



Place & Health

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FULL ABSTRACT BOOKLET

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CS 1.1: SPATIALIZING URBAN HEALTH

Continuous Mobility Patterns and Exposure to a National Kernel Density Surface of Retail Products

Authors

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Abstract

Background: Health-related points of interest (POIs) within cities are known to affect the behavior and health of citizens traveling through their streets.

Objective: In this paper we present the development of an analytic framework for the study of human mobility and real-time exposure to the landscape of point-of-sale products available across the US, a POI known to heavily influence a range of health related behaviors.

Methods: A nationwide density surface of convenience and related retail outlet locations was generated using kernel density estimation. The empirical basis for this probability density surface was a national dataset of 269,781 retail outlets. This surface was then linked to real-time mobility coordinates from 365 participants' cellular phones, recorded every 10-minutes for 180 days. Hourly mobility patterns were characterized by radius of gyration and associated contact with the product density surface. Exponential, log-linear modeling techniques were utilized to explore the way exposure varied as a function of the mobility patterns of participants.

Results: Mean distance traveled per hour was 545 meters (SD=2,635). Time of day on weekends versus weekdays was a strong predictor of exposure to products. Beyond aggregated temporal dynamics, radius of gyration varied significantly within and between states, and these within state mobility patterns were strongly associated with exposure to retail products. Overall, from hour-to-hour and day-to-day, product exposure in New York was much greater than in all other areas of the US, an effect that appears to be driven by chronic exposure to New York's urban centers.

Conclusion: These data suggest that research on exposure to retail products should account for the mobility and preferences of individuals as they engage with POI over time. Results highlight the dynamic interplay between city-level POIs and human mobility patterns across different regions of the US.

Reproductive Health Vulnerabilities among Urban Poor Women: A Study across Three Indian Cities

Authors

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Abstract

Reproductive morbidity was considered a first priority on the research agenda set by the programmers about reproductive health in Indian society. To examine the magnitude of the problem of reproductive morbidity and by the adoption of reproductive health perspectives in strategies addressing women's autonomy, gender role attitude and reproductive health issues. The data extracted from Health of the Urban Poor (HUP), recently collected from both Slum and Non Slum across three cities Bhubaneswar Jaipur, and Pune in year 2011-12. The sample size in Bhubaneswar (1,839 HHs), Jaipur (1,995 HHs) and in Pune (1,884 HHs). The respondents were currently married women aged 15-49. This study has used bivariate, multivariate and index like women's mobility, household decision making, and women's autonomy. It is found that sexual violence is high among slum women in all the three cities. It is highest in Pune i.e. (26 %) and the lowest in Jaipur (16 %) whereas in non-slum it is the highest in Pune (19 %) and the lowest in Bhubaneswar (11%). Results shows that the women having any STI in three cities Bhubaneswar (5.4), Jaipur (9.6) and Pune (6.7) also having problems as bad smelling genital discharge, genital sore or ulcer in all the three cities. HPU data illustrates the incidences of reproductive morbidities across all cities which is captured STIs. Therefore, health care planners and health educators need to empower women and also stress the specific relationship between women's control over their own bodily rights, Sexuality and risk of reproductive morbidity.

Spatial and Temporal Trend Analysis of the Prevalence of Multimorbidity and its Association with Socioeconomic Disadvantage in South Africa

Authors

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Abstract

South Africa is facing a new public health challenge with chronic infectious and non-communicable diseases, and multimorbidity becoming increasingly prevalent in an

ageing population. The aim of the study was to investigate the spatiotemporal epidemiology of prevalent chronic diseases (diabetes, hypertension, tuberculosis (TB) and HIV), multimorbidity and the association with socioeconomic disadvantage in South Africa.

This study utilised 2008 and 2012 data from the National Income Dynamics Study, a longitudinal study with a sample of approximately 28 000 respondents. Cross-sectional analyses and logistic regression modelling were used to investigate associations between chronic disease multimorbidity, socioeconomic status and selected risk factors. Spatial hot spot analysis using the Getis-Ord Gi* statistic highlighted the spatial distribution of multimorbidity across the 2011 Census districts of South Africa.

Multimorbidity increased in prevalence from 2.73% to 2.84% in South African adults between 2008 and 2012 (average age of 53.7 years in 2008 and 55.1 years in 2012). Multimorbidity was associated with socioeconomic deprivation, obesity, and age, and was higher in urban areas. The most common combinations of co-morbidities were hypertension/diabetes, TB/hypertension and HIV/hypertension. Self-reported TB and HIV prevalence were significantly under-reported compared to available national data. Spatial analysis showed hot spots of higher multimorbidity prevalence in parts of the KwaZulu-Natal and Eastern Cape provinces, and this pattern mirrored the spatial pattern of socioeconomic disadvantage.

This study contributes towards data on multimorbidity in low and middle-income countries and the important role of hypertension in multimorbidity. It provides a foundation for future research on the components of socioeconomic disadvantage that drive chronic disease multimorbidity. The study also highlights the limitation of survey data on self-reported TB and HIV status; disease associated with stigma. This interdisciplinary study will therefore be of significant interest to researchers and policy makers concerned with population health and the effect of place and context.

GIS Aided Intervention Options for Prevention of Water-Borne Diseases in Poor Urban Neighborhood of Rawalpindi City

Authors

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Abstract

An investigation was probed to unravel health–hygiene issues related to altered environment in urban poor neighborhood. Using survey-based questionnaire data, explanatory and response variables were analyzed by logistic regression which revealed 61% of surveyed population (n=964) has environmental health risks that are attributed to poor sanitation (OR=1.71, 95% CI = 1.24–2.36) and unsafe drinking water

(OR=1.49, 95% CI = 1.08–2.05). The GIS aided predictors has explained influence of landscape on poor sanitation due to sewage flow from posh localities placed on elevated ground, towards densely populated poor neighborhoods. The latter areas were further characterized by people vulnerable to incidence of diarrhea (OR=1.73, 95% CI = 1.14–2.42), and malaria (OR=2.59; 95% CI = 1.76–3.91) owing to landscape features as they were low-lying areas and geographically natural receivers of wastewater. Female population, especially age groups between 10–23 years were most affected by water related diseases. Our findings indicate a high level of dissatisfaction in surveyed population regarding their living environment. Based on GIS mapping, we have identified potential risk-spots in Rawalpindi city where standing water may cause considerable population exposure to mosquitoes. To overcome health risks, geographical aspects and topographic features can be useful attributes to seek GIS based solutions to avoid standing water in city. We conclude that poor sanitation coupled with unsafe drinking water is emerging public health challenge in the study area. Failure of government to respond adequately to this situation is the prime cause of growing distrust among poor neighborhood dwellers. Provisions of safe drinking water supply and improved sanitation at selected spots is proposed through mapping of area to prevent an outbreak of both diarrhea and malaria, which could be an imminent health risk upon the onset of monsoon season.

CS 1.2: SPATIALIZING URBAN HEALTH

Geospatial Analysis of Inequalities in Public Health Care Delivery in Kaduna State, Nigeria

Authors

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Abstract

Access to adequate and equitable health services is very critical in meeting up the global health coverage. Studies have shown in the past that there is inequality in the accessibility to health care facilities among populations across many Nigerian states. Rapid population expansion, widespread conflicts and poverty, and lack of financial resources for the provision of health facilities are identified as the key factors responsible for the poor health care delivery systems in Nigeria. With a population of about 170 million, Nigeria is in dire need of planning the distribution of its health care facilities to align current socio-economic realities. The study is based on the premise that distributive equity in healthcare facilities indexes accessibility. Using Kaduna State as a case example, the study assessed health care availability and accessibility through the adoption of Living Conditions Survey Data for 2011. Geospatial methods were adopted in mapping the various areas with health facilities to show levels of accessibility vis-à-vis total population. Further analyses are done using concentration curves,

concentration indices, and horizontal equity index. Factorial analysis and Pearson Product Moment Correlation were the statistical techniques adopted for analyses. The result indicates a general mal-distribution that accentuates a phenomenal lack of proper attention to patients and general poor access in specific vulnerable parts of the State. The study recommends a more robust and deeply investigated health care provision system tailored to suit the peculiar socio-economic conditions and population distribution across Kaduna State.

Studying the Perceived Local Food Environment Through Individual Spatial Cognition Analysis: A Case Study in Madrid (Spain)

Authors

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Abstract

In this study we aimed to assess how the residents' cognitive space determines the perceived food environment in a low-income Madrid neighborhood. We conducted our analyses with 6 women aged 40-75 residents of this area. We asked participants to draw sketch maps and gathered additional qualitative data from a Photovoice Project (interviews, questionnaires and photography) in order to complement cognitive representations.

Geographic Information Systems provide new ways and techniques to analyze how people perceive their neighborhood, allowing also the integration of qualitative and quantitative data for our analysis. We performed a bi-dimensional regression analysis in order to compare sketch maps with actual maps in order to quantify deformations in cognitive representations. The results were complemented with the assessment of the form and size of the representations using qualitative and quantitative techniques. Analyzing the residence location in the representations constitutes another important point in this study in order to explain the perceived proximity and accessibility to acquire healthy food in their neighborhood.

As a result, we observed that people conceived their neighborhood as a very small area (0.176 km²), underlying the fact that our study area are strongly fragmented. Sketch maps collected present simple forms. The different store types and bars represent a

high percent of edges in the representation, showing a problematic lack of neighborhood identity. Our participants perceived a great availability of food stores in their neighborhood, not necessarily carrying healthy option though. "Economic crisis", "hygiene conditions" and "cultural diversity" were highlighted by participants as topics with a major influence on their food environment. Also, they complained about the loss of traditional markets, considered as important socialization places with a personal touch in customer service.

Geographic Patterns of Infectious Diseases in Africa: Case Studies of Diarrheal Diseases in Yaounde-Cameroon

Authors

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Abstract

Yaoundé is currently experiencing very rapid and uncontrolled urbanization, leading to a complete occupation of its land area. This is in response to the local populations modifying the environment to provide themselves with vital space for habitation with subsequent negative health impacts. The predominant health concerns are the presence of infectious and parasitic diseases such as malaria, diarrhoeas, typhoid fever. This study aims at examining the interrelationship between two concepts i.e. the environment and health, focusing on diarrhoeal diseases, and the associated risk factors in Yaoundé. Spatial inequalities in the incidence and prevalence of diarrhoeal diseases were observed, and influence of physical environment (assessed here through topography) on housing appears to be a significant risk factor in the occurrence of diarrhoeas in the city. Using tools and techniques of spatial analysis (e.g., GIS), we've realized that diarrhoeal diseases vary statistically between different topographic units: prevalence rates are higher among city dwellers living in marshy areas (wet lowlands), moderate among those settled on the slopes and low among inhabitants living on the plateaus. The prevalence rates of bacterial and parasitic diarrhoeas also vary according to whether or not those plateaus are textured i.e. made of hard rocks or of weak ones. More so, according to whether or not, slopes were exposed to the local wet wind and whether marshy areas were used for residential purposes, for economic investments or for crops and farming. Such an outcome has enabled the mapping of urban sectors and of citydwellers more or less at risk of diarrheal diseases in the city. We believe that such a map can be used by urban development planners and Decision makers to rethink the housing or town settlement policy, and to carry out specific health measures

Spatiotemporal Pattern Analysis of Scarlet Fever Incidence in Beijing, China, 2005–2014

Authors

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2. Prof. Xiuha Guo (Department of Epidemiology and Biostatistics, School of Public Health, Capital Medical University, Beijing)

Abstract

Objective: To probe the spatiotemporal patterns of the incidence of scarlet fever in Beijing, China, from 2005 to 2014. **Methods:** A spatiotemporal analysis was conducted at the district/county level in the Beijing region based on the reported cases of scarlet fever during the study period. Moran's autocorrelation coefficient was used to examine the spatial autocorrelation of scarlet fever, whereas the Getis-Ord G_i^* statistic was used to determine the hotspot incidence of scarlet fever. Likewise, the space-time scan statistic was used to detect the space-time clusters, including the relative risk of scarlet fever incidence across all settings. **Results:** A total of 26,860 scarlet fever cases were reported in Beijing during the study period (2005–2014). The average annual incidence of scarlet fever was 14.25 per 100,000 population (range, 6.76 to 32.03 per 100,000). The incidence among males was higher than that among females, and more than two-thirds of scarlet fever cases (83.8%) were among children 3–8 years old. The seasonal incidence peaks occurred from March to July. A higher relative risk area was mainly in the city and urban districts of Beijing. The most likely space-time clusters and secondary clusters were detected to be diversely distributed in every study year. **Conclusions:** The spatiotemporal patterns of scarlet fever were relatively unsteady in Beijing from 2005 to 2014. The at-risk population was mainly scattered in urban settings and dense districts with high population, indicating a positive relationship between population density and increased risk of scarlet fever exposure. Children under 15 years of age were the most susceptible to scarlet fever.

CS 1.3: SPATIALIZING URBAN HEALTH

Developing Participatory Mapping Tools for Fostering Health Literacy Skill Building Among Immigrant Youth in San Francisco

Authors

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Abstract

BACKGROUND: In order to reduce health disparities among U.S. immigrant communities interdisciplinary problem-solving and community partnership models are necessary. Citizen Science attempts to generate data that would not otherwise exist, and in the process engage communities to increase public health literacy. One of the main goals of Participatory Research is to give voice to individuals and communities often not represented in traditional research, and to create locally produced evidence that is relevant to health promotion programs. In the area of mapping and health disparities, much of the focus has been on analyzing geospatial information in order to identify 'hot spots' for public health attention. Engaging with community members in high disparity settings through generating participatory maps is a logical next step for mapping research to undertake to influence local decisions about health programs.

METHODS: With guidance from English as a Second Language (ESL) teachers and their adolescent students within a summer school program exploring food choices, media literacy, computer mapping, marketing of health messages, and social factors, we developed a series of participatory mapping tools, using free mapping software from Google Earth and Instagram, a social media platform for posting photographs.

RESULTS: Examples of mapping projects applying citizen science principles to engage adolescents to build public health literacy skills include: creation of a world map displaying family recipes that have been made more healthy; creation of a field trip that allows students to create a neighborhood map in real time that includes perceptions in the form of photos and comments (as well as traditional map concepts); and a group Instagram collage based on a reactions to unhealthy food marketing in a selected neighborhood route.

CONCLUSION: Free mapping and media formats can provide opportunities to develop citizen science projects applying principles of participatory mapping to health disparities topics of community interest.

Using Smartphone Technologies to Investigate the Impact of the Built Urban Environment on Mental Wellbeing in Real Time: A Pilot Study

Authors

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Abstract

Background. Over three and a half billion people, more than half the world's population, live in urban areas. As this number continues to rise, it is estimated that 66% of the

global population will live in cities by 2050 (1). While urban growth during this period will be greatest in Africa, Asia, Latin America and Oceania, it will also affect long-established urban areas such as Europe (2). This ongoing urbanization has important implications for global health and wellbeing. Although, traditionally, city dwellers have been considered healthier due to improved sanitation, nutrition and health care, there is overwhelming evidence that urban living is also associated with greater social disparities, a more stressful social environment and increased risk for chronic disorders (3-5). The majority of scientific research in this area has focused on the impact of urban living on physical health and wellbeing; however, some of the best-established effects of urbanization concern mental health and wellbeing. For example, one of the most robust findings is that city dwellers have a substantially increased risk for mental illness including anxiety disorders, mood disorders and psychotic disorders (6,7). Critically, the observation of a dose-dependent effect provides support to a causal relationship, rather than a mere association, between urban living and risk for mental illness (8).

Where Do People Purchase Food?

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Abstract

A pilot study on food purchasing locations over a two week period was undertaken in Melbourne, Australia. Fifty-six participants recorded details on all food purchases made over a two-week period including name and address of store, where they were prior to making the purchase (home, work, other), and primary mode of transport to the store (e.g. car, public transport, walk/cycle). Data on the participants' household address, workplace postal code, and the stores where they made food purchases were geocoded in ArcGIS 10.2 and the network distance between the food store and their home/work address was calculated. A total of 929 food purchases were recorded. These were a median distance of 6.8km (IQR 3.6 – 13.3) from participants' household location with supermarket purchases occurring slightly closer to home (median 6.0km (IQR 3.3 – 10.3)). When home was reported as the location prior to visiting the store, this made little difference to the median distance between home and food store visited (median 6.3km; IQR 3.2 – 14.5). Amongst those that work, food purchasing locations were found to be a median distance of 6.1km (IQR 2.3 – 14.8) from the workplace although were noticeably shorter when workplace was reported as the prior location (median 2.3km; IQR 0.9 – 11.7). Understanding how and where individuals access food is useful in informing our thinking on the appropriateness of using narrowly-focused neighbourhood

exposure measures when trying to understand the role of food environments on food purchasing behaviours.

The State of Inequality in Utilizing Modern Contraception Methods Among Women of Urban Slums of Rajasthan, India

Author

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Abstract

Purpose

Health inequalities are observable differences in health between subgroups of a population. Any level of preventable maternal or child mortality is unacceptable and inequities associated with reproductive health outcomes demands action. Contraceptives are considered as a vital player in improving maternal health by evading unintended pregnancies which affects women's health in several ways. Purpose of this study was to determine the prevalence and level of inequality in utilizing modern contraceptive method among women living in the urban slums of Rajasthan, India.

Method

Data from the primary household survey conducted in the year 2015 was used. This paper examines the factors associated with the inequality in modern contraceptive use with the prevalence of modern contraceptive methods among married women (aged 15-49 years) in the urban slums of Rajasthan, India. Different inequalities such as education, economic status, migration status and women's autonomy were measured with choice of modern contraceptive method adopted by women in slums. Bi-variate analysis was done including chi-square test to determine the difference in population and logistic regression was applied to understand the strength of association of predictor variables and outcome variables. Results highlight the significant difference in the choice of modern contraceptive method adopted and various inequality indicators such as education, economic status, migration status and autonomy of women. The use of modern methods of contraception tended to be lowest in women with no education and generally increased across education levels. Likewise, women with low economic status had lower rates of utilization of contraception.

Conclusion

The study accounts the magnitude of inequality in modern contraceptive use among women of the urban slums of Rajasthan, India. The need of the hour is to focus in the most- disadvantaged subgroups (the poorest, the least educated, migrants and women with less autonomy) in the urban slums of Rajasthan, India.

CS 1.4: SPATIALIZING URBAN HEALTH

Healthy Urban Environment Characterization Focused on Physical Activity and Food: A GIS-Based Method

Authors

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Abstract

In response to the emerging challenge of the obesity epidemic, as highlighted by the World Health Organization, public health policies and programs are focusing on promoting changes in the urban environment. Healthier urban environments may influence the distribution of cardiovascular risk factors. The aim of the present study was to design and implement a multivariate method based on a Geographic Information System (GIS) to characterize and evaluate the environmental correlates of obesity: the food and the physical activity urban environment. The study was conducted in a sociodemographically average urban area of Madrid (Spain), comprised of 12 contiguous census sections ($\approx 16,000$ residents total). Data were gathered through on-field auditing of all food stores and street segments present in the study area. We designed a synthetic index integrating continuous measures of both food and physical activity environments, generated by kernel density analyses. The synthetic index ranges from 0 to 100, being 0 least healthy. We found a heterogeneous distribution with 75% and 50% of the area scoring less than 36.8 and 25.5 respectively. As the Spanish official statistical data are aggregated by census sections, the study area were characterized following a range from high to low through a zonal analysis. Thus, 4.2% of the population lives in a healthy area while 41.0% is in an unhealthy place. Most of the population (52.8%) is located in an area with a median score, 29.1% medium-high and 26.6% medium-low. Our results highlight the need to consider urban environments as promoters or barriers for healthy behaviors such as better eating and being physically active. This synthetic index may be relevant tool to inform future urban health interventions.

Association Between Suicide and Exposure to Homicide in Urban Neighborhoods: A Spatial Analysis

Authors

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Abstract

Suicide is a leading cause of premature mortality. Understanding how social and environmental exposures in urban communities affect suicidality is crucial for the development of population-based interventions to reduce suicide rates. Previous research suggests that exposure to community violence and perpetration of violence are associated with higher risk for suicidality. We used vital statistics records from California, geocoded to address of the decedent, to examine whether proximity to homicide was associated with the occurrence of suicide in urban census tracts. For each urban tract (n=7194) and each month in 2012 (the most recent year for which data are available), we computed the number of homicides during the same month, previous month, and 12 months prior within buffer zones of varying distances of the tract. We found that proximity to homicides was negatively associated with the likelihood that a suicide would occur in a given tract-month after controlling for demographic factors, seasonality, other confounders, and spatial and temporal autocorrelation. Estimates suggest that elimination of exposure to homicides would result in a 6.4% increase in the number of tract-months with one or more suicides (95% confidence interval: 3.2 – 9.5%). This relationship was stronger in neighborhoods that were poorer, younger, and less socially cohesive. Results were robust to a wide variety of sensitivity tests. We hypothesize that violence can be directed inward or outward and that our study is capturing the potential substitution of outward- and inward-directed violence. Further investigation is needed to identify the drivers this association.

The Social Production of Health Risk in Urban Neighborhoods: Studying Vulnerability to Chronic Disease in Two West African Cities

Authors

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6. Prof. Gérard Salem (Université Paris Ouest Nanterre La Défense)

Abstract

The SANTINELLES project offers a comparative analysis of urban health in two mid-sized West African cities, Saint-Louis (Senegal) and Bobo-Dioulasso (Burkina Faso). This paper highlights our findings about how the socio-spatial organization in the eight sampled neighborhoods shapes vulnerability to disease. First, we highlight how historical legacies, migration, and social and economic processes have shaped neighborhoods and urban landscapes in these two former colonial cities. Second, we examine how the social networks of local actors are spatially rooted in both cities, contributing to different forms of governance and unequal development dynamics. These findings are triangulated with the clinical and qualitative data of the larger study to analyze how socio-territorial processes materialize in disease morbidity, lack of access to medical care, and illness experience. The data for this paper reflects our grounding in health geography; we used direct observation, sketch maps, and semi-structured interviews with stakeholders, care givers, community organizations and inhabitants.

Understanding Community Food Environment Through Photovoice: A Participatory Action Research Project in Madrid

Authors

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7. Dr. Manuel Franco (University of Alcalá)

Abstract

PhotoVoice is a participatory action research method enabling participants to capture and reflect the strengths and concerns of their community through photography. It promotes critical reflection about relevant issues through group discussion on their own photographs and may generate concrete policy recommendations. Our aim was to gain a deeper understanding of the community food environment as perceived by the residents of a low-income Madrid (Spain) district.

This study ran throughout 2015, as part of the Heart Healthy Hoods project

(hhhproject.eu). 24 residents, between 40 and 75 years living in two neighborhoods of the study area participated in four different groups. Participants were asked to photograph all the features related to the food environment in their neighborhood. Each group underwent at least 5 group meetings, where we used the SHOWED mnemonic method to guide group discussions on their pictures. Each meeting was audio taped and transcribed verbatim. Participants analyzed all their photographs in the last meeting identifying barriers and opportunities for healthy eating.

Participants identified themes and coded the 163 photographs they took with 32 final photographs chosen for the photobook and exhibition. Through a consensus-building process principal emerging categories of the local food environment were identified by the group participants. Six main topic areas were derived from these categories by the research team using the qualitative analytical technique of successive approximation: 1) Cultural diversity, 2) Ageing, 3) Poverty and economic crisis, 4) Food trade, 5) Social relationships, and 6) eating in moderation.

Participants were the main actors throughout the study and were highly satisfied with their involvement in the project. Finally they generated 16 concrete policy recommendations that were shared with local policy-makers in an open meeting. The relevance of this project lies in the innovative approach in public health research allowing for citizen immersion.

Mobility, Vulnerability and Health Challenges

Authors

Tilak Mukherji (Sigma Research and Consulting),
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Abstract

Vulnerability to ill health is an issue facing the migrant population in urban areas. Though opportunities in terms of better health services are available in urban areas, migrants have little choice but to live and work in unsafe conditions that result in exposure to infectious and non-communicable diseases, besides accidents, violence and abuse. These in turn have implications in terms of mental and psychosocial well-being.

An attempt is made in this paper to understand the linkages between migration and health status and the initiatives to address the emerging issues in developing countries using the available reports and data including World Migration Report besides that of UN Habitat and WHO.

Migrants are left out of public health services and the most vulnerable urban migrant populations include those who do not have a regular residence status, and those with specific health needs, such as women, children and the elderly. The World Health Organization (WHO) and UN-Habitat (2010) have identified a “triple threat” that consists of infectious diseases that thrive in poor and overcrowded urban environments; non-communicable diseases that are exacerbated by unhealthy lifestyles followed in urban

areas and taken up in the course of settling in cities; and injuries and violence due to dangerous road traffic and unsafe working and living conditions (WHO and UN-Habitat, 2010).

The barriers include: Lack of regular legal status, Fear of deportation, Xenophobic and discriminatory attitudes

Economic factors, Language that can impact diagnostics, medication, medical follow-up, hospital visits and admission, and adherence to treatment protocols , Exclusion of migrants from health systems- eg China, India, South Africa, and Argentina, Lack of health insurance coverage coupled with high costs of health services and Low levels of health literacy and immunisation coverage among slum residents, lower than in rural areas

Negative or abusive attitudes of health staff towards migrant patients eg South Africa, China; Migrants' susceptibility to infectious diseases eg HIV/AIDS in Latin America and the Caribbean, India, and Kenya; TB in Kenya, South Africa, China ; US (Higher TB incidence among foreign-born persons in 2013) Migrants are more vulnerable to NCDs than the local population and Psychosocial vulnerabilities due to migration

There is an urgent need for improving migrants' health in cities through migrant inclusive health systems in terms of state of health and accessibility to quality health-care services including strong outreach and referral systems, formal policies of inclusion.

CS 2.1: SPATIALIZING URBAN HEALTH

Does Walkability Differ by Area Sociodemographic Profile? A Study of Madrid City

Authors

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Abstract

Several studies have focused on the relevance of walkable neighborhoods to improve population's physical activity. In order to address physical activity inequalities, it is important to understand how walkability differs by area sociodemographics. Our objective was to study the relationship between area-sociodemographic profile and walkability in the census sections of the municipality Madrid, Spain (n=2407). Sociodemographic predictors used were area-level of education (% of people with low education level) and immigration (% of foreign people), stratified into quintiles (Q); Q5 represents the census sections with the lowest educational level or presence of foreign individuals. The outcome of interest, walkability index, was derived from three variables: population density, connectivity and land-use. The distribution of census sections in terms of walkability was analyzed for the quintiles of the two sociodemographic predictors. Census sections with the highest level of education presented the lowest levels of walkability (walkability in Q1=-1.53); whereas Q4 and Q5 of low-educational level were the ones with the highest walkability (walkability in Q4=0.78, Q5=0.53). We also found a clear relation between areas with high % of foreign-born residents and higher walkability (walkability in Q1=-1.43, Q2=-0.98, Q3=-0.11, Q4=0.6, Q5=1.91). Using Q1 as the reference group, all differences were statistically significant ($p<0.05$). The three components of the walkability index showed similar results independently. In conclusion, census sections with higher levels of education and census sections with less foreign-born people were less walkable. Disentangling the mechanisms behind these results may help urban planners design better and more walkable environments that would help increasing population's physical activity.

A Spatial Pattern Analysis for the Accessibility to Maternal Health Care in Minna, Nigeria

Authors

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3. Prof. Sanusi Yekeen (Federal University of Technology, Minna. Nigeria)
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Abstract

The health of women when they are pregnant put to birth and the postpartum period is known as the maternal health. It involves the health care aspect of family planning which includes, pre-natal, anti-natal and post-natal periods which aim at reducing morbidity and mortality rate among women of child bearing age. It was estimated by, (UNFPA, 2014.) that 289,000 women globally died during pregnancy in 2013. A good number of the women are from developing countries and Nigeria where Minna is a region is one of the developing countries. This study examined the spatial distribution

pattern of health facilities that administers maternal health care in Minna in relation to the geographic location of the patients. Hospital records related to maternal health care were collected from public and private hospitals in Minna for the year 2013 to 2015. The addresses of the patients were also collected for the purpose of geo coding on the map. Hot spot analysis (Getis and Ord) was conducted using the point for the identification of the concentration of patients in relation to the health facilities located near them. The result reveals that health facilities that render maternal health services are not evenly located and not easily accessible by the target population. The study thus recommends, among others the need for safe motherhood campaign, an evenly and efficient distribution of maternal health facilities in Minna.

Spatial Temporal Surveillance of Post Disaster Mental Health

Authors

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Abstract

Mass traumatic events, such as terrorist attacks and natural disasters, have increased globally in recent years and can have substantial consequences for population mental health. Early emotional reactions after traumatic events are predictive of later psychiatric symptoms. Targeting geographic areas wherein citizens are exhibiting emotional responses in the immediate aftermath of mass trauma could therefore mitigate long-term mental health consequences.

However, no systematic efforts have investigated the possibility of a space-time syndromic surveillance system for the early emotional consequences of mass trauma. Here we show that a near real-time examination of social media data combining sentiment analysis and a space-time scan statistic has the potential to identify geographic areas with early emotional responses in the aftermath of a disaster. We extracted seven basic emotions from Twitter data in the wider Paris arrondissements in the aftermath of the recent terrorist attacks. We then identified geographic areas in

which emotional responses were concentrated. We found geographic concentrations of fear and sadness in the tweets of users in areas around which the attacks took place. A syndromic surveillance system as outlined here may help with the early detection of geographic areas with emerging mental health needs.

We anticipate our study to be a starting point for more sophisticated models in the early detection of mental health risk after mass traumatic events. For example, further efforts could be prospective incorporating real-time social media data also in other languages over larger geographic areas with more fine-grained temporal resolutions. In countries or areas without efficient emergency infrastructure, this approach may also have potential for the early detection of mass trauma and to guide emergency care and rescue efforts.

Application of Area-level Data to Hospital-based Population Health Management

Authors

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Abstract

Introduction: For chronic conditions such as asthma, it is increasingly evident that hospitals must develop service delivery systems that address patient needs in the context of their communities. Few studies examine how area-level data on social determinants of health can inform clinical practice, in order to improve population health. This study used local patient-level electronic health record (EHR) data to examine geographic variations in preventable adult asthma hospitalizations in relation to area-level social determinant indicators.

Methods: We conducted a retrospective cohort analysis from 2012 – 2014 on 2,328 asthmatic primary care patients (aged 18 to 64 years old) at an urban community teaching hospital. Those diagnosed with chronic obstructive pulmonary disease or sickle cell disease were excluded.

We created choropleth maps depicting contextual factors and hospitalizations by census tract (CT) including the concentration of poverty, residents in public housing,

and minority population. We constructed an air quality buffer map outlining truck routes. For CT characteristics we used data from the American Community Survey, the US Department of Housing and Development and New York City Department of Transportation. Asthma hospitalization, defined by discharge diagnosis, was acquired from patients' EHRs. Patient addresses were geocoded as point data and aggregated to the CT level. We conducted a hot spot analysis to assess whether hospitalizations clustered in CTs with poorer social determinant indicators.

Results: We found one hot spot corresponding to areas that are predominantly minority, have elevated levels of public housing, and cluster along truck route buffers. We saw no clear relationship between CT poverty and hospitalizations.

Discussion: Geographic variation in asthma admissions illuminates the multifaceted needs of the hospital's local population. Understanding the association between the social environment and clinical care is essential to developing data-driven interventions that address the needs of the hospital's target population.

CS 2.2: SPATIALIZING URBAN HEALTH

Geoinformation-Based Assessment of Primary Health Care Facilities in Oyo Town, Southwestern Nigeria

Authors

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Abstract

This study developed a Geographical Information System (GIS) database and mapped the distribution of Primary Health Care Facilities (PHCFs) in a traditional Nigerian city, Oyo town. The list of PHCFs and ownership in Nigeria obtained from the Department of Health Planning and Research served as database for the study. Also, the National Population Commission census figures provided information on the population of the city. Handheld Global Positioning System (GPS) was used to acquire the locations of 34 existing PHC centers within the study area. Field observation, questionnaire and IKONOS multispectral imagery (1.1m resolution) acquired from National Centre for Remote Sensing were used to ascertain the road network, built-up areas, location and spatial coverage. Geospatial analytical operations employed using ArcView 3.3 include proximity analysis (buffering), overlaying and querying. Data show that there exists inequality in the distribution of PHCFs among the various administrative units in the city with Owode having highest distribution of 17.6%, followed by Sabo 14.7% and Apaara with no PHCF. The study identified three categories of PHCFs- Comprehensive Health Centre (38.2%), Health Centre (38.2%) and Basic Health Centre (23.6%). It was

observed that the patient-physician ratio is (1:15), population-physician ratio (1:7035), patient-nurse ratio (1:5) and population-nurse ratio (1:2438) for the three categories of PHCFs. Private organizations dominated the PHCFs ownership in Oyo city with 58.8%, and government 41.2%. Hence, appropriate authorities should endeavour to achieve a more fair distribution of health facilities in the city, taking into consideration health-dependent parameters so as to generate social justice.

The Case of the Viaduct over Bela Street, in Rio De Janeiro, and the Contributions for the Studies of Intra-Urban Health-Disease

Authors

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Abstract

This present proposition introduces an intra-urban case study on the relationship between the opening of an expressway and its consequences on health and environment. To describe and analyze the context, the relationships and perceptions related to the object, quantitative and qualitative data were co-related, these collected from field work, theoretic research and empiric originals.

In 1981, Bela Street, located at the neighborhood of São Cristóvão, in Rio de Janeiro, a relevant social, economic, historic and cultural urban complex, was covered by a viaduct. Proclaimed as a legacy in mobility at the United Nations Conference on the environment and development (ECO-92), ironically, began to expose their habitants to risks associated to the vicinity of a heavy traffic and high speed arterial road, which reflexes are of great importance for understanding of the process on urban health-disease. The extreme place's conditions, as well as the two decades of impact, motivated the decision for this present study.

The construction of expressways over constituted urban tissue was planned based on the road logic practiced in Brazil since the beginning of the XXth century. Historically, the city of Rio, Brazilian "post card", has been receiving major public investments for the realization of international events, attracting external and political capital gains. Such investments are concentrated on constructions, causing deep urban transformations. To adapt itself, the "carioca" population, once more, is being victimized by inequities.

Thinking about the experience of Rio de Janeiro, and of Bela Street, is fundamental in order to have a critical view on this so "legacy" of major events on urban health. In the case of the Rio-2016 Olympic Games, 150 km of new expressways are being built.

Understand the urban processes, its social representations and reflexes on health, are fundamental constitutive elements for the decision making on planning healthy public politics.

Built Environment and Fruit and Vegetable Consumption: An Ecological Study

Authors

1. Dr. Mariana Menezes (Federal University of Minas Gerais (UFMG))
2. Dr. Bruna Costa (Federal University of Minas Gerais (UFMG))
3. Dr. Cláudia Oliveira (Federal University of Sao Joao del-Rei)
4. Dr. Aline Cristine Lopes (Federal University of Minas Gerais (UFMG))

Abstract

Background: Ecological studies have been essential to understand the relationship between environmental conditions and food consumption. The purpose of this study was to describe the environmental conditions and their relation with the consumption of fruits and vegetables (FV) among users of Brazilian's public health services.

Methods: This is an ecological study that evaluated food stores contained in buffers with rays of 1,600 meters from 18 sites of the Health Academy Program (HAP). We measured by direct observation variables from the macro-level (density, proximity and type) and the micro-level (section location of FV; availability, quality, variety, price and advertising of FV and ultra-processed foods). Aggregate data from users (monthly income and FV consumption) were obtained by interview. The analysis included Kernel intensity estimator, average nearest neighbor and function LISA of local spatial autocorrelation.

Results: 3,414 users were interviewed and 336 food stores were analyzed. Major geographical variations were identified in the FV consumption. The average consumption was higher in neighborhoods with higher income and concentration of food stores, and better index of access to healthy foods. The sites with poor FV consumption had most stores with poor access to healthy foods.

Conclusion: We found negative characteristics of the food environment that may contribute to the low FV consumption found, suggesting the need for the development and consolidation of public policies aimed at creating healthy environments through interventions in the built environment that increases access and the consumption of healthy foods, such as FV.

CS 2.3: SPATIALIZING URBAN HEALTH

Combining Theory and Data to Understand How Health Was Included and then Excluded in a Legislative Reform of a Land Use Planning System

Authors

1. Dr. Patrick Harris (Sydney University)

Abstract

Purpose

Theory based evaluation is gaining currency to investigate complex problems. Realist evaluation is one approach where empirical data and theory combine to provide deeper explanations. Existing theory has not yet been used sufficiently to understand activities to influence public policy to improve health. This presentation reports findings from comprehensive reforms of the land use planning system in NSW, Australia, that led to the inclusion then exclusion of two (of 11) health objectives.

Methods

Primary data included nine purposively sampled stakeholder interviews and a focus group. Secondary data included Hansard recordings of parliamentary proceedings and freedom of information documents (emails, internal reports, minutes of meetings). Three political science theories directly connected the data with explanations about agenda setting and policy change while retaining our institutionalist [1] analytic focus on structures (rules and mandates), 'actors' (people and networks), and 'ideas' (policy content): multiple streams approach (MSA) [2, 3]; advocacy coalition framework (ACF) [4]; and punctuated equilibrium theory (PET) [5, 6]. We also used political economy theory [7].

Conclusions

The theoretical analysis allowed explanation of the legislative review over time to be complex, incremental and non-linear, undergoing long periods of stasis, then openness to change, and then stasis (in terms of openness).

The explanatory detail provided by each provides subtly different explanations about why health became influential.

MSA suggests 'healthy planning' entrepreneurs used the reforms as a window of opportunity. ACF suggests health was successfully positioned due to struggles between different networks' core beliefs but acceptance that health was positive. PET suggests positioning the health objectives rather than detail behind these did not challenge the limited information processing capacity of decision makers. Political economy suggests government was beholden to capital growth rather than balance or sustainability and this disconnect galvanised political opposition to the reforms and the opportunity for the health objectives.

Contextualizing Social-Spatial Determinants of Health Services

Authors

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3. Dr. Liang Mao (University of Florida)

Abstract

A renewed focus on social determinants of health has created the need for better

understanding of the context in which care and health occur. However, the way we measure place is lacking a fine-scale gold-standard smaller than the currently used county or zip code levels. These large coarse-scale areas are often not well-aligned with how human interactions occur. To study the effect of spatial scale on health services, we compared a catchment model to measurement of a hospital's local service area and need for language services using a social-spatial approach at the localized hospital level and the broader county level that is the current standard among most hospitals conducting community health needs assessments. Language services were the proportion of limited English proficient population at the county level and at the individual hospital service area level.

Two major datasets were integrated for this study. First, general hospitals from the American Hospital Association 2013 (N=4514) database were used to create the hospital service areas layer and whether or not hospitals offered language services. The second dataset used the 2009-2013 American Community Survey for creating a second layer containing estimates of need (high/medium/low) for language services within each service area from the first layer and compared to county boundaries also from the ACS.

We found that this modelling approach did facilitate visualization of social-spatial differences when finer-scale methods were employed as compared to the county level measures. This is a necessary preliminary step in order to better understand the role of spatial statistics in addressing social determinants of health. The catchment area method is not without limitations but the purpose of the present analysis is to elucidate the importance of fine-scale visualization as compared to current coarse-level practices in the healthcare delivery field to facilitate the study of social-spatial determinants of health.

Living in Deprived, Close-Knit Neighbourhood Communities: The Nuances of Social Support and Social Control and their Effects on Health and Wellbeing

Authors

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Abstract

This qualitative study explores the dynamics of close-knit, Mediterranean, Maltese deprived neighbourhoods in relation to the health and wellbeing of mothers by considering the role of social processes, social capital and social networks. Through theories from diverse disciplines including Putman (2000)¹, Bourdieu (1984)², Portes (1998)³, Berkman et al., (2000)⁴, Kawachi and Berkman (2001)⁵, the complexities of social capital are addressed. Results have shown a match with the theory of 'normative' social capital, where attributes of social organisation such as trust and reciprocity, cohesion and solidarity have been linked. In other instances narratives of social capital have also matched with the 'resource' theory, where social capital influences varying modes of access to socially important resources.

Through these mechanisms, it is universally expected that the health of the respondents improves. However, this research shows other dimensions. Few theories related to social capital comment on the fact that a neighbourhood even though socially supportive and engaging, can prove to have a negative social influence on its inhabitants. Indeed, several respondents move out of this neighbourhood due to excessive familiarity and intrusion. In the new neighbourhood social context, these respondents find that the sense of anonymity, rather than being detrimental as theoretically explained, proves to be beneficial for their wellbeing.

Distance and Affordability as Barriers to Accessing Mental Health Services for Poor Living in Slums of Karachi: Findings from a Mixed-Methods Study

Authors

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3. Dr. Tazeen Saeed Ali (The Aga Khan University)

Abstract

Background & Purpose

The mental disorders contribute 12% to the global burden of disease affecting 25% of a global population and have emerged as a major challenge for developing countries in the SDGs era. Our study explored access, cost & consequences of limited accessibility to mental health services in terms of caregiving for the mentally ill in the urban communities.

Methods

A sequential mixed-methods study was conducted in the slums of Karachi from July – September 2015 using purposive sampling. The cross-sectional survey explored the service utilization patterns and costs of accessing mental health services. The qualitative inquiry (FGDs and interviews) explored the determinants of reduced access and reasons behind preference for not-for-profit NGO set up compared to public and private sectors.

Results

Out of 115, around 90% patients accessed the NGO services in past 3 months with almost all having switched from public sector services. Only 31% earned regularly with two-thirds earning less than 5000 Pakistan Rupee a month. As for caregivers, 53% considered the overall treatment costs as high and non-affordable, whereas, at least 70% considered the expenses incurred in separate cost components (consultation fee, medicines, and travel) as high. More than 50% preferred the NGO set up over public and private sectors (21% each) and cited easy accessibility (96.5%) and availability of low-cost medicines (84%) as a reason for continuing the treatment and preferring the NGO services. The qualitative inquiry augmented these findings with all the

stakeholders agreeing the cost of transport and medicines as limiting factors for the poor in terms of accessibility. This coupled with persistent poverty negatively affected the prognosis and quality of caregiving.

Conclusions

The limited accessibility and unavailability of cost-effective and affordable services for poor result in compromised quality of care and health outcomes as well as less than optimal services utilization.

Trends in Maternal and Child Health Care Utilization and Child Health Outcomes among Slum Residents in Sub-Saharan Africa and South Asia: Estimating Spatial Inequality Using a Slum Index

Authors

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Keywords: Maternal and Child Health, Urban Slums, Health Care Utilization, Health Disparities, sub-Saharan Africa, South Asia

Abstract

Purpose

With rising rates of urbanization and vast growth of slums in developing countries, research is needed to measure the determinants of health and health outcomes among urban slum residents. Estimating trends in urban health among slum residents relative to other urban inhabitants provides evidence of health disparities for priority setting by program implementers and policy-makers. This study adapts Günther and Harttgen's¹ (2012) spatial inequality approach for identifying slum residents from existing cross-sectional household data, in order to compare maternal and child health care utilization and childhood outcomes between rural, urban slum and urban non-slum residents in sub-Saharan Africa and South Asia over time.

Methods

We analyzed Demographic and Health Survey data from seven countries between 2003 and 2011. We studied four measures of maternal and child health care utilization, including: appropriate antenatal care, appropriate tetanus toxoid vaccination, skilled delivery, and full childhood immunization. Health outcomes studied include the prevalence of diarrheal disease and of acute respiratory infection in children under-five. Adjusted multivariate logistic regression models were used to assess differences in health care utilization and health outcomes between slum residents and other urban

residents within each of the countries. We employed post-estimation commands to assess whether changes were significant over time.

Conclusion

In some locations, improvements over time in maternal and child health care utilization and child health outcomes among slum dwellers were found, suggesting encouraging shifts in reaching marginalized populations. However, in spite of improvements in some indicators, we also find evidence of increasing disparities in urban settings, in support of the concept of a growing “urban penalty.” Further investigation is needed to understand what factors contribute the most to improvements, ways to scale-up existing efforts, and to what extent lessons learned can be shared across countries.

CS 3.1: GEOGRAPHY AND URBAN HEALTH-ICDs-01

High Incidence of Vaccine Preventable Diseases in Urban Districts of Ghana

Authors

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Abstract

Background: Vaccine-preventable diseases (VPDs) are a major global public health problem with a disproportionate burden of disease in low and middle income countries (LMIC). Although information on the spatial, demographic and geo-ecological determinants of VPD incidence is vital for effective control, very few studies in Africa have focused on these. This study was investigated the spatial clustering of six VPDs (Measles, Meningitis, Mumps, Otitis media, Pneumonia and Tetanus) in a West African country. The study also compared the incidence of VPDs across settlement types, ecological zones and administrative regions.

Methods: This study was conducted in the West African nation of Ghana. Cumulative incidence of VPDs for 2010 – 2014 were computed for each administrative district using Ghana census data and disease counts from the Centre for Health Information Management (CHIM) of Ghana Health Services (GHS). ArcGIS 10.1 and GeoDATM 1.6.7 were used to conduct Global spatial autocorrelation (Moran I) and Local Indicator of Spatial Association (LISA) analysis. Relationships between VPD incidence and settlement types, ecological zones and administrative regions were determined using Kruskal-Wallis H test.

Results: The analysis revealed unique clustering patterns for VPDs in the study area. Incidence of VPDs were found to be higher in urban districts compared to rural districts. Incidence of some VPDs varied across ecological zones and administrative regions.

Conclusion: This study presents evidence of spatial clustering of VPDs in Ghana. It also provides evidence of higher VPD incidence in urban districts of Ghana. Further investigations will be needed better understand the reasons behind clustering patterns and higher incidence of VPDs in urban districts. Findings of this study provide valuable insights for public health practitioners and Expanded Program on Immunization (EPI) managers.

Urban Rural Differential in the Risk of Chronic Diseases in India: Evidence from a Large Scale Sample Survey

Authors

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Abstract

Background: Extant literature is full of studies on urban rural differential in maternal and child health in India. But studies on urban rural differential in risk of chronic diseases are limited. Earlier studies examining urban rural differential in risk of chronic diseases were based on small area. None of the studies were based on nationally representative sample survey.

Objective: Data from India Human Development Survey (IHDS) conducted in 2004-05 has been used to test the hypotheses: risk of chronic diseases is equally prevalent in urban and rural areas.

Methods: The present study had measured six outcome variables namely occurrence of TB, mental illness, cancer, diabetes, high blood pressure and heart disease. Bivariate and multivariate techniques were used for analysis.

Results: Findings of the study rejected the hypotheses. There are enormous urban rural differential in risk of chronic diseases. Diseases like tuberculosis, cancer and mental illness are more prevalent in rural areas, while lifestyle diseases namely diabetes and hypertension have notably high prevalence in urban areas. Findings clearly indicating that there are two type of disease, disease of rural area and disease of urban area. Urban India is suffering from diabetes and hypertension because of sick lifestyle.

Drug Resistance Among Pregnant Women Attending Antenatal Clinic in Ghana

Authors

1. Mr. Philip Enyan (University of Ghana Medical School)

Abstract

Background: Initial evidence from resource-limited countries using the WHO HIV drug resistance (HIVDR) threshold survey suggests that transmission of drug-resistance strains is likely to be limited. However, as access to ART is expanded, increased

emergence of HIVDR is feared as a potential consequence. We have performed a surveillance survey of transmitted HIVDR among recently infected persons in the geographic setting of Accra, Ghana.

Methods: As part of a cross-sectional survey, 2 large voluntary counseling and testing centers in Accra enrolled 50 newly HIV-diagnosed, antiretroviral drug-naïve adults aged 18 to 25 years. Virus from plasma samples with >1,000 HIV RNA copies/mL (Roche Amplicor v1.5) were sequenced in the pol gene. Transmitted drug resistance-associated mutations (TDRM) were identified according to the WHO 2009 Surveillance DRM list, using Stanford CPR tool (v 5.0 beta). Phylogenetic relationships of the newly characterized viruses were estimated by comparison with HIV-1 reference sequences from the Los Alamos database, by using the ClustalW alignment program implemented.

Results: Subtypes were predominantly D (39/70, 55.7%), A (29/70, 41.4%), and C (2/70; 2, 9%). Seven nucleotide sequences harbored a major TDRM (3 NNRTI, 3 NRTI, and 1 PI-associated mutation); HIVDR point prevalence was 10.0% (95%CI 4.1% to 19.5%). The identified TDRM were D67G (1.3%), L210W (2.6%); G190A (1.3%); G190S (1.3%); K101E (1.3%), and N88D (1.3%) for PI.

Conclusions: In Accra the capital city of Ghana, we found a rate of transmitted HIVDR, which, according to the WHO threshold survey method, falls into the moderate (5 to 15%) category. This is a considerable increase compared to the rate of <5% estimated in the 2006-7 survey among women attending an antenatal clinic in Mamobi. As ART programs expand throughout Africa, incident infections should be monitored for the presence of transmitted drug resistance in order to guide ART regimen policies.

Dengue, Product and Marker of Urban Inequalities: The Case of Santa Cruz de la Sierra (Bolivia)

Authors

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Abstract

Dengue is a major public health problem linked to urbanization and globalization. Dengue is endemic in Bolivia's lowlands, in particular in the Santa Cruz de la Sierra region, where the head town is now considered to be the epicenter of the disease in the country. The town of Santa Cruz de la Sierra has roughly 1.5 million inhabitants and is characterized by significant spatial and demographic growth since the middle of the 20th century. This growth produced heterogeneous urban sub-spaces and diverse conditions for the circulation and transmission of the dengue virus.

This paper presents findings from a study of household and neighborhood vulnerability to dengue in the town of Santa Cruz. We pursued a spatial analysis of diagnosed cases of dengue and census data to identify diagnosed dengue heterogeneity, which is often confused with spaces at risk heterogeneity. To analyze the real conditions of virus circulation at household and neighborhood level, the same data were collected during a multidisciplinary field survey from a 100 cluster random sample at the town level. Our findings reveal the social and spatial variability of dengue morbidity, and that different spaces of risk are produced by neighborhood-level disparities. Comparing these results with other urban health research (Santinelles research program) allows us then to propose a new analysis of the health consequences of urban development, planning and management.

CS 3.2: GEOGRAPHY AND URBAN HEALTH-ICDs-02

Investigating the Origin of Imported Dengue Cases and Characteristics of Dengue Epidemics: The Role of Inter-Regional Flows in the Spread of Epidemics in a City of Regional Influence Under Tropical Climate

Authors

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4. Ms. Rosangela Gasparetto Da Silva (UNIVERSIDADE DE SÃO PAULO)

Abstract

Introduction: In the state of São Paulo, Brazil, studies have identified a high incidence in the coastal cities of the state, particularly in Santos, the largest port. However few studies have looked at the contribution of flows in the spread of epidemics.

Objectives: To investigate imported dengue cases in epidemics and to describe the main epidemiological characteristics in Araraquara, in the state of São Paulo.

Methods: Use of all reported cases of dengue from the Information System for Notifiable Diseases (SINAN) from 1998 to 2013. Dengue incidence was calculated for each year and a Geographic Information System was used to map the sites of infection of imported cases.

Results: There was increase of dengue incidence and annual variation in the epidemiological pattern of the disease. Imported cases of dengue occurred both in epidemic and inter-epidemic years. However there were higher numbers of imported cases in the inter-epidemic periods and most were imported from other municipalities of the State of São Paulo.

Conclusion: Results demonstrated the relevance of imported cases of dengue in

different years in the spread of epidemics. Also pointed important changes in the epidemiology of dengue regarding age, gender and site of infection. The finding reinforces the need for actions to combat dengue also in schools, in the workplace and at points of arrival and departure of people in the city, such as transportation terminals, sugar cane and orange juice industries that export their products through the port, bus terminals and bus locations.

It also highlights the need for targeted vector control programs and surveillance of travelers at ports, airports, bus station, train station, truck transportation and logistics enterprises as well as regularly affected local areas.

Association between Haemophilus Influenzae Type B (Hib) Vaccination and Child Anthropometry in Andhra Pradesh (India): Evidence from Young Lives Study

Authors

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Abstract

Objective: Haemophilus Influenzae Type B (Hib) causes infections of pneumonia, meningitis, epiglottitis and other invasive diseases exclusively among children under age five. The occurrence of these infections may impair child growth by causing micronutrient deficiency. The aim of this study was to examine the association between vaccination against Hib and child anthropometric outcomes in India.

Data and Methods: The study uses longitudinal data from first and second waves of Young Lives Study (YLS) conducted in Andhra Pradesh, India during 2002 (child aged 5-21 months) and 2006-07 (child aged 54-76 months). Study included 1824 children that had complete information on Hib vaccine, child anthropometric outcomes and other potential confounding variables in each wave of YLS. The outcome variables of interest are childhood stunting, underweight, wasting and thinness in wave-2. These variables were defined by Z-score of below minus two standard deviations from the median of the reference population

Results: Result shows that a higher percent of children were stunted and underweight among those who were not vaccinated against Hib (39% & 48% respectively) as compare to those who were vaccinated (31% and 39% respectively). The result of multivariate analysis also shows that childhood stunting and underweight was significantly lower among children who were vaccinated against Hib (odds ratio: 0.77, 95% CI: 0.62-0.96 and odds ratio: 0.80, 95% C.I: 0.64-0.99 respectively) as compare to the unvaccinated children. Moreover, about 9% of stunting and 10% of underweight could be prevented by adopting vaccination against Hib in India.

Conclusion: Study concludes that vaccination against Hib- in addition to being a major intervention for reducing childhood infectious disease and mortality- can be considered as a potential tool for reducing the burden of undernutrition in India. Therefore, the inclusion of Hib vaccine into universal immunization programme will be helpful to reduce the burden of undernutrition in India.

Neglected Tropical Diseases in Contemporary Urban Health Discourse: A Call to Action

Authors

1. Mr. Veincent Christian Pepito (University of the Philippines Manila)
2. Dr. Mojgan Sami (University of California, Irvine)

Abstract

Neglected tropical diseases (NTDs) are a subgroup of infectious illnesses which range from various intestinal parasitic infections to leprosy and dengue. Causing acute illness, long-term disability or premature death, its health effects are often amplified by stigma and economic losses. Although these diseases are prevalent in the tropical regions, they are not prioritized by funding agencies, researchers or policy makers.

It may be more appropriate to re-frame NTDs as diseases of poverty since the world's most economically-disadvantaged populations reside in or near the tropics. These diseases usually occur in rural regions and poor urban centers within low- and middle-income countries predominately in sub-Saharan Africa, Asia and Latin America.

Urban centers in these regions tend to be populated quickly given the current urbanization trends. By 2030, two-thirds of the world's population is projected to live in an urban area and around a third of these will be in mega-cities of low- and middle-income countries. These trends imply that the world's cities would be at the forefront of disease prevention at a scale unprecedented in history.

Despite the threat, contemporary urban health discourse is not giving NTDs the attention they deserve. Poor and marginalized urban communities suffer as a result. Aggravated by climate change, dengue outbreaks are happening more frequently. Certain diseases such as leprosy and intestinal parasitic infections still persist, with urban cases presenting a substantial hindrance to elimination.

There is a need to utilize the benefits of urbanization to implement an integrated approach to control NTDs. However, it is only when funding agencies, urban health experts and leaders at the national and international level acknowledge the threat and burden of NTDs on urban populations that meaningful action against these diseases can be done.

Factors Determining the Heterogeneity of Disease Burden in Relation to Urban Disparities for Rawalpindi City Slum Area Dwellers

Authors

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Abstract

Urban infectious diseases present an appealing focus for control interventions due to rising global burden of diseases in urban dwellers. Urbanization in developing countries is mostly haphazard, ill-planned resulting in slum area where dwellers confront with health inequalities and are vulnerable to infectious diseases. The current study was conducted in urban-slum areas of Rawalpindi to investigate (i) incidence of infectious diseases in poor communities, (ii) factors associated with disease prevalence in urban settings and (iii) how equitable resource allocation can reduce the health risks of vulnerable population. Using self structured questionnaire, based on information gathered after extensive field surveys, data of 944 persons were collected out of which 585 (62 %) were females while 359 (38 %) were males with an average family income less than Rs. 15,000 (US\$ 150) per month. Based on odds ratio statistics, significant increase in flu and gastrointestinal infections were observed. Age group between 6–12 years was most affected by flu while females appeared highly vulnerable to both flu (OR=1.39; 95% CI=1.07–1.80) and gastro problems (OR=1.51; 95% CI=1.16–1.95). Results of univariate logistic regression revealed that room sharing (OR=2.11; 95% CI=1.62–2.74) and 1-2 bed houses (OR=1.58; 95% CI=1.21–2.06) has significant effect on household flu vulnerability apart from other characteristics of slum areas such as open wastewater channels and exposure to cold. Inappropriate heating and inaccessibility to clean drinking water has forced people to indulge in risky behavior that has reduced their quality of life and increased their susceptibility to infectious diseases. We conclude that equitable allocation of financial resources can uplift the health of urban poor community investigated here. Better housing, safe infrastructure for extreme cold and heat exposure prevention, improved sanitation and access to safe drinking water are highlighted as intervention priorities.

CS 3.3: GEOGRAPHY AND URBAN HEALTH-METHODOLOGIES-01

Geographical Access to Healthy Foods and Residents' Perceptions: A Mixed Methods Study Using GIS, on Field Measures and Photovoice

Authors

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4. Ms. Carmen Ramos (Public Health Institute. Madrid Salud (Madrid City Council))
5. Dr. Manuel Franco (Social and Cardiovascular Epidemiology Research Group, School of Medicine, University of Alcala, Alcala de Henares, Madrid, Spain.)

Abstract

Several studies have highlighted the value of investigating people's perceptions of the neighborhood food environments vs. objective measures. Qualitative research may help to better understand perceived barriers and facilitators to healthy eating. We aimed to gain a deeper understanding of how low-income residents perceive their neighborhood food environment and its related barriers and facilitators combining GIS, in-store assessments and the participatory action research method of Photovoice. This mixed methods study was conducted in Madrid (Spain), with twelve adults aging 40-75, residents in one low-income neighborhood. Participants photographed, discussed and analyzed both positive and negative aspects of their food environment. We combined data from their photographs and discussions with objective food environment measures based on GIS and in-store field audits. We categorized availability, quality and price of healthy foods, using an overall healthy food availability index (HFAI) score (-7 to 49), and calculated resident's walking access with a street network analysis. A total of 114 food stores were identified and half of them were surveyed. 59.4% were traditional stores, 34.4% corner stores, and 6.2% supermarkets. The mean HFAI scores for these store types ranged from 36.5 for supermarkets to 33.6 and 10.84 for corner stores and traditional stores, respectively. 97.8% of residents lived within less than 10 minutes from a high healthy food store. Participants highlighted that traditional food stores offered healthier, with better quality of products and service whereas supermarkets were seen as promoters of marketing unhealthy foods. Supporting traditional stores would facilitate healthy food access, while enhancing social cohesion within neighbors. Identified barriers were "economic crisis", "lack of leisure facilities" and "the wide availability of energy dense foods at low prices". The combination of quantitative and qualitative methods conceptualizing barriers and facilitators to healthy eating generated concrete targets for interventions promoting a healthier neighborhood food environment.

Assessing Benefits of Green Roofs in Urban Context Quantification of Air-Pollutants Cut Down by Green Roofs and Positive Effects on Population Health Status

Authors

1. Prof. Stefano Capolongo (Politecnico di Milano)
2. Prof. Daniela D'Alessandro (La Sapienza University of Rome)
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4. Dr. Marco Gola (Politecnico di Milano)

5. Dr. Giulia Procopio (Politecnico di Milano)
6. Dr. andrea rebecchi (Politecnico di Milano)
7. Prof. Maddalena Buffoli (Politecnico di Milano)

Abstract

OBJECTIVES

Densely-built urban areas are affected by high air pollution levels, whose are caused by vehicle traffic, which represent the main emission source into the atmosphere, but also by combustion processes of buildings' heating. Smog and fine particles are responsible for health problems such as respiratory and cardiovascular diseases, with repercussions mainly on weak population (elderly and children groups). The green, in all its forms, and especially plants are able to absorb these toxic substances by filtering polluted air, releasing oxygen into the atmosphere and, where it is possible, reducing noise pollution.

Aim of the research is to quantify the capability of green roofs as an element to reduce air-pollutants in urban contexts, investigating the positive effects on population health status.

METHODS

The first phase of the study analyses the green areas' effects of citizenship's health, through a systematic review of the scientific literature. Subsequently, the research work has been developed a calculation model in order to quantify the pollutants cut down in relation to an increase of green surfaces on the flat roofs of an urban area examined. In conclusion, through the calculation model, it has been estimated benefits of a hypothetical intervention of cover green roofs' transformation, in a neighborhood of Milano city.

RESULTS

The project of conversion in green roofs through the application of the tool, according to the percentages defined by the morpho-typological analysis of the buildings examined, could reduce the pollutants up to 18,09 $\mu\text{g}/\text{m}^3$ of PM10, 13,56 $\mu\text{g}/\text{m}^3$ of PM2.5 and 7,24 $\mu\text{g}/\text{m}^3$ of O₃ each year.

CONCLUSIONS

Considering a large-scale urban redevelopment project, in addition to psychological and perceptive benefits, with positive influences on housing quality and life of population, it should be considerate the benefits of environmental sustainability, such as reducing noise pollution, absorption of electro-smog, microclimate mitigation and fixing fine particles.

Studying Socio-Territorial Processes in Two West African Cities: Research Design and Methodology

Authors

1. Dr. Ellen Foley (Clark University)
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6. Dr. Florence Fournet (Institut de)

Abstract

The SANTINELLES project represents an attempt to develop an innovative methodology to deepen our understanding of urban health inequalities in mid-sized cities in West Africa, and in particular how they are situated within broader processes of urbanization and the social production of urban places. While there is some existing literature on urbanization and health in Saint Louis, Senegal, these processes are very understudied in Bobo-Dioulasso (the second largest city in Burkina Faso), particularly by health geographers. Our sampling method relied on random spatial sampling of 250 households from a total of eight neighborhoods (four in each city). These neighborhoods were selected to represent the heterogeneity of urban spaces and urban dwellers in each city. We collected a variety of qualitative and quantitative data from each sampled household. Data collection techniques included a household survey, clinical exams of adults and children, and a socio-medical questionnaire. The study relied on several health indicators (including nutritional status and malaria) among children aged 6 to 59 months and adults aged 35 to 59. This paper will provide an overview of the SANTINELLES project's research design and some of the methodological successes and challenges we faced during the course of data collection.

Researching Healthy Land Use Policy Making Using Realist Methods

Authors

1. Dr. Patrick Harris (University of Sydney)

Abstract

Purpose

Realist methods in health research are increasingly used but there is very little knowledge about how to conduct realist research investigations into public policy. At the same time, despite the extensive evidence base clarifying the built environment as a determinant of health, there is limited knowledge about how and why land use planning systems take on health concerns. This presentation provides methodological insights

from a program of realist research investigating the inclusion of health across a land use planning system in New South Wales, Australia.

Methods

Data collection includes publicly available documentation and purposively sampled stakeholder interviews and focus groups across different cases of activities in the land use planning system. The (new institutionalist) units of analysis are 'institutional' structures (rules and mandates constraining and enabling actors), 'actors' (the stakeholders, organisations and networks involved), and 'ideas' (policy content). Data analysis combines the empirical data with relevant theories from political science, sociology and political economy to develop propositions about 'mechanisms' and 'conditions' leading to the 'outcome' of health's inclusion or non- inclusion.

Conclusions

The institutionalist units of analysis (ideas, actors, structures) is useful for designing data collection and initial analysis about mechanisms and conditions. For example, cases of environmental impact assessments of major infrastructure developments have shown health is principally included in assessments of risk (an idea as a 'mechanism') because of the culture of the health system (actors and structures forming 'conditions'), which is necessary but insufficient to include the wide range of health issues ('outcome'). Using different theories has helped to explain different aspects of policy making revealed by the empirical data. For example Kingdon's focus on windows of opportunity complements Sabatier's focus on networks and power, and the political economy approach interrogates facilitating or regulating health considerations within public and private capital investment in the built environment.

CS 3.4: GEOGRAPHY AND URBAN HEALTH-METHODOLOGIES-02

Generating Evidence in Maternal and Newborn Health in Urban India: A Rigorous Process

Authors

1. Dr. Benazir Patil (Save the Children, India)
2. Mr. Dipankar Bhattacharya (Save the Children, India)
3. Dr. Uzma Syed (Save the Children, USA)
4. Dr. Lara Vaz (Save the Children, USA)
5. Dr. Sudeep Singh Gadok (Save the Children, India)
6. Dr. Rajesh Khanna (Save the Children, India)

Abstract

Background

Nearly half of the population in India is expected to reside in urban areas by 2030. However, little is known about appropriate delivery mechanisms or effective intervention strategies for urban areas. Analysis of the NFHS III data confirms the worse-off health

status of the urban poor . While the recently launched National Urban Health Mission (NUHM) seeks to improve access to primary health care in urban areas, with a focus on the urban poor, it is equally important that the processes and platforms that help design sensitive, responsive, and relevant urban health interventions are in place. Saving Newborn Lives (SNL) project of Save the Children is working on generating evidence to help develop effective service delivery mechanisms for maternal and newborn health care in urban poor settings.

Methods

A meditated and rigorous process was carried out comprising of: emphasis on urban newborn in the India Newborn Action Plan INAP; A landscape analysis that identified key stakeholders working in urban health; Formulation of a Technical Advisory Group (TAG) for urban health; Undertaking a literature review and secondary data analysis; Conducting of HMIS study; Conducting a situation analysis (focusing both on demand and supply side) in two cities and developing city specific approaches detailing out required service delivery mechanisms for MNH in urban poor settings.

Discussion

The process elicits consensus building strategies and mechanisms proposed in the form of city specific approaches for improving maternal and newborn health in urban poor settings of India. It indicates that no single magic bullet mechanism exists for providing primary health care for the mothers and newborns in cities and that every mechanism should look into the aspects of availability and accessibility in order to bring about significant changes.

Documenting Health Concerns in Marseille's Industrial Corridor: The Benefits of a Community-Based, Multidisciplinary Research Collaboration

Authors

1. Ms. Alison Cohen (University of California, Berkeley)
2. Prof. Barbara Allen (Virginia Tech University)
3. Ms. Yolaine Ferrier (Centre National de la Recherche Scientifique, Centre Norbert Elias)
4. Dr. Johanna Lees (Centre National de la Recherche Scientifique, Centre Norbert Elias)
5. Mr. Travis Richards (University of California, Berkeley)

Abstract

Industrial activity in the Marseille metropolitan area, with a population second only to Paris in France, is heavily concentrated and abuts residential communities. Local residents express great concern about the possible environmental health impacts, but have limited evidence to assess these concerns. Our research team, with experience in sociology, anthropology, epidemiology, and environmental health science, has collaborated with community residents and local stakeholders in a multidisciplinary,

community-based participatory research process to systematically document health issues of residents in these towns.

In this presentation, we argue that multidisciplinary and community-based, participatory work is key for developing research that will be useful to community residents and leaders and will inform action. In this abstract, we list some key examples. From the multidisciplinary perspective, we used sociology research to understand how residents and stakeholders have made meaning from previous studies of environmental health in the region to identify how our ongoing study can fill current gaps in knowledge. We used epidemiology methods to design a rigorous sampling strategy and questionnaire. We used environmental health science and in-depth anthropologic interview data to help identify topics to include in the survey. Our community-based approach improved the research at every step of the process, from helping identify topics to include in the survey, to increasing participation once we began administering the survey, to helping analyze and make sense of the findings.

Out of over a dozen urban environmental health studies conducted in this region, ours is the only one to be multidisciplinary and/or community-based in nature, and while both of these approaches are increasingly common in some countries (like the United States), they remain rare in France and elsewhere in Europe. Based on the benefits we outline here, we encourage greater uptake of these approaches for researchers interested in comprehensively and systematically documenting urban health issues.

Integrated Territorial Development for Health Equity: What Elements are Crucial?

Authors

1. Prof. André-Anne Parent (Université de Montréal)
2. Prof. Denis Bourque (Université du Québec en Outaouais)
3. Dr. René Lachapelle (Université du Québec en Outaouais)

Abstract

Complex problems such as health inequities and neighborhood revitalization are increasingly addressed through local intersectoral partnerships, causing a multiplicity of venues in which actors can be involved, and consequently, « hyper-consultation ». To overcome this problem and improve action, communities started to convene actors from local networks in order to implement integrated territorial development approaches. As part of a wider research on the subject of integrated territorial development practices, a postdoctoral internship was carried out. The objective of this component of the research was to enhance participants' understanding of three local networks and support reflection on optimizing collaborative practices. The trainee developed an innovative research method based on a collaborative model for emerging initiatives that assured sharing and use of knowledge, as outlined by the knowledge-based enlightenment strategy. A summary of the data highlighted a number of elements to improve common to the three initiatives studied: the need to clarify and assert a clear leadership in order

to carry out actions that promote equity; the importance of resources, particularly financing; diversification of sectors represented by partners; level of trust between partners; clarification of roles, particularly elected institutions and managers; and finally, recognition of the approach by local decision makers. In addition, contextual factors specific to the socio-political climate seem to have been critical during the observed period. Indeed, repositioning of the State according to a logic of individual responsibility and phasing of investment in communities in favor of centralization and privatization, destabilized local networks, still being rebuilt. The results will provide a better understanding of local practices and nourish the larger study that will end in 2017, thereby enhancing new ways to deal with complex problems in communities, such as health inequities and adverse living conditions.

Tackling Health Inequalities through Urban Regeneration Programs: Preliminary Results of the Dutch District Approach

Authors

1. Ms. Annemarie Ruijsbroek (National Institute for Public Health and the Environment (RIVM))
2. Dr. Albert Wong (National Institute for Public Health and the Environment (RIVM))
3. Prof. Karien Stronks (Academic Medical Centre, University of Amsterdam)
4. Prof. Anton Kunst (Academic Medical Centre, University of Amsterdam)
5. Prof. Hans Van Oers (National Institute for Public Health and the Environment (RIVM))
6. Dr. Carolien Van Den Brink (National Institute for Public Health and the Environment (RIVM))

Abstract

Purpose: Health problems often concentrate in areas where also the social and physical environment is poor. Such neighbourhoods tend to concentrate socioeconomically disadvantaged groups, like unemployed people living on a low income. The living conditions in these areas together with the socioeconomic situations of the residents make up the so-called “social determinants of health”. Urban regeneration programs aim to target these social determinants of health. The investigation of urban regeneration programs can therefore be useful to generate evidence about the impact of area-level policies on health and health inequalities.

One such regeneration program is the Dutch District Approach. This approach, which started in 2008 in the 40 most deprived districts of the Netherlands, deployed interventions addressing the social and physical environment and the social position of residents. These interventions thus offered a unique opportunity to examine the health effects of area based investments addressing the social determinants of health. The health impact of urban regeneration programs have been studied previously, also in the Netherlands (URBAN40). The current study will supplement this previous work by using

a longer follow-up time, a better selection of the control population and by including more health outcomes.

Method: This study aims to evaluate the longer term health impact of the Dutch Districts Approach, using a quasi-experimental design. Propensity Score Matching (PSM) is used to match control districts with the target districts. We use both neighbourhood characteristics and individual characteristics for matching. Next, the Difference-in-Difference approach is used to compare the health developments (general health, mental health, physical activity, smoking & BMI) in the target districts with the control districts. The results will be presented at the conference.

Conclusion: We anticipate that the results will provide insights in the longer term health impacts of large-scale urban regeneration schemes and their usefulness for tackling geographical health inequalities.

CS 4.1: URBAN HEALTH-BEHAVIORS-03

Travel Behaviour, Active Travel and its Relationship to Physical Activity Among Sri Lankan Adults

Authors

1. Dr. Shreenika de Silva Welilage (University of Colombo)
2. Prof. Dulitha Fernando (University of Colombo)
3. Dr. Jagath Gunatilake (University of Peradeniya)

Abstract

Background: Although the benefits of active living are clear, many people do not engage in sufficient PA. Having supportive public policy that support active transportation is a method that could encourage more PA among populations.

Objectives: The aim of this study was to assess the travel behaviour and the contribution from active travel and its relationship with meeting recommended levels of activity among Sri Lankan adults in the district of Colombo.

Methods: This study was carried out among a sample of 1320 adults. The pattern of PA was assessed using the long form of the International Physical Activity Questionnaire (IPAQ) validated for Sri Lanka. Travel related behaviour was assessed using an interviewer administered questionnaire.

Results: Majority travelled at least 10 minutes a day to go from place to place. The median travel time was 80 minutes a day (IQR =40-120). Median minutes of both walking and cycling (active transportation) were 30 minutes/day. Among those travelling for a job/studies, active transportation was used by 13.5%. The median time for travelling for day to day activities was 30 minutes a day (IQR=20-60 min). Twenty

percent walked for day to day travel. Active transport was used for day to day needs by 23.7% of the study sample. When the total amount of physical activity was assessed with travel behaviour to the job, the mode of travel showed a significant relationship with the level of PA ($p < 0.01$). The percentage belonging to the sufficient activity group was highest among those using active transportation when compared to those using motorised transport.

Conclusions and recommendations: Sri Lankan adults on average, recorded about one and a half hours of travel per day of which only one third was using an active mode of transport. Using active transportation were significantly associated with achieving recommended amounts of PA.

How the Built Environment Affects Active Physical Activity Behaviours of Migrants

Authors

1. Ms. Lailah Alidu (University of Birmingham)

Abstract

Migrant health has been an issue of concern in countries receiving high number of migrants. In recent years there has been studies to prove that the health of migrants deteriorate on arrival at their destination. There have also been rising levels of obesity and its related illnesses. This in part may be due to high calorie food consumption and lower levels of physical activities amongst these groups. Even though campaigns and initiatives to increase participation in physical activity have been underway, levels of physical activity amongst people have been static and may have declined in the UK. This paper sought to investigate environmental factors that discourage healthy physical activity behaviours of migrants in Birmingham. The study aimed at using in depth interviews to explore their health beliefs and behaviours.

Thirty-six participants were recruited through community settings, churches, universities and through the use of posters. All interviews were conducted in English, recorded and transcribed verbatim. Interviews were analysed using a thematic approach. Qualitative analysis using thematic approach revealed important themes such as, religious and cultural barriers, non human friendly environment, technology based activities promoting laziness. Some respondents would not use parks and green spaces for any physical activity such as walking or running because of the presence of dogs. Some women respondents were not comfortable jogging because of the presence of men smoking and engaging in anti social behaviours. They also found it tempting to exercise because of escalators, automatic doors and elevators everywhere. In this research it was found that culture and religion form underlying factors for not engaging in physical activity so therefore public health activities, interventions and promotions should take into consideration the diversity in terms of culture and religion in order to be effective.

Active Transport and Urban Health a Questionnaire to Quantify the Level of Physical Activity of Milano's Citizenship

Authors

1. Prof. Maddalena Buffoli (Politecnico di Milano)
2. Dr. Lorenzo Boati (Politecnico di Milano)
3. Dr. Marco Gola (Politecnico di Milano)
4. Dr. Marta Dell'ovo (Politecnico di Milano)
5. Dr. Andrea Rebecchi (Politecnico di Milano)
6. Prof. Stefano Capolongo (Politecnico di Milano)

Abstract

OBJECTIVES

Regular Physical Activity (PA) has significant benefits for public health. In urban areas, several studies demonstrate that Active Transport (AT) could help raising the level of daily PA, health benefits and population's well-being. In this context, public policies in urban planning play a key role in making the built environment encouraging healthier lifestyles.

METHODS

Aim of the research was to assess the expected increase of PA as a result of improving pedestrian and cycle paths and the short-medium-long term impacts on lifestyles and population's health status.

It has been distributed a questionnaire, specifically organized to collect data to be processed with the tool HEAT (WHO Regional Office for Europe) and for know the citizens' habits regarding the current usage of bike and the potential increase.

RESULTS

The questionnaire has investigated various aspects, such as willingness to change habits in PA, different kinds in city daily transfers, utilization of bike sharing and evaluation of the existing cycle network's satisfaction degree. The analysis was conducted in an area of Milan, administered for a period of 2 months on a sample of population between 20 and 65 years.

The collected data demonstrate that through the implementation of the cycle network, there would be more cyclists which carry out the 150 minutes weekly of PA recommended by WHO: time spent in AT shifts from 35,8% to 70,2%. Protective benefit on the risk of mortality for cyclists compared to non-cyclists increases from 3% to 6% (growing more of 50%).

CONCLUSIONS

Through the adoption of HEAT, it was also quantified the savings benefits of the National Health System resulting from the reduction of mortality related to increased AT. Progressively, the research developments could investigate other aspects like air-pollution, traffic, noise and further general actions for healthy lifestyles promotion as a vehicle of public health prevention.

How to Map Urban Health Facilities in LMICs; A Practical Guide

Authors

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5. Mr. Shakil Ahmed (International Center for Diarrhoeal Disease & Research, Bangladesh (icddr,b))

Abstract

Health Facility Mapping has been identified as a cornerstone for health planning and monitoring by the World Health Organization. Yet developing countries that could benefit from a comprehensive health facility database lack GIS trained personnel to conduct mapping exercises. Furthermore, in urban areas, technical difficulties are encountered in recording Global Positioning System (GPS) coordinates using traditional devices due to high-rise buildings and close proximity of health facilities. Keeping these challenges in mind, we have developed a streamlined method to undertake health facility mapping in urban areas by non-technical personnel.

To describe the processes and steps involved in health facility mapping in urban areas.

The first step involves getting permission from health authorities in the country and the preparation of basemaps. In absence of digitized maps and only periodic update of non-digitized paper maps, a process of digitization and update was necessary. The second step involves the systematic inventory of all facilities. To save time and cost we merged listing and geocode collection steps through the use of a computer application which has the following functionalities: (a) Listing forms (facility name, address, contact number) with an option for collection of geographic coordinates. (b) Auto unique identifier generation for each listed facility. (c) Onsite correction through live plotting of geocodes over an upgraded base map. The third step is where we do facility survey. The Survey questionnaire followed WHO's recommended signal and domain functions. To minimize data collection error the app had built-in logic checks. The fourth step is where 5-10% of the surveyed areas are revisited for data verification

This method for mapping was refined over a period of 3 years during field work in Bangladesh. Other countries in the process of creating Master Facility Lists may benefit from our experience and methodological innovations., potentially saving time and expert resource costs.

Prioritize Health! How Should a Hospital Contribute to the Health of the Community it Serves?

Authors

1. Ms. Lindsey Realmuto (The New York Academy of Medicine)
2. Ms. Maya Scherer (The New York Academy of Medicine)
3. Ms. Alexandra Kamler (The New York Academy of Medicine)
4. Mr. Tongtan Chantararat (The New York Academy of Medicine)
5. Dr. Marthe Gold (The New York Academy of Medicine)
6. Dr. Linda Weiss (The New York Academy of Medicine)

Abstract

Meeting health needs for diverse urban populations is a challenge that is arguably best accomplished by asking guidance from a cross-section of that constituency. Public deliberation (PD) is a method of stakeholder engagement used to gather public input for institutions and/or policy makers on values-based decisions that cannot be adequately addressed with technical information alone. This presentation describes a project that used PD to provide guidance to a New York City hospital in a very diverse community on best approaches to prevent chronic disease.

PD sessions included presentations on chronic disease prevention, focusing on evidence-based clinical, community, and policy approaches, health conditions and disparities, social determinants of health, and use of evidence. Participants informed by experts discussed case studies in small and large groups, bringing in their own values and experience to prioritize approaches, populations and particular interventions. To assess the impact of the PD on participant knowledge and attitudes, and the quality and effectiveness of the deliberative sessions, participants completed pre- and post-surveys.

Sixty-six individuals, diverse with respect to age, race, ethnicity, culture, neighborhood of residence and educational attainment, participated in three 2-day deliberative sessions. A majority of participants across all sessions prioritized community-based or policy-based interventions versus clinic-based prevention approaches. Additionally, participants recommended that the hospital focus prevention efforts on populations at highest risk of disease due to their socioeconomic status. The hospital is reviewing recommendations from the PD for implementation.

Our findings suggest that members of the public see an important role for hospitals in activities other than clinical care, including community programming that is appropriate and responsive to a diverse, urban community. In addition, they expressed a greater interest in the common good than in their own needs, prioritizing programs that address those at highest risk of disease due to social factors.

CS 4.2: URBAN HEALTH-ENVIRONMENTAL HEALTH-02

A Longitudinal Study of the Impacts of Public Transit Improvements on Commute Patterns and Physical Activity Levels of Queen's University Employees in Kingston, Ontario

Authors

1. Dr. Patricia Collins (Queen's University)
2. Dr. Ajay Agarwal (Queen's University)

Abstract

To curb greenhouse gas emissions and reduce the burden on aging street infrastructure, North American municipalities are (re)investing in public transit to increase ridership. Meanwhile, studies have shown that riding public transit offers valuable opportunities for daily physical activity (PA), since walking is usually required at both ends of the journey. Thus, public transit offers a valuable option for improving urban health at individual and population levels.

In the automobile-dependent midsized city of Kingston Ontario, three new express bus routes have been introduced to improve the network and increase ridership. The objective of this study was to longitudinally examine changes in commute patterns and physical activity levels since the introduction of these routes among an employee group that has been a primary focus of Kingston's Transit Redevelopment Strategy.

An online survey was administered to the same population of Queen's University employees in October 2013 (RR=43%), 2014 (RR=33%), and 2015 (RR=43%). 443 employees completed the survey in all three years, and are the focus of our analysis.

We observed a 3.7% increase in year-round transit ridership from year 1 to year 2, and a further 2.0% increase from year 2 to year 3, representing a total increase of 5.7% in 2 years ($p < 0.001$). Most of the mode shifting was observed among employees who drove/carpooled, parked off-site, and walked in ($p = 0.02$), though there were modest reductions in those using entirely passive and active modes in previous years. Transit riders reported the lowest number of leisure-time physical activity (LTPA) minutes per week. However, when leisure time physical activity (LTPA) was combined with their commute-related physical activity, transit riders accrued 30 more minutes of PA per week than entirely passive commuters.

Our study demonstrates that investments in public transit do stimulate transit ridership and provide physical activity opportunities, even in automobile-oriented midsized cities.

Climate Change Adaptation for England's Health and Care System

Authors

1. Dr. Bernd Eggen (Public Health England (PHE))
2. Dr. Sonia Roschnik (SDU /Sustainable Systems Solutions)
3. Dr. Louise Newport (Department of Health, UK)

Abstract

The UK's Climate Change Act 2008 requires public sector organisations to consider the risks posed by climate change and report on their preparation and planning for adaptation. For the first time, a comprehensive report for the whole of the health and care system in England has been prepared. A multi-sectorial system approach was considered most appropriate because it provides greater insights into the state of climate change preparedness and capacity to adapt in this sector. It also means that synergies and barriers can be identified so that areas for further collaboration can be recognised.

The following parts of the health and care system have been considered:

- National Bodies representing the health sector in England;
- Providers of NHS services (including Ambulance Trusts);
- Family doctors, dental practitioners;
- Voluntary Sector represented by Joseph Rowntree Foundation and National Council of Voluntary Organisations;
- Clinical Commissioning Groups;
- Health and Wellbeing Boards.

The report was prepared by a team from all the above sectors, led by the Sustainable Development Unit (SDU).

Three elements are considered for each part of the health and care system:

- Risk Assessment;
- Adaptation Planning;
- Impact/Evaluation of Adaptation Actions.

Where possible other areas are addressed including:

- Opportunities;
- Assumptions and uncertainties;
- Barriers to implementation of adaptation plans;
- Useful tools, support, guidance.

A considerable amount of information is routinely collected by the health and care system (e.g. syndromic surveillance) and this adaptation report draws predominantly on these sources, also highlighting areas where key information is still needed.

This is the first comprehensive adaptation report for a country's health and care system.

Polybrominated Diphenyl Ethers and Polychlorinated Biphenyls in Dust from Cars, Homes, and Offices in Lagos, Nigeria

Authors

1. Dr. Temilola Oluseyi (University of Lagos)

Abstract

Concentrations of polybrominated diphenyl ethers (PBDEs) and polychlorinated biphenyls (PCBs) were measured in dust from 16 cars, 12 homes, and 18 offices in Lagos, Nigeria. These data are the first and second reports respectively of contamination of Nigerian indoor dust with PCBs and PBDEs, the second report on PCBs in car dust worldwide, and augment substantially the database available for the African continent. Highly elevated concentrations of BDE-47 and BDE-99 were observed in two car dust samples. At 9,300 and 3,700 ng/g for BDE-47 and 4,200 and 19,000 ng/g for BDE-99, they are amongst the highest reported for these congeners globally. ANOVA comparison with previously reported data for Canada, New Zealand, the UK, and the USA; reveals concentrations of the Penta-BDE congeners BDEs 28, 49, 47, 66, 100, 99, 154, and 153 in house dust in this study to be significantly lower than in Canada and the USA, with those of BDE-49 and 154 in this study significantly lower than in New Zealand and the UK. While concentrations of BDE-183 in this study were statistically indistinguishable from those Canada, New Zealand, the UK, and the USA; those of BDE-209 were exceeded significantly by those in the UK and the USA. Concentrations of PCBs in house dust in this study were statistically indistinguishable from those in Canada, New Zealand, the UK, and the USA; except for PCB 180. Median concentrations of PCBs in cars in this study were higher than those in the only previous study. While median concentrations of PBDEs in cars in this study generally exceeded those in homes, the difference was significant only for BDEs 49, 154, and 197, with concentrations in cars also significantly greater than those in offices for BDEs 49 and 154. In contrast, concentrations of all target PCBs in offices exceeded those in cars.

Assessment of Household Environment and its Potential Effect on Health in Urban India

Authors

1. Mr. Arun Kumar Yadav (International Institute for Population Sciences, Mumbai.)

Abstract

Presently compounded effect of population dynamics increases the urban population growth. Consequently, most of the urban dwellers has forced to live in sub-standard housing areas which are at greater risk of infectious disease. In 2015, infectious disease considers as a second global risk. In light of above context, it becomes necessary to understand the trend of infectious disease and assess the prominent household environmental factor responsible for infectious diseases. An attempt has also been

made to assess the relative change of household environmental attributes between 2004 and 2014. The study used the data based on “Morbidity and Health Care” from the last three round of National Sample Survey viz. 52nd, 1998; 60th, 2004; and 71st, 2014. To analyse data study used a different statistical tool like crosstab method to calculate trend of diseases. Correlation technique has used to find out the major influential indicator for the different diseases. The relative change has been calculated between decades for assessing the improvement of major household environmental attributes. The three model of logistic regression has been done to see the relationship between a response variable and predictor variables. Results prove that diseases like vector born disease (VBD) and air born disease (ABD) is reflecting the incremental trend in three rounds of surveys. The correlation matrix shows that VBD has an inverse relation with education and toilet facility. The ABD is inversely associated with most of the indicators such as household having Flush toilet and using modern means of cooking fuel. Regression results shows that General Muslims has less chance of VBD. Result shows that 0-4 years children, as well as females, are more likely to have water born disease (WBD) compare to other categories. The chance of having ABD is reducing with the increase age.

CS 4.3: URBAN HEALTH-ENVIRONMENTAL HEALTH-03

Domestic Wastewater Assessment in Minna

Authors

1. Mr. Nenger-John Danjuma Emmanuel Terfa (Federal University of Technology, Minna. Nigeria)
2. Dr. Umaru Emmanuel (Federal University of Technology, Minna. Nigeria)
3. Mr. Augustine Aniebiet John (Nigeria Police Medical Services, Minna, Niger State)
4. Ms. Abakpa Grace Onyukwo (National Biotechnology Development Agency, Abuja)

Abstract

Informal means of discharging wastewater into the built environment from bathing, cooking, ablution and laundry is the resultant effect of poverty from the inefficiency of sanitary facilities in unplanned urbanization among households in developing countries. Urban wastewater constitute high numbers of faecal microorganisms including disease-causing pathogens like escherichia coli, salmonella, campylobacter, shigella, enteric viruses, protozoan parasites and helminthes parasites. Malaria, typhoid, diarrhea and giardiasis are diseases associated with slum neighborhoods in which Kpakungu, a fast growing corridor of Minna is not an exception. This study is the outcome of investigating the health effect of domestic wastewater on Kpakungu residents. A selective sampling among 100 households, analyzed with SPSS software has revealed residents frequent treatment of typhoid (92%), Malaria (88%), diarrhea (45%) and 30% of skin manifestation of infective disease and infestations. Water usage revealed cooking

(95%) and bathing (90%) as predominant activity. Rasi 700 gas meter value when compared to NESREA's 0.04-0.06ppm for NO₂, 10ppm for CO, and 0.01ppm for SO₂ for an ideal human environment revealed a worrisome gaseous emission value. Findings also revealed a high usage of an inherent intoxicant gas substance of stagnant wastewater by youth of the neighborhood which leads to deterioration in health and social disorder. Recommendations channeled towards health awareness and check especially among women, children and youth are necessary measures for health and environmental agencies in the state to ensure a healthy living environment, built on strict environmental sanitation, treatment, repairs and installation of appropriate sanitary facilities in the neighborhood.

Toxic Release Inventory Facilities in Metropolitan Atlanta: Evaluating Variation by Community Socio-Demographics

Authors

1. Mr. Ryan Johnson (Washington University in St. Louis School of Medicine,)
2. Dr. Christina Fuller (Georgia State University)

Abstract

Purpose

Past studies have documented that low income and minority populations often reside in communities with disproportionate exposure to hazardous chemicals. The objectives of this study were to evaluate the relevance of sociodemographic characteristics on the presence of Toxic Release Inventory (TRI) facilities, emissions, as well as the incidence and resolution of facility complaints in the 20-county Atlanta Metropolitan Statistical Area (MSA).

Methods

We extracted year 2000 census tract data from the US Census and mapped TRI facilities. We applied regression models to examine the association between census tract level race/ethnicity and socioeconomic variables with TRI facility presence; amount of air toxics released; number of releases; and amount of chemicals emitted per release. Additionally, we investigated the relationship with TRI facility complaints and responses.

Results

In census tracts with TRI facilities, on average there were 4.7% more minority residents. Controlling for race/ethnicity, the odds ratio for the presence of a TRI facility was 0.89 ($p<0.01$) for each 1% increase in females with a college degree and 2.4 ($p<0.01$) for each 1% increase in households with an income of \$22-\$55,000. A 1% increase in females with a college degree was associated with an 18.5 pound ($p<0.01$) reduction in the amount of chemicals emitted per release. Census tracts that had multiple complaints had 4.3% fewer minority residents than census tracts with no complaints ($p=0.009$). However, more complaints ($OR=1.02$, $p=0.01$) and a longer time to

resolution were associated with a higher Hispanic population (OR=1.03, p=0.01).

Conclusion

In the Atlanta MSA, education was significantly associated with TRI facility location and emissions, while census tracts with higher Hispanic populations had more complaints and took longer to resolve. These findings have not been documented previously and suggest that non-White and lower SES communities may be disproportionately exposed to air toxics and receive slower responses to complaints.

Understanding Fecal Sludge Management Practices in Nhlamankulo, Maputo, Mozambique

Authors

1. Dr. Julia Stricker (Independent sanitation consultant. At the time of the study short term consultant at the Water and Sanitation Program, World Bank, Maputo, Mozambique)
2. Ms. Odete Muxímpua (Water and Sanitation Program, World Bank, Maputo, Mozambique)
3. Mr. Peter Hawkins (Water and Sanitation Program, World Bank, Maputo, Mozambique)

Abstract

In informal settlements of developing cities a major challenge for providing safe sanitation is hygienic fecal sludge management. There is only limited knowledge about habits and preferences with regards to filled-up onsite sanitation facilities in these communities. Understanding them is crucial for designing sanitation services that reduce the high fecal-related disease burden and improve public health.

We use data from a cross-sectional survey consisting of 359 household interviews and sanitation facility measurements in the municipal district of Nhlamankulo, Maputo's oldest unplanned district. We analyze emptying rates, existing service providers, their emptying techniques and prices, as well as the residents' attitudes towards them. We also assess the total fecal sludge volume and estimate the share that is safely managed.

A hygienic fecal sludge management service is inaccessible to most households in Nhlamankulo due to either physical or economic barriers. Most households rely on family members and informal operators (18% and 43% respectively) who bury the fecal sludge in the yard, dump it in open drains or onto solid waste collection points. 39% of the households contract small-scale companies that use diesel-powered trash pumps or hand pumps and inconsistently transport the fecal sludge to the sewage treatment plant. The necessity to pay upfront for fecal sludge management services poses a serious problem to many households, with the poorest hit disproportionately. There would be a strong preference for hygienic services if they were cheaper and the sanitation facilities

were physically accessible. We estimate that today around 52% of the fecal sludge actually taken out of sanitation facilities never leaves the neighborhood. Fecal sludge exposure is thus wide spread and is likely to increase with further densification of the district. The results of the study and emerging policy recommendations will be discussed in this presentation.

Assessing Waste Management Practices in South Southern Nigeria

Authors

1. Dr. Franklin Nwaoha (Green Hope Human Development Initiative)

Abstract

Aim: Assessing the waste management practices in south southern Nigeria over a 3 month period from February to April,2015.

Method: This was a descriptive cross-sectional study. A total of 200 workers from 20 hotels were given self administered questionnaire from which information was obtained. Data was analysed using SPSS version.

Results: Of the respondents,87.4% have a management team while 12.6% did not.45.0% had waste reduction programs while 55.0% did not.70.2% did not sort their waste. Waste recycling for items like plastic, glass accounted for 22.8%.60.8% dispose their waste through contractors,20.2% through state management services,11.8% dispose waste through burning,7.2% throw openly into nearby bushes. There was no record of waste disposal estimate.

Conclusion: As a result of poor waste management surveillance and awareness, there is a need for proper recycling of waste and recommended that all segments of the society must team up with public agency to find a nostrum to urban solid waste management.

Dumping Site and Health Risks to Urban Neighborhood, India: A Cross-Sectional Case-Control Study

Authors

1. Mr. Praveen Chokhandre (International Institute for Population Sciences)

Abstract

Introduction: Growing issues of open dumping site particularly among developing countries affects largely to its proximate communities.

Objectives: To assess the exposure of dumping site by analyzing prevalence of specific morbidities viz. respiratory illness, eye infections and gastro-intestine problems among

people residing near dumping ground. The study attempts to understand the risk factors for selected morbidities.

Design: A cross-sectional household survey was conducted using a case-control design. The exposure of dumping ground on selected morbidities has been analyzed using the PSM method. Multivariate logistic regression model is employed to analyze the potential risk factors for morbidities.

Participants: The study population consisted of exposed group (n=200) who had been staying in the vicinity of dumping ground for at least a year and a distant community (considered as unexposed) control group (n=200) was selected with same socio-economic and living conditions. Propensity score matching (PSM) method is used to assess the impact of the dumping site.

Results: The study findings suggest a relatively higher prevalence of selected morbidities among exposed group than non-exposed group particularly for respiratory illness (23% v 10%), eye irritation (20% v 9.5%) and for stomach problem (27% v 20%) respectively. Results from propensity score matching suggest that exposure to the dumping site leads to a higher prevalence of respiratory illness (12%), eye disease (8%) and stomach problem (7%). After adjustment for confounding variables and effect modifiers, results of multivariate analysis suggest respondents from exposed group were significantly more likely to suffer from respiratory illness (OR 3.06, p<0.01), eye infection (OR 2.39, p<0.01) and stomach problems (OR 1.66, p<0.05) compared to unexposed group.

CS 5.1: URBAN HEALTH-BEHAVIORS-01

Reduction in Malnutrition through Implementation in Partnership with I.C.D.S

Authors

1. Mrs. Anagha Waingankar (Society for Nutrition, Education and Health Action(SNEHA))
2. Ms. Vyoma Dalal (Society for Nutrition, Education and Health Action(SNEHA))
3. Mrs. Sheila Chanani (Society for Nutrition, Education and Health Action(SNEHA))
4. Mrs. Anuja Jayaraman (Society for Nutrition, Education and Health Action(SNEHA))
5. Mr. Digambar Gaikwad (Society for Nutrition, Education and Health Action(SNEHA))
6. Mrs. Anita Patil (Society for Nutrition, Education and Health Action(SNEHA))
7. Mrs. Neena Shah More (Society for Nutrition, Education and Health Action(SNEHA))

Abstract

Aahar program in Dharavi, is an innovative program to reduce acute malnutrition in children 0-36 months old. We collaborate with the Government of India (GOI) Integrated Child Development Services (I.C.D.S.) in 300 Anganwadi centres.

Purpose

We believe partnership with the government for the prevention and treatment of malnutrition is critical for a sustained reduction in acute malnutrition.

Methods

We conduct joint monthly growth monitoring activities to identify the malnourished children, refer malnourished children with complications for treatment, pregnant and lactating mothers to ICDS for provision of hot cooked food and take-home-rations (THR), undertake joint mobilization of mothers for complete immunization of their children in municipal outreach camps, adhere to a protocol of joint home visits to follow up on acutely malnourished children, monitor their health and weight gain, observe home based feeding of a 56 days course of Ready to Use Foods (RUTF), counsel mothers on child care and feeding practices and inform them on local public health services. We accompany mothers and support them to negotiate access of public health services. We facilitate peer learning in group meetings and community sensitization events. We build the capacity of ICDS staff to plan and implement effectively.

Findings

Preliminary results of Phase I show that growth monitoring by I.C.D.S. increased from 27% to 41.6%, overall coverage increased from 70 % to 80 %, children consuming THR increased from 20 % to 28 %, women reported an increase in receipt of THR from 11 % to 21 %.

End line results are forthcoming which will shed more light on the results of the partnership.

Conclusion

SNEHA'S experience shows that demonstrated credibility and trust lead to greater acceptance and responsible action by the ICDS and communities. We plan to accelerate supportive supervision in ICDS to promote interaction and partnership with communities.

Breaking through the Barriers: Supporting Youth with FASD who have Substance Use Challenges

Authors

1. Dr. Maya Peled (McCreary Centre Society)
2. Ms. Annie Smith (McCreary Centre Society)
3. Mr. Duncan Stewart (McCreary Centre Society)
4. Mr. Tim Agg (PLEA Community Services)

Abstract

Background. Fetal Alcohol Spectrum Disorder (FASD) describes the range of disabilities resulting from prenatal alcohol exposure. FASD is associated with various cognitive impairments which, coupled with other challenges, can increase the likelihood of youth

with FASD becoming involved in crime, substance use, and other risk behaviours. This study included the voices of youth with FASD to gain a better understanding of their needs and of promising practices in reducing their substance use and supporting their healthy development.

Method. This project emerged from a community-research partnership in British Columbia, Canada. A mixed-methods approach was used, including interviews (50 youth with FASD; 55 service providers) and analyses from three youth surveys (youth in mainstream schools; custody; alternative-to-custody programs; n=260 youth with FASD).

Results. Youth with FASD experienced a number of risks and challenges, including an unstable home life, difficulties at school, abuse victimization, mental health issues, substance use, and criminal justice involvement. For example, 17% of youth with FASD aged 12-19 in mainstream schools had stayed in a custody centre (vs. 1% without FASD). Also, 27% of those with FASD had their first drink of alcohol at age 9 or younger (vs. 5% of youth without FASD). Protective factors and promising practices were identified that were linked to reduced substance use and other benefits. These included FASD-informed and trauma-informed approaches, individualized support and program flexibility, structure and consistency, a strengths-based approach, focus on concrete skill-development, and youth involvement in their own treatment planning.

Discussion. Youth's suggestions were consistent with past research on promising practices for this group of young people. Substance-use programming should take into account youth's cognitive challenges and unique needs, as well as their strengths, to create an individualized and integrated plan of care for each youth with FASD.

Socio-economic Issues: Injecting Drug Users (IDUs) and Razor Blade Users (RBUs) and Hotspots, in a Squatter Settlement of Karachi, Pakistan

Authors

1. Dr. Muhammad Yousuf (Aga)

Abstract

Globally the use of injecting drug has led to colossal outburst of HIV infection among injection drug users (IDUs), and their family.

In Pakistan, according to a UNAIDS study, the prevalence of HIV/AIDS among the men and women of age 15 to 24 years is about 0.1 %.

This study was conducted in 2012 to estimate the numbers of IDU/razor blade users (RBUs) and of hotspots and to determine the socio-economic factors behind the narcotic use.

Geographic mapping (GM) approach in each sector of the site was used to estimate the size of IDUs/RBUs population, at a squatter settlement in Karachi. The key informants (KI) were interviewed to identify hotspots and to determine number of IDUs/RBUs at each hotspot. The KIs were categorized into primary (IDUs/RBUs), secondary (intimately acquainted with IDU/RBU) and were supporting them. All others were classified as tertiary KIs.

In step 1, initial estimates of hotspots and IDUs/RBUs were drawn. During step 2, the hotspots were visited to interview IDUs/RBUs, validate spots and estimates. The step 1 and 2 data were collated for the final estimates.

Study results reveals that the estimated IDUs were 410 and RBUs were 70 . Sectors 5 and 2 were ranked highest in terms of number of spots, IDU population and average IDU per spot. In contrast, RBUs were concentrated most in sector 2 and 3. Majority of the KIs were illiterate (8.1%), 80.2% were unskilled labor..

Due to illiteracy and poverty the people were more exposed to social and economical problems and majority found indulged to narcotic use. Awareness raising , proper policy development, good governance system and socio-economical uplifting measures are required to overcome the problem.

Smoking Cigarettes Among Urban Women and Men in Nepal

Authors

1. Mr. Bikesh Bajracharya (Nepali-German Health Sector Support Programme)

Abstract

Smoking Cigarette can cause a wide variety of diseases and can lead to death. Smoking is a risk factor for cardiovascular disease, lung cancer, and other forms of cancer.

The study aims to determine the burden and socio-demographic determinants of smoking cigarette among urban women and men in Nepal. The study is the further analysis of the urban subsets of women's and men's individual datasets of Nepal Demographic and Health Survey 2011, using SPSS 16 version on weighted cases. The study is based on 1,819 women and 717 men aged 15-49 years residing in urban areas of Nepal.

Smoking cigarette is highest among urban women and men aged 45-49 (15.5%, 57.1%), illiterate urban women and men (15%, 50%) and urban poorest women and men (13.3%, 57.1%). In terms of region, it is highest among urban women and men in mid-western region (6.7%, 30%), urban women in mountain (9.1%) and urban men in terai (26.3%).

Whereas it is lowest among urban women and men aged 20-24 (0.3%, 22.3%), highly educated urban women and men (0.3%, 19.2%) and urban richest women and men (2.3%, 22.3%). In terms of region, it is lowest among urban women in eastern region (3.5%), urban men in western region (22.3%), urban women in hill (4.5%) and urban men in mountain (16.7%). It is found to increase with increasing age and a showed negative association with education level and asset quintile.

In conclusion, urban men smoke cigarettes significantly higher than urban women. There is high rate of smoking cigarette among older, illiterate and poorest urban women and men. Smoking cigarettes is significantly associated with age, education and socio-economic status. The study recommends (i) use the dis-aggregated urban data for planning and (ii) develop urban policy and strategies to address growing smoking cigarettes burden in urban areas of Nepal.

Does Physical Accessibility Influences an Uptake of Maternal and Child Health Care Services Among Women Living in Urban Slums of India?

Authors

1. Ms. Divya Vyas (Indian Institute of Health Management Research (IIHMR) university, Jaipur, India)

Abstract

Purpose

Safe motherhood programmes tend to prioritize the need for skilled care during delivery, including ante natal care. Access to maternal and child health care is affected by multitude of factors such as availability, distance, cost and quality of services and socio-economic and cultural factors. The purpose of this research paper is to examine an association of indicators of physical accessibility with number of Ante Natal Care (ANC) visit made and institutional delivery adopted by the women of urban slums of Rajasthan.

Method

Data from the primary household survey conducted in the year 2015 was used. This paper examines the geographic distance factors associated with the number of ANC services and uptake of institutional delivery among women (aged 15-49 years) in the urban slums of Rajasthan, India. The distance travelled by the women for ANC services and for institutional delivery was accounted and then categorized into intervals of 0-4 km, 5-9 km, and more than 10 Km. Means were reported for the continuous variables (Number of ANC Visits, Institutional Deliveries) and proportions are reported for categorical variables (Distance to health facility) with standard deviations. Bi-variate analysis was done and then regression analysis was done to see the association of variables such as distance travelled, type of transport used and time taken to reach the health facility with the number of ANC visits and institutional delivery uptake by the women of urban slums. Findings indicate that kilometer increase in the distance to the nearest health facility decreases the probability of institutional delivery by 0.7 percent.

Conclusion

The present study highlights that physical accessibility factors such as mode of transportation, time taken to reach the facility and distance of the health facility affects the number of ANC visits by the women and for institutional deliveries.

CS 5.3: PLACE BASED ACTIONS TO PREVENT DISEASE AND PROMOTE HEALTH IN CITIES-01

National Urban Health Strategy: Issues and Approaches Bangladesh Perspective

Authors

1. Mr. Md Abu Bakr Siddique (Urban Primary Health Care Services Delivery Project)
2. Mr. Dhiraj Kumar Nath (Asian Development Bank, Bangladesh Resident Mission)

Abstract

Bangladesh has been experiencing rapid urbanization. The country's urban population was only 8.78% in 1974, which has been increased to 27% in 2011. It is assuming that by 2040, more than 50% population of the country will live in the urban areas. For increasing urban population, among others, essential health service delivery is very critical, particularly for the urban poor. Health issues in the urban areas have some differences that of rural areas. Densely population, higher prevalence of communicable diseases, unhealthy slums, existence of industries, environmental pollution, lack of pure drinking water and adequate sanitation are some of major public health problems in the urban areas.

In practice, primary health care, family planning services and public health are the responsibilities of the government and free of cost in Bangladesh. In urban areas, public sector primary health care service delivery is inadequate compare to demand. Private clinics are the main sources for health service delivery, but highly expensive and unaffordable for the poor. Considering demand of present days and challenges in future, the government of Bangladesh is going to implement a National Urban Health Strategy.

To implement the strategy, preparation of an operational plan is under process. Through this operational plan, activities will be taken to increase capacity of the Urban Local Bodies and involvement of Non-government Organizations for health service delivery. A high level Coordination Committee comprised with representatives from relevant ministries, other government and non-government organizations will take policy decisions to implement the strategy. It is expected that successful implementation of the National Urban Health Strategy will establish an affordable and quality health care services delivery system for the urban people of Bangladesh.

CIVIC Engagement: Improvement in Health and Social Status by Developing Partnership between Civic Society And University

Authors

1. Dr. Muhammad Yousuf (Aga Khan University)
2. Dr. Shakila Yousuf (Government Health Department, Sindh)

Abstract

Since 1983, Aga Khan University (AKU) has continued to work on health systems development through prototype projects in urban and rural settings. In 1985, AKU implemented Primary Health Care (PHC) initiatives through its Urban Health Program (UHP) in urban slums of Karachi. This partnership between an academic institution and community provides an excellent, sustainable and replicable learning experience. This paper will share the reflection of published material related to health and social status and partnership of communities with a university.

In last 24 years, the faculty have widely published their research work in peer reviewed journals, based on different aspects of Urban Health Program.., eighty such papers/commentaries were Identified. Nine papers/commentaries highlight the theme: improvement of health and social status, by having partnership between civic society and university.

UHP has evolved in three phases. In first phase (1985-1996), UHP concentrated on PHC at six squatter settlements. The infant mortality rate reduced to 50% and under five mortality to 57%. Local girls were involved as Community Health Workers (CHWs) for surveillance.

In second phase (1994-1999), eight sites including two control were selected. Along with the provision of PHC services, intersectoral approaches were also considered. Community groups called Community Management Teams (CHMTs) were formed to work as partners.

In the third phase (2000 to date), 3 sites were selected. Community is working with UHP as a partner to have sustainable initiatives for primary health care. . UHP is focusing on antenatal care, family planning, immunization, health education, curative services, referral system, community capacity building and rehabilitation of water and sanitation systems.

The strategies have varied from health interventions to health and development with intersectoral approach and community participation and seems more effective. These programs may be replicated elsewhere.

The Health Declines with Longer Duration of Residence? Evidence from an Australian Longitudinal Study

Authors

1. Dr. Santosh Jatrana (Deakin University)

Abstract

A number of highly cited studies have demonstrated the health advantage of Foreign-Born (FB) compared to the Native-Born (NB) population and a decline in health advantage the longer they stay in the host countries. However, most of the evidence from the existing literature is limited by the use of cross-sectional study design, use of single indicator of health and poor control of time varying confounders. Additionally, little attention has been paid to the mechanisms by which transition of health over time occur, limiting the ability to implement policies that will result in improved health for all, including immigrants.

This study extends the previous research by investigating changes in three health measures (self-assessed health, mental health and physical health) among FB people from English speaking countries and non-English speaking countries relative to NB Australians over time using multiple rounds of a nationally representative longitudinal dataset- Household Income and Labour Dynamics in Australia (HILDA) Survey. We also explore English language proficiency, and socioeconomic and health behavior factors as possible mechanisms through which health outcomes change over time post migration. We used Conventional multilevel mixed and hybrid regression models to evaluate health outcomes in 9,558 NB and 3,067 FB people.

Foreign-born people from ES countries typically had a health advantage relative to NB people, and FB people from NES countries had a health disadvantage with respect to NB people for all health outcomes. There was no evidence that these differences changed by duration of residence except for self-assessed health amongst FB people from NES countries where the disadvantage was not measureable until duration of residence exceeded 20 years. English language proficiency mediated the relationship between duration of residence and health for FB people from NES countries.

Slum Upgrading Strategies and its Effects on Health of Dwellers: An Assessment of Mortality by Homicides in Belo Horizonte, Brazil

Authors

1. Mrs. Maria Angelica Salles Dias (Federal University of Minas Gerais - UFMG, Belo Horizonte Observatory for Urban Health - OSUBH, School of Medicine)
2. Dr. Amelia Friche (Federal University of Minas Gerais - UFMG, Belo Horizonte Observatory for Urban Health - OSUBH, School of Medicine)
3. Dr. Sueli Mingoti (Federal University of Minas Gerais - UFMG/School of Statistics)

4. Dr. Waleska Caiaffa (Federal University of Minas Gerais - UFMG, Belo Horizonte Observatory for Urban Health - OSUBH, School of Medicine)

Abstract

Purpose: The effects of social determinants on populations health is well known. However, there is little scientific evidence that urban upgrading interventions help improve health or reduce inequities. This study aimed to assess the impact of urban interventions of the Viva Villa Project on the health of people living in slums, evaluating the mortality rates by homicides in areas with and without interventions.

Methods: This is a quasi-experimental study using mortality data from a special designed data warehouse. Since 2002, in Belo Horizonte municipality, community-based participatory and structural urban interventions of slum areas has been developed. These interventions involve implementation and improvement of the roadway system, water supply and sewage networks and housing improvements.. Annual mortality rates by homicides were compared between slums with intervention (SI) with slums without intervention (SW), according to the schedule of interventions. Univariate linear regressions were carried out by comparing the case and control slums and the pre and post work periods. Significance level of 5% and confidence intervals of 95% were considered for all analysis.

Results: Investigating the mortality rate from homicide in the pre and post intervention periods we observed that in the slums with interventions there was a statistically significant decrease in the post-work period, unlike what occurred in the post-work period in the slums that did not undergo intervention. In the pre-work period the falls in mortality rates were not significant in both case and control slums.

Conclusion: The results point to a possible effect of interventions on homicide mortality rates in the post-work period, comparing case and control slums grouped. These are preliminary analyzes and further investigations should be carried out considering each pair of slums case and control as well as the time of exposure of the intervention and the time of exposure of the benefit after its completion.

A Novel Research Framework for Identifying the Social Factors and Cultural Determinants of Diabetes in Urban Areas

Authors

1. Prof. David Napier (University College London, Department of Anthropology)
2. Prof. John Nolan (Steno Diabetes Center)
3. Dr. Anna-Maria Volkmann (University College London, Department of Anthropology)
4. Ms. Louise Hesseldal (Novo Nordisk A/S)
5. Mr. Niels Lund (Novo Nordisk A/S)

Abstract

Purpose

The increase in type 2 diabetes in urban areas provides complex challenges that call for

a new research approach. We present a novel research framework (the Diabetes Vulnerability Assessment) for assessing factors that make individuals vulnerable to developing diabetes and to suffering from complications. Vulnerability here is characterised not just by the presence of biological risk factors, but along a spectrum of biological and social factors, and cultural determinants.

Research was conducted as part of the Cities Changing Diabetes Programme, initiated in 2014 by Novo Nordisk A/S, in partnership with University College London (UCL), and Steno Diabetes Center. Its aim is to understand the complexity of urban diabetes and to provide concrete guidance for policy change, urban planning, and public health intervention through collaborative research.

Methods:

Five cities (Mexico City, Copenhagen, Houston, Tianjin and Shanghai) participated in the study. Local academic partners together with UCL conducted the research. The Diabetes Vulnerability Assessment was implemented to assess local givens in the formal, the community, and the vulnerability domains as they relate to participants' social and cultural circumstances, their health, health care, and diabetes. Specifically trained fieldworkers carried out in-depth, semi-structured qualitative interviews. More than 550 Interviews were summarised by fieldworkers, transcribed, archived and are being analysed locally as well as globally in collaboration between the teams.

Conclusion:

While the biomedical factors involved in type 2 diabetes are well known, too little is known about significant social factors and cultural determinants. The two latter, however, play a central role in prevention as well as management of the condition. This novel research addresses the paucity of knowledge regarding social factors and cultural determinants while providing concrete insights into local needs and capabilities. These factors, like financial, time, resource and geographical constraints are shared across cities, but manifest themselves in unique ways locally.

CS 5.4: URBAN HEALTH-HEALTHCARE SERVICES-01

Impact of a Primary Health Care Program on Health Status of Women and Children in an Urban Settlement of Karachi, Pakistan

Authors

1. Prof. Fauziah Rabbani (Aga Khan University)
2. Dr. Unaib Rabbani (Aga Khan University)
3. Dr. Maryam Huda (Aga Khan University)

Abstract

Background and Objective:

Department of Community Health Sciences, AKU is running a Campus-Community

Partnership model of primary health care “Urban Health Program (UHP)” in squatter settlements of Karachi. UHP offers preventive, promotive, basic curative and rehabilitative services focused on families especially mother and children. In order to generate population-based data for timely decision making a population based surveillance system was installed in 2015 at Sultanabad. This data was compared with baseline data collected in 1996 to see the trends in indicators.

Methods:

Line listing of households was done in all sectors of Sultanabad within 400 meter radius from UHP health centre. Households (HH) were eligible to be enrolled if there was a married woman of 15-49 years of age. Data was collected using a structured questionnaire which was translated into “Urdu”. Analysis was done using SPSS version 19.

Results:

Proportion of women with no schooling dropped from 78% in 1996 to 38.6% in 2015. Proportion of housewives declined to 75% in 2015 from 92% in 1996. Proportion of women seeking antenatal care increased from 19% in 1996 to 87% in 2015 similarly home deliveries declined to 25% from 75% between 1996 and 2015. Contraceptive prevalence improved to just 32% from 14.4%. Proportion of children exclusively breast fed increased from 36% to 63%. Stunting among children under 5 reduced to 40% in 2015 from 70% in 1996.

Conclusion:

Due to longstanding presence of Aga Khan University in this squatter settlement, some of the maternal and child health indicators have improved, failure to use contraception and stagnant rates of malnutrition in children are glaring examples of where services have faltered. This ongoing surveillance will help the UHP, NGOs working in Sultanabad, government programs and community organizations to focus on these priority issues.

Marginalized Women of Squatter Settlements: Antenatal Care and Constraints

Authors

1. Dr. Shakila Yousuf (Government Health Department, Sindh)
2. Ms. Farah Naz (Dow Medical University)
3. Dr. Muhammad Yousuf (Aga)
4. Mr. Bilal Yousuf (Liaquat national medical college)

Abstract

Marginalized Women of Squatter Settlements: Antenatal Care and Constraints

Shakila Y, Farah N, Yousuf M, Bilal

A study was carried out at two slum areas of Karachi..It was comparative study to identify the perceptions of women about the importance of antenatal care (ANC) and to have awareness about the constraints faced by the women for having ANC

Interviews were conducted with 75 women of child bearing age living at the two squatter settlements of Karachi by using pilot tested survey questionnaire. Convenient sampling method was adopted for the interaction.

At site 1, majority of the women are getting proper attention by the family during pregnancy and were found interested to know more about ANC. They follow proper diet plan. 78% were aware of benefits of ANC, some delivered at the hospital.

At site 2, majority do not get proper attention by the family during pregnancy, they eat whatever is available. 28% were aware of benefits of ANC and majority was not interested to know about ANC. No any women delivered at hospital.

Several constraints and misconceptions were identified inhibiting the ANC like; pregnancy is considered as natural process and ANC checkup is not necessary, due to family pressures women are not allowed for ANC checkup, more time consumed at the PCH centers for ANC, lack of awareness and financial resources and transport problem.

Women should be empowered to make decision for the improvement of their well being and health, to avoid risks to their health and for the provision of ANC. Efforts should be made for the acceptance of antenatal and maternity care by the women and their families.

Key words: women, marginalized, antenatal care, lack of awareness, diet, slums, child bearing age, maternity care, family pressure.

Involving Healthcare Providers as Community Advocates for Vaccination against Polio in High Risk Area in Sindh, Pakistan

Authors

1. Dr. Jamshed Hasnain (Bridge Consultants Foundation, Karachi, Pakistan)
2. Dr. Arshad Altaf (Bridge Consultants Foundation, Karachi, Pakistan)

Abstract

Background

Polio immunization campaigns in Pakistan continue to face challenges such as refusals by community resulting in decreased coverage. Bridge Consultants Foundation, a NGO implemented a project in Sindh with support of UNICEF in 2012-13. We sought to evaluate key features.

Description

The project was funded by UNICEF and was started in August 2012. The objectives were to sensitize healthcare providers (HCPs) in target areas to support polio vaccination campaigns, work as an advocate for polio eradication and help in

decreasing the misconception about polio. In order to achieve these objectives, potential HCPs were identified and mapped; advocacy sessions were conducted that were supported by renowned pediatricians; polio messages were developed; TVs and DVD players were installed at selected HCPs' clinics and a study comprising of exit interviews at clinic of HCPs were conducted to determine whether the project made any impact.

Lesson learned

The project demonstrated the feasibility of making HCPs polio advocates. A total of 1389 HCPs were mapped and out of these 675 HCPs were identified as polio advocates. One hundred HCPs were provided equipments which played messages in the waiting areas. Advocacy sessions were well attended by HCPs and government officials. At the end of the project, 102 parents were interviewed. 93% reported noticing the TV messages that were played in the waiting area of clinics. 61% informed that their HCP educated them about polio. After watching the video a large proportion (89%) of them suggested that they are convinced that polio drops are beneficial.

Conclusion

This project helped in removing misconceptions about polio vaccination particularly among the underprivileged individuals. In order to have a more substantial impact, immunization coverage needs to be increased in poorest groups and special strategies should be identified to reach mobile populations and underserved groups.

Urban Impact on Spousal Communication and its Role on Achieving Reproductive and Child Health Services through Women's Empowerment in Three South Asian Countries

Authors

1. Mr. Brajesh - (International Institute for Population Sciences)
2. Prof. Chander Shekhar (International Institute for Population Sciences)

Abstract

Women commonly have less power and empowerment in making decision about RCH matters between husband and wife in most parts of South Asia. It is associated mainly with urban/rural classification, her ethnicity, deprivation level, and education. This study tries to understand the association of empowerment with spousal communication on RCH matters with considering urban rural differential. From DHS-2006-07 data of India, Nepal and Bangladesh on currently married women 15-49, the findings shows that large proportion of women with low socio-economic and demographic status like age, residence, wealth, religion, education and media exposure have low level of empowerment and from rural areas. This proportion of women is increasing with increasing the level of empowerment in all communication variables related to RCH matters. Multilevel results found in range 5 to 8 of residual variance in spousal communication with and without empowerment for decision making is attributable to

differences between regions. Spousal communication on RCH matter positively associated with empowerment in all countries. Overall conclusion decision making for contraception is satisfactory but the empowerment in other reproductive and child health (RCH) services is very low, and level of women empowerment for all three dimensions in Bangladesh is least effective. A large proportion of women are living with medium group of empowerment in Nepal and in Bangladesh the distribution of women is similar in all level of empowerment. It may be due influence of religious and culture factors. There should be improvement in the level of women's empowerment to making more decision regarding RCH matters in these all countries. So, by increasing information, education and communication strategy they can achieve a desire level of women empowerment for making decision to access health services in all these three countries.

Health Status and Health Seeking Behavior of Street Children in Dhaka City of Bangladesh

Authors

1. Mr. Mohammad Awlad Hossain (Orbis International, Bangladesh)

Abstract

Street children, a marginal and neglected population of Bangladesh are deprived of their very basic entitlements of food, shelter, education and medical care. A cross-sectional study was conducted to explore the health status and health seeking behavior of the street children of Dhaka city, Bangladesh. A total of 214 street children were randomly enrolled in this survey. A semi-structured questionnaire was used for collecting data from children aged 6 to 11 years. Data collection was done between September and October, 2013.

The study showed that only 8.4% of the respondents had balanced diet in their menu in the last 24 hours prior to survey. The prevalence of underweight among surveyed children was 16.8% (<-2 z-score). Around 29% of the children had experienced injury/accident of any kind in last one year. Almost all of the children (99.1%) had been found to be suffering from some ailments. Common cold (97.7%) and fever (78.0%) were common among children followed by stomachache (55.6%), diarrhea (40.2%), and headache (31.3%). Among the sick, 70.6% received medical services. Most of the respondents sought their treatment from local drug seller (62.3%), this was followed by traditional healers (15.9%) and street vendors (11.9%). 77.1% of children mentioned that treatment cost was borne by their family members while 22.9% mentioned that it was borne by them. Among treatment seekers, 74.2% children mentioned that providers did not want to give them services. 27.0% of the respondents mentioned that they could not seek treatment owing to lack of money.

Street children's health care is extremely ignored and unrecognized. They have very limited access to formal health care services due to poverty, lack of information and social barriers. A concerted effort should be taken to address the health needs of street children.

Treatment Seeking Behavior of Mothers in the Management of Acute Respiratory Infections in Bauchi State, Nigeria

Authors

1. Dr. Moyosola Bamidele (John Snow Training & Research Institute Inc)
2. Dr. Dele Abegunde (John Snow Training & Research Institute Inc)
3. Dr. Nosa Orobato (John Snow Training & Research Institute Inc)
4. Dr. Katherine Beal (John Snow Training & Research Institute Inc)
5. Ms. Toyin Akomolafe (John Snow Training & Research Institute Inc)

Abstract

Childhood pneumonia is generally curable if trained health workers promptly administer the correct antibiotic treatment. Lot quality assurance sampling (LQAS) survey was used to investigate the health-seeking behavior of mothers of children less than five years old who had suffered from a respiratory infection two weeks before the survey was conducted.

Data from three (2012, 2013 and 2015) waves of LQAS were used for this exploration. Responding households were sampled using a rigorous multistage random sampling of 19 LQAS locations in the 20 Local Government Areas in Bauchi state. From a compiled list of households in the sampled locations, 19 households were selected through a systematic random sampling technique totaling of 380 households in each of the three survey years.

Descriptive analyses were performed using purposefully preprogrammed Microsoft Excel worksheet and STATA© (Version 12). For the baseline, follow-up and end-line surveys, we estimated and compared the average coverage of the indicator for the LGAs with an acceptable level of statistical errors of $\alpha \leq 5\%$, and $\beta \leq 20\%$.

The result indicated that the coverage level of health seeking behavior indicators for cough with fever mostly decreased. In 2015 LQAS, 66.9% (95% CI: 64.2%, 69.9%) mothers interviewed, reported that they had sought treatment for their child's respiratory illness. This was significantly lower than that of mothers who sought treatment in 2013, 73.8% (95% CI: 70.6%, 77%). About a third of mothers of children with cough accompanied with fevers i.e. 35% (n=380) sought treatment the same or next day they identified the illness.

In conclusion, we have used data from three waves of LQAS to study health-seeking behaviors of caregivers in management of acute respiratory. Future studies need to examine specific assets and challenges influencing caregivers' treatment-seeking behaviours in order to positively influence decision-making at the household level.

CS 6.3: URBAN HEALTH-HEALTHCARE SERVICES-03

Increase the Uptake and Access of Primary Health Care Services by Standardization of the Antenatal Care Clinics at Urban Health Posts: Evidence from Maharashtra, India

Authors

1. Ms. Sarita Patil (So)

Abstract

The numbers of maternal deaths in low-income countries reflect inequities in access to health services and highlight the gap between rich and poor. Most are preventable through primary care. Nevertheless, primary level urban health posts serving outsized slum communities suffer from deficient infrastructure, supplies, human resources and access.

The Society for Nutrition, Education and Health Action (SNEHA) partners with Mumbai and three adjoining municipal corporations to ensure the provision of basic primary care services for pregnant and lactating women through the establishment of weekly antenatal care clinics at 53 urban health posts located nearby slum communities. To standardize those clinics it required obtaining buy-in, consistent advocacy and follow up with the administrative heads, persuasion to issue official circular, motivation of the health post staff to consider the weekly clinic as part of their daily routine, identify equipment and infrastructure upgrade needs and bridge the gap, requisite clinical trainings of the health care providers and Behavior Change Communication trainings for the outreach workers. Standard observation tool was used as a strategy to improve the quality of care to pregnant and lactating women. Periodic observations by trained workers helped providing constructive feedback to the health post staff and line managers and supportive supervision. As a result antenatal services have expanded from provision of iron and folic acid tablets and tetanus toxoid to include abdominal examination, blood pressure measurement, counseling, referral advice and documentation. It also documents referrals to higher facilities and the regularity of clinics. Over a period of one and half year 96% health post reported providing five or more core services regularly and the clinics were accessed by 8198 pregnant and lactating women.

SNEHA successfully encouraged municipal cadres to provide routine antenatal care through constructive feedback based on observation.

The Role of Informal Providers in Managing Pregnancy and Childbirth Related Conditions in Slum Areas in Dhaka City

Authors

1. Mr. Mohammad Awlad Hossain (Orbis International, Bangladesh)

Abstract

In Bangladesh, it is seen that informal health care providers play an important role in managing pregnancy related conditions both in rural and urban areas. Only 18% of childbirths are attended by skilled providers while the rest are attended by various categories of alternative and non-medically trained providers. This study aimed to explore the practices of informal health care providers in relation to pregnancy and childbirth in slum areas.

The study was conducted in Korail slum of Dhaka city in Bangladesh. Qualitative methods such as in-depth interviews, FGDs and listing were utilized to gather information from the health care providers.

The study reveals that informal providers such as village doctor, homeopaths, faith healers and traditional birth attendants (TBAs) were the primary source for managing complications related to pregnancy and child birth in slum areas. Though village doctors, homeopaths and faith healers did not conduct delivery directly, in many cases there were called on by TBAs to accelerate the pain during childbirth. It was common practice among village doctor to push intra venous (IV) saline and injection to accelerate delivery. Likewise, homeopaths provided homeopathy medicine for prolonged or obstructed labour, while faith healers treated with holy water, holy verses, amulet, and medicinal plants. Data also reveals that some providers who managed complications such as eclampsia, bleeding, retained placenta, prolonged labour, malpresentation of foetus were involved in harmful practices. They also delayed in referring mothers with complications, who required immediate referral to qualified doctors or hospitals.

An integrated initiative should be taken to ensure rationale practices in pregnancy and childbirth by the different types of informal health care providers in the slums.

The Role of Private Health Facilities in Provision of Family Planning Services among the Urban Poor

Authors

1. Ms. Morine Sirera (Jhpiego (an affiliate of John Hopkins University))
2. Ms. Mercy Kamau (Jhpiego (an affiliate of John Hopkins University))
3. Mr. Nelson Keyonzo (Jhpiego (an affiliate of John Hopkins University))
4. Mr. Paul Nyachae (Jhpiego (an affiliate of John Hopkins University))

Abstract

Introduction

One out of three Kenyans 32% live in urban areas, with 70% living in informal settlements, with access health services from private facilities. Accessibility and availability are key determinants of family planning services. A key component of the Kenya Urban Reproductive Health Initiative “Tupange” – a 5-year program funded by the Bill and Melinda Gates Foundation – was to improve Family Planning (FP) access

for the urban poor populations. One of the strategies was to increase access to FP and improve the commodity supply environment.

Methodology

Registered private facilities within the urban informal settlements were identified and branded. Capacity of service providers built through training to enable them offer quality FP Service. Facilities were provided with essential equipment's for provision services. Community health volunteers were also trained to enable them mobilize and refer clients for FP services the facilities. Facilities were also linked to the Ministry of Health (MOH) stores for distribution and redistribution of commodities. Support supervision was carried out by MOH management teams.

Results

The main source of injectable for women between baseline and end line remained the same at 65% while 26 % switched to private facilities. Women who had been getting injectable from private facilities at baseline 68% continued to do so while 27% switched to the public facilities. On the other hand those who switched from the pharmacy to private facilities increase to 63.1%. Over 70 % of private providers were able to offer more than seven methods.

Conclusion

Working with private providers and linking them to the public sector as well as ensuring the quality standards are maintained is essential for the sustainability of FP programs in the informal settlements.

References

Mapping Availability and Utilization of Maternal and Child Health Services on the 16 Score Card Indicators at Urban Settings - An Experience from India

Authors

1. Mr. Sunil Thomas Jacob (UNFPA)

Abstract

Achieving Reproductive Maternal and Newborn Health outcomes is a challenge where there is challenging geography and vulnerable populations. RMNCH+A (Reproductive Maternal Newborn Child Health +Adolescents) Programme is an attempt to improve the health indicators in a State like Rajasthan having a population of 60 million and with high maternal and child mortality. There are stark differences in the indicators of the Urban and Rural areas of Rajasthan and in the urban settings there are poor maternal and newborn indicators. The paper looks at how the tool of score card indicators has facilitated the mapping of the accessibility and utilization of the services at the urban health institutions covering 10 high priority districts

The RMNCH+A initiative which covers both the Urban and rural areas comprises of various strategies that include gap analysis, capacity building, concurrent monitoring and evaluation. The concurrent monitoring involves the monitoring of the 16 score card dashboard indicators quarterly and on annual basis. The 16 score card indicators are developed on the basis of the data across a population of approximately half a million

comprising of pregnant mothers, newborns and infants. The data is entered at the urban health institutions comprising of the Medical Colleges, District Hospitals and Sub Divisional Hospitals situated at the Urban settings.

The score card indicators are selected on the basis of life cycle approach and covers the following areas family planning, Care during pregnancy and delivery , Institutional deliveries , Newborn care, Nutrition during pregnancy ,Breast feeding and home based care . The analysis of the indicators in the high priority districts shows that there are quite stark differentials in terms of the urban and rural settings and the differentials in the inputs gives inputs for the policy makers and programme managers to take corrective action to strengthen the programme implementation

CS 6.4: URBAN HEALTH-HEALTHCARE SERVICES-04

Health Services and Inequalities in Urban Context: Realities in two Districts of Tamilnadu

Authors

1. Prof. Uma Maheswari (University of Madras)

Abstract

At present, India's total population stands at 1.21 billion. Among the top five fast urbanizing states in India, Tamil Nadu (48.4 per cent) with rapid development processes have led to haphazard and uncontrollable growth of urban areas of Chennai and Kancheepuram districts. It will be worthwhile to evaluate if these districts are fully prepared to take on the challenges that are thrust on it under the current socio-economic and political environment. The direct impact of urban sprawl reflects on the health of the inhabitants of Chennai and Kancheepuram and urban agglomeration areas. The contemporary imbroglio conditions of urbanization needs proper planning to facilitate a fine living standard for its inhabitants. The planning of the sprawl area needs to be given due importance so as to accommodate the development. There is a pivotal need for government, academicians and nongovernmental agencies to network together to comprehend this scenario of sprawl. Failing to roll out better policies for a controlled growth is ruling out better future for generation next. An attempt is made to study the public health conditions and the health service that are available in these districts. The inclusion of experts from various sectors on a single platform to intrinsically and extensively judge on the factors and its impacts will be elicited. Geographers, Urban city planner, hospital administrators and physicians would contribute their opinions on this issue. The tools like questionnaire, Global Information System, interviews, brainstorming sessions would be conducted to appraise the situations and its impact. Further, applying public health criteria to land use and urban design decisions could substantially help in improving the quality of life of the people.

Urbanisation and Health Disparities: An Intra Urban Analysis of Environmental Health Indicators and Healthcare Systems in Lagos, Nigeria

Authors

1. Dr. Immaculata Nwokoro (University of Lagos)

Abstract

Lagos is among the fastest growing cities of the world with a population of 10,788,000 in 2010 (UN-Population Division, 2011) and, currently 13, 121, 000, and 18, 857,000 as projected by the World Urbanisation Prospects, 2012. Health indicators suggest deficits in the health care services and systems, as well as environmental determinants of health. These health disparities are found to be more endemic in the slum areas inhabited mostly by the vulnerable groups. Some efforts made towards addressing these health inequalities in service delivery, the burdens of diseases associated with poor sanitation and access to portable water have not been effective. These indices are enough compelling reasons for this study. Most of the data for this study were extracted from reports of international organisations and findings from researches of experts on urban health. Primary data of researches on environmental health indicators across Lagos were also utilised. Findings show that while access to piped water to premises decreased from 33% in 1990 to only 6% in 2013, it has increased from 45% to 73% for other improved sources within the same survey period which means that more individuals and private organisations are now responsible for their own water provision. The inextricable link between environment factors and health were ascertained by various studies done in different areas of Lagos. Major findings and Reports indicate a weak health care system and identified several challenges which include lack of coordination, fragmentation of services, dearth of resources, including drug and supplies, inadequate and decaying infrastructure, inequity in resource distribution, and access to care and very deplorable quality of care. Suggested interventions that will reduce the urban health disparities include, physical and infrastructure development and improvement in water, sanitation and waste collection methods, as well as establishing a comprehensive health care system.

Constraints to Family Planning among Slum Dwellers in Ibadan, Nigeria

Authors

1. Dr. Adetola Lawal (Jericho Specialist Hospital, Ibadan)
2. Dr. Foluso Ishola (Youth Society on Cancer Nigeria (YSCN))

Abstract

Introduction

Despite implementation of programs to improve contraceptive coverage in Nigeria; unmet need for family planning is still high especially among slum dwellers resulting in high population growth. This study qualitatively investigated barriers to family planning

use among slum dwellers in Ibadan, Nigeria.

Methods

This qualitative study utilized semi structured one to one interviews for data collection and occurred between January and March 2015 in Oluyole and Ojoo community. One hundred participants purposively sampled included 76 male and female community members, and 24 community health workers. Informed consent was obtained from participants and participation was voluntary. Interviews were audiotaped, transcribed and analyzed for recurring themes and patterns.

Result

Findings revealed that only few had adequate knowledge of family planning methods. Some women revealed that their husbands held the decision making power and their opinions held little value. Barriers such as access to services and financial costs were also revealed. Perceived side effect such as weight gain and infertility were major concerns.

Conclusion

Community myths and misconceptions regarding family planning use should be addressed. Women need to be empowered to participate in household decision making process. Communities should also be enlightened about availability of safe, effective and accessible family planning methods.

Socio-Demographic Determinants of Use of Maternity Care Services in Urban Women in Nepal

Authors

1. Ms. Milima Singh Dangol (Thammasat University)

Abstract

Identifying socio-demographic determinants is important to improve utilization of maternity care services. The study examined the socio-demographic determinants of use of maternity care services among urban women in Nepal by further analyzing the urban subset of women's individual dataset of Nepal Demographic Health Survey 2011.

Utilization of maternity care services varied significantly by women's age, education, economic status, religion, parity, ecological and development region. All these socio-demographic variables were significant factors for use of antenatal care by skilled birth attendants, 4+antenatal care and delivery by skilled birth attendants (P value <0.001).

Uses of all maternity care services were found to increase with increasing education and economic status of urban women. Compared to illiterate urban women, highly educated urban women were two times more likely to use antenatal care and delivery by skilled birth attendants and three times more likely to receive 4+ antenatal care.

Urban richest women were two times more likely to use all three maternity care services compared to urban poorest women.

Parity and age of women showed a negative association with the use of all maternity care services. Urban women with one child were 2 times, 6 times and 4 times more likely to use antenatal care by skilled birth attendants, 4+ antenatal care and delivery by skilled birth attendants respectively than urban women with more than 6 children.

Hindu and Buddhist urban women and urban women in central development region were significantly more likely to use all three maternity care services, while it seems decreasing from central to far western region. Urban women in hill were significantly more likely to use antenatal and delivery by skilled birth attendants.

In conclusion, women's age, education, economic status, religion, parity, ecological and development region were significant determinants for use of maternity care services among urban women in Nepal.

Urban-Rural Inequities in use of Maternal Health Services in Nepal, 1991-2010

Authors

1. Ms. Milima Singh Dangol (Thammasat University)

Abstract

Maternal health services are vital for the survival and well-being of both mother and child. It is important to monitor urban-rural inequities in use of maternal health services to measure progress and address health inequities.

The study is to determine the inequities in use of maternal health services between urban and rural women in Nepal in the period of 1991 to 2010. The analysis is based on the data from four Nepal Demographic and Health Survey published in the years 1996, 2001, 2006 and 2011. The urban: rural ratio and urban: rural differences were calculated to analyse the trends and inequities in use of maternal health services among urban and rural women in Nepal.

There are significant inequities in use of maternal health services between urban and rural women in Nepal but it is reducing over time. Between 1991-1995 and 2006-2010, the urban: rural ratio reduced from 3.2 to 1.6 for antenatal care from skilled birth attendants, from 4.1 to 1.5 for 4+antenatal care, from 1.5 to 1.2 for women receiving two or more tetanus toxoid, from 7.3 to 2.3 for delivery by skilled birth attendants, from 8.6 to 2.3 for institutional delivery and from 0.7 to 1.7 for postnatal care. In terms of urban: rural differences, there is equity gain for antenatal care by skilled birth attendants, 4+antenatal care and women receiving tetanus toxoid but not for skilled birth attendant delivery, institutional delivery and postnatal care.

Equity in use of all types of antenatal care is improving but it is widening for using delivery and postnatal care between urban and rural women in Nepal. It is recommended to strengthen the ongoing health and non-health maternal health interventions to address the equity gap between urban and rural women.

CS 7.2: LMIC LESSONS LEARNED-MODELS FOR BUILT ENVIRONMENT THAT ADVANCE HEALTH AND EQUITY IN CITIES

Road Crossing Safety for Vulnerable Road Users: School Pupils' Assessment of their Walking Routes in the Cape Coast Metropolis of Ghana

Authors

1. Mrs. Regina Obilie Amoako-Sakyi (University of Cape Coast)
2. Mr. Kwabena Koforobour Agyemang (University of Cape Coast)
3. Mr. Kingsley Nana Osei (University of Cape Coast)
4. Prof. Albert Abane (University of Cape Coast)
5. Dr. Edem Amenumey (University of Cape Coast)

Abstract

Statistics show that up to 23% of pedestrian fatalities recorded in Ghana are among children. Generally, road crossing has a high representation on the pedestrian action before impact list recording up to 73% of pedestrian fatalities. This exploratory study conducted among 792 self-reported captive walkers aged between 8 and 18 years accessed road crossing safety of school pupil's routes to school. The study relied on GIS buffering techniques in selecting 25 schools within the Cape Coast metropolis.

Principal Component Analysis was used to develop individual based safety indices for pupils and the results show that age, gender and socioeconomic status of pupils were significantly associated with pupil's perception of safety. Some pre-disposing factors to pedestrian crashes found in the study include pupils' use of multi-modal access routes with more than two 3-way and 4-way intersections, lack of traffic wardens and marked crossing points, drivers' failure to stop for pupils to cross on major arteries including the Trans-Ecowas highway which links major West African countries together. Some basic crossing aids were absent on pupils' routes.

Overall, majority of school pupils who used multi-modal access routes felt unsafe from dangers posed by cars. In conclusion, the study found that routes used by pupils in the Cape Coast metropolis do not have adequate safe road cross

Rapid Health Impact Assessment of Transport Policies In Maputo, Mozambique

Authors

1. Dr. David Rojas-Rueda (ISGlobal, Centre for Research in Environmental Epidemiology (CREAL))
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Abstract

Introduction: Urban planning and related policies can contribute to improvement in health. Recent epidemiological and health impact assessment (HIA) studies suggest that a change from passive (car) to active transportation (cycling, walking) and public transport in daily life could improve health. Although a number of HIA studies have been conducted in Europe and North America, such studies are still largely lacking in low and middle-income countries.

Methods: We conducted a Rapid HIA in Maputo (Mozambique). We collected information to conduct HIA study through interviews with different stakeholders. Part of the information was also obtained from the National Institute of Statistics, Urban Mobility Plan (UMP), and international data bases. We also conducted field work to identify the built environment and mobility characteristics in the respective cities by using the different modes of transports in several places of the city.

Results: The UMP in Maputo doesn't consider walking or cycling as a key modes of transport. Develop policies to increase active and public transport will help to reduce the air pollution, traffic accidents, and noise in the city and could increase the physical activity. Urban transport policies should also include a social perspective, increasing equity, social support, cohesion and participation. Develop policies based on a better governance, a multi-sectoral, metropolitan and multilevel approach are necessary in Maputo, for the success implementation of urban transport policies.

Conclusion: Urban transport policies focused on active and public transport are missing in Maputo. The Rapid HIA can be used in developing countries as a useful tool to improve decision making process in urban and transport policies. The study also highlights the need to routinely collect basic data in developing countries, not only to conduct HIA studies but also as a tool to take the appropriate political decisions in urban and transport planning and health and social development.

Exploratory Analysis of Spatial Data in Nutritional Epidemiology: Identifying Food Stores Distribution Patterns in the Urban Area

Authors

1. Prof. Maria Oliveira (UNIVERSIDADE DE SÃO PAULO)
2. Ms. Claudia Luques (UNIVERSIDADE FEDERAL DE SÃO PAULO)
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6. Prof. Paula Martins (UNIVERSIDADE FEDERAL DE SÃO PAULO)

Abstract

Introduction: There is growing interest in the environmental effects on nutritional status. The aim of this study was the assess food stores distribution patterns though the application of Exploratory Analysis of Spatial Data (ESDA).

Methods: Food availability in all stores located at 258 census tracts in the urban area of the city of Santos, Brazil was assessed using a validated instrument (n=672). A Healthy Eating Score (HES) was calculated to each store according to the degree of industrial processing and the nutrient content of available food items. Geographic coordinates of the stores were assessed using GPS receivers and the points were aggregated in census tracts in order to explore the spatial patterns of data. Spatial autocorrelation was examined. Moran's I local and global values were used to identify spatial cluster of census tracts according to HES and food environment variables. Moran Maps and Lisa Cluster Maps were plotted to identify and characterize hotspot clusters of nutritional scores.

Results: Local and global significant Moran's I statistics could be observed in the store distribution aggregated by census tracts: HES ($I=0.155$, $p=0.01$), convenience stores ($I=0.240$, $p=0.04$), supermarket and medium stores ($I=0.030$, $p=0.01$), greengroceries ($I=0.040$, $p=0.01$) and candy stores ($I=0.151$, $p=0.01$). Bars (drinks and snacks) ($I=0.238$, $p=0.01$) and Bars with meals ($I=0.4472$, $p=0.01$). **Conclusion:** The results suggest different patterns of distribution of food stores that may affect food availability. ESDA may be a useful tool for the identification of spatial distribution patterns of the food environment that may have effect on nutritional status and health.

WHO's New Guide on Age-Friendly City Indicators

Authors

1. Mr. Paul Rosenberg (World Health Organization Centre for Health Development)
2. Dr. Megumi Kano (World Health Organization Centre for Health Development)
3. Mr. Amit Prasad (World Health Organization Centre for Health Development)
4. Mr. Alex Ross (World Health Organization Centre for Health Development)

Abstract

Purpose: Ageing and urbanization are among the most transformative demographic dynamics of the 21st century. While cities continue to experience unprecedented growth, the proportion of older residents is similarly rising in urban areas. One approach to creating an urban environment responsive to the needs of older residents is in the concept of age-friendly cities. Many communities around the world are engaged in efforts to become more age-friendly. To support these initiatives, the World Health Organization developed a new guide on using core indicators to assess the age-friendliness of cities. This presentation will be one of the first occasions to introduce and disseminate the newly published guide in a global academic forum.

Methods: The guide and the core indicators described within it were developed over a 3-year period involving desktop research, expert consultations and field testing of a global scope. The final set of core indicators measures physical accessibility and social inclusiveness of the environment as well as quality of life and equity. The guide recognizes the importance of the local context and is designed to encourage local adaptations and innovations, while also articulating a path toward global standardization.

Conclusion: This new technical guide provides an adaptable framework and core indicators for measuring how well urban environments support the health and wellbeing of older adults. It is recommended for all cities and communities seeking to measure and improve the physical and social environments for better quality of life and equity in response to, or in anticipation of, an ageing population.

Incorporating Urban Travel Choices to Air Quality Policies: Lessons from New York City, Paris and São Paulo

Authors

1. Mrs. Anne Dorothée Slovic (School of Public Health, University of Sao Paulo)
2. Mrs. Sofia Oliver (School of Public Health, University of Sao Paulo)
3. Dr. Helena Ribeiro (School of Public Health, University of Sao Paulo)

Abstract

The association between urban air quality, vehicular emissions and health outcomes has been long established by epidemiologists making it one of the current greatest environmental and global health issues. As cities concentrate the world's greatest share of exposed people, local policy makers face the challenge to cope with one of the major circumstances aggravating the effects of air pollution: traffic density and people's exposure. Governments, at all levels, understand the importance of implementing public policies that aim to control its impacts. As the world's attention shifts to climate change, urban air quality becomes an ally to mitigation and raises the question of looking at the efficiency of strategies developed in different cities, in particular to the ones that look at travel modes. Using the cases of New York City, São Paulo and Paris, this study

highlights the different tendencies observed in these three cities, by linking the different mobility survey reports, government programs and policies implemented over the last fifteen years. Results suggest some tendencies and disparities in transportation choices. For instance, the more distance between people's residence and their place of work, the more they tend to use privately owned vehicles, partly due to the lack of available public transportation near their homes. This is particularly true for middle-income population that constitutes the major car owners. There is a need to develop more integrated clean transportation strategies that reach a greater number of city inhabitants and that limit the use of privately owned vehicles for work travel purposes. To conclude, policy makers will gain in improving air quality by incorporating people's travel choices and profile and by identifying where travel shifts are possible. Moreover, there will be a societal gain by promoting new transport initiatives that will reduce work related commute time as an environmental justice tool.

CS 7.3: LMIC LESSONS LEARNED-HEALTH WORKFORCE DEVELOPMENT FOR PRIMARY CARE & COMMUNITY AND MENTAL HEALTH

The Urban Health Extension Program of Ethiopia: Service Delivery Related Lessons from Implementation

Authors

1. Mr. Zelalem Adugna (John Sn)

Abstract

Context and purpose: In 2009, the government of Ethiopia has initiated the Urban Health Extension Program to expand the coverage of community-level health services to the urban population. The organizing principle of the program is the provision of 'household-centered' public health services. This article presents service delivery related lessons from the implementation of program.

Methods: Review of the program related reports and deliberations, proceedings of consultative workshops, field observations and interviews were conducted to produce a synthesis report that has been validated by 'expert panels'.

Results: The design of the Urban Health Extension Program of Ethiopia was modeled on the rural health extension program and therefore was not contextualized to the complex nature of urban environment and heterogeneity. Unlike the rural, the heterogeneity of urban population required appropriate targeting of clients and households based on geographic locations, health risks and socio-economic conditions. The service providers were not equipped with the urban life style, urban governance and planning systems. Most urban health challenges and risks fall outside the mandate of the ministry of health. Urban population are mobile and most of them spend the day out of their residential houses which makes 'house-hold centered' service delivery a critical challenge. It was learned that technology, a readily available resource, was not fully utilized.

Conclusion: The urban health extension program of Ethiopia must be contextualized

into the complex nature of urban life style and heterogeneity. In urban settings, partnership with other sectors (including the private sector) is critical since most health risks in urban settings fall outside the mandate of the ministry of health. Models should be developed to target clients and households based on their spatial distribution, risk behaviors and socio-economic factors. Technology, an abundantly available resource in urban areas, need to be fully harnessed to improve service delivery.

Migration and Maternal Health: BRAC's Experience in Delivering Maternal, Neonatal and Child Health Services in Slums of Urban Bangladesh

Authors

1. Dr. Nauruj Jahan (BRAC)
2. Dr. Kaosar Afsana (BRAC)

Abstract

Purpose

Despite Bangladesh's significant improvement in maternal and child health status over the past few decades, the situation still remains very poor, especially in the compromised socio-economic condition of urban slums. One of the major challenges in improving this situation is the highly mobile slum dynamic due to rapid urbanization and migration. BRAC has undertaken a unique health programme since 2007, known as Manoshi, to improve maternal, neonatal and child health care in the challenging context of urban slums of Bangladesh. This paper attempts to review the existing situation of delivering maternal health services like pregnancy identification, and antenatal and postnatal care visits by community health workers in Manoshi working areas with respect to migration.

Method

Data was extracted from the Management and Information System of Manoshi.

Community Health Workers collect this data monthly, BRAC management analyzes it and Quality Assurance Team regularly validates it.

In Manoshi, Community Health Workers provide scheduled household level services that include pregnancy identification, antenatal care and postnatal care. In 2014, they identified 47%, 39% and 14% pregnancies in first, second and third trimester respectively (n=191,631) among the non-migrant women. Whereas, they identified 75% of the pregnant migrants in third trimester, 23% in second trimester and only 2% in first trimester (n=8,331). Still, they are increasingly providing 4 or more antenatal care visits (from 26.7% in 2007 to 81% in 2014) and are providing almost 100% postnatal care visits to the delivered mothers within 48 hours of delivery.

Conclusion

Delay in pregnancy identification increases the chance of missing high risk pregnancies and timely management resulting disability and death. Therefore, we need to reinforce Manoshi intervention through intensified and innovative efforts to identify all

pregnancies and ensure proper health care. Besides, government should also strengthen its policy to address migration and minimize its negative impact on health.

A Nurse Led Urban Health Movement in Shanghai

Authors

1. Ms. Pamela Hoyt Hudson (The Rogosin Institute)
2. Dr. Barry Smith (The Rogosin Institute)
3. Dr. John Wang (The Rogosin Institute)
4. Ms. Li Ling Chen (Dreyfus Health Foundation)
5. Dr. Yu Jiazhen (China Community Health Alliance)
6. Ms. Molly Phillips (The Rogosin Institute)

Abstract

This presentation will share results of a successful public health initiative in urban Shanghai, highlighting a cross disciplinary global partnership and several case studies of low cost health projects that have resulted in policy impact. The initiative illustrates an evolving collaboration between The Rogosin Institute in New York together with 36 community health centers, two hospitals, two schools of nursing, and two elderly nursing centers from 10 districts in partnership with the China Community Health Alliance and health policy directors from the local municipal government in Shanghai. Program infrastructure, methodologies, findings, challenges, and future plans, including replication of this model in New York and the development of collaborative multi city research studies, will be shared.

The Dreyfus Health Foundation of The Rogosin Institute in New York launched “Problem Solving for Better Health®” in 1989 in China, a participatory project planning methodology used to unleash the potential of health care professionals to achieve better health and quality of life for the patients and communities they serve. Rogosin’s global program has been tested in more than 30 countries. In China the program has been applied in academic institutions, hospitals, and communities in 21 cities, engaged more than 13,000 health professionals, and resulted in over 7,000 health action projects. The program methodology and local infrastructure has catalyzed this urban health initiative in Shanghai. Examples include the development of health clubs to address diabetes and hypertension and the training of community health nurses to improve maintenance of peripherally inserted central catheters in cancer patients through outreach education, which have grown from pilot projects to government sponsored initiatives.

Problem Solving for Better Health is an iterative, transformational, and sustainable methodology that teaches health professionals the concepts and methodology necessary to increase community engagement and better self care as evidenced by this initiative in Shanghai, China.

The Double Burden of the Disease: Stigmatization of Individuals Suffering from Mental Disorders in Cameroonian Metropolises

Authors

1. Dr. Blaise Nguendo Yongsi (Institute for Training and Research in Population Studies (IFORD))

Abstract

Background: Mental illnesses and types of disorders are reported across cultures, and their burden continues to grow with significant impacts on health and major social, human rights and economic consequences in all countries. There is growing evidence that mental health literacy has improved worldwide in recent years. The question arises as to whether this trend is paralleled by an improvement of attitudes towards people with mental problems. **Objectives:** This paper aims at providing an overview on stigmatization towards people with mental illnesses, by examining the way in which mental illnesses are portrayed in Cameroon. **Methods:** A trend analysis was carried out using data from a cross-sectional population survey conducted in urban settings of Cameroon in 2014 and 2015. By means of fully structured questionnaires, the questions assessed the presence and intensity of stigmatizing attitudes towards individuals with mental illnesses. Data was analyzed using descriptive statistics. **Results:** Empirical findings and qualitative evidence indicate that stigma against mental illness remains rampant in Cameroon, constituting a significant barrier to successful treatment, reducing key life opportunities, and predicting poor outcomes over and above the effects of mental illness per se. In fact, individuals with mental illnesses receive harsh stigmatization, resulting in decreased life opportunities and a loss of independent functioning over and above the impairments related to mental disorders themselves. **Learning objective:** Mental health literacy is the most easily modifiable factor. Potential strategies of stigma reduction include education about mental illness, promoting contact between the community and persons with mental illness. **Keys words:** Stigmatization, mental illnesses, public opinions, social rejection, urban area, Cameroon.

Atypical Forms of Employments and Wage Gaps of Healthcare Workers in Urban Areas of Cameroon

Authors

1. Mr. Gaston Brice Nkoumou Ngoa (University of Yaoundé II, REMA University Paris Dauphine, DIAL)

Abstract

In reference to the efficiency wage theory, the healthcare worker's effort and the productivity of healthcare organizations are an increasing function of the salary. However, the liberalization policies implemented in the Cameroonian health sector and

in the health workers labor market in 1990s have led to the development of atypical forms of employment in public and private health facilities. This paper aims to analyze the effect of atypical employments on the wage gaps of healthcare workers in urban areas of Cameroon by estimating a joint econometric model of wage determination and employments choice. Afterwards, the Oaxaca-Blinder decomposition of wages will be carried out. Data used were collected in 2013 as part of the project on "Working conditions of healthcare workers in urban areas of Cameroon" in collaboration with the African Population and Health Research Centre. As a result, atypical employments are found to be a basis of wage inequality for healthcare workers in urban areas of Cameroon. The hourly wage gaps are significantly different from zero between permanent and atypical employments. The wage of temporary healthcare workers is 15.24% lower than the one of permanent workers. The wage of the part time healthcare workers is 16.50% lower than the one of full time workers. These wage gaps are not explained by the differences in productive characteristics of healthcare workers but between 97.14% and 98.42% by the precariousness of the atypical jobs.

Can Frontline Workers be Effective in Presbyopia Screening? An Experience from BRAC Reading Glass Project

Authors

1. Ms. Anita Chowdhury (BRAC)
2. Dr. Mahfuzar Rahman (BRAC)

Abstract

Introduction: Demand in near vision correction in the community exist in the Bangladeshi context with a thin presence of formal eye care support. This study aimed to test the screening capacity of BRAC frontline health workers in identifying near vision or presbyopia-cases in order to ensure frequent services to meet the community need. **Objective:** To assess the accuracy of presbyopia diagnosis by frontline workers.

Methods: A cross- sectional analytical study, done in 6 randomly selected sadar (urban) upazillas (sub-district), organizing a total of 105 eye-camps with a minimum sample required was 1050, where 2059 camp-patients were screened. Health-cadres for example, program organizers (PO), upgraded shasthya shebikas (USS, health volunteers) and old shasthya shebikas (OSS) working in BRAC reading glass project, were assigned to one of three arms consisting two sadars through permuted-block randomization. Sensitivity and specificity was calculated to understand presbyopia screening performance by the three different cadres. Their screening reports were matched with the gold standard by recruiting optometrists.

Results: Screening of PO-arm was 76% accurate (CI, 74.4-80.3) USS-arm, 73% (CI, 69.8-76.2) while OSS-arm, 61% (CI, 56.6-65.3). The sensitivity of the PO-arm was 77%, USS, 76% and OSS-arm, 58%. The specificity was 78% (PO-arm), 67% (USS-arm) and 69% (OSS-arm). Proportion of false positive rate was similar for PO (23.1%) and USS-

arm (24.3%), but higher in OSS-arm, 42 %, on the other hand the false negative rate in USS was 33%, CI, 27.2-39.5 in compared to OSS-arm, 31 % (23.4-39.2) but in PO-arm, it was 22% (CI, 17.7-26.4).

Conclusion: This study concluded that health volunteers with nominal education and experience can identify presbyopia cases in urban community, and could be utilized as a potential health human resources in correcting near vision cases in the absence of sufficient community eye care support.

CS 7.4: PLACE BASED ACTIONS TO PREVENT DISEASE AND PROMOTE HEALTH IN CITITES-04

Immunisation in Sub-Saharan Africa: Coverage, Geographical Variations and the Hotspots

Authors

1. Dr. Olatunji Adetokunboh (Stellenbosch University, Cape Town)
2. Ms. Adeola Adetokunboh (Centre for Healthcare Research and Training, Ibadan)

Abstract

Background: Expanded Programme on Immunisation is one of the most cost-effective public health intervention for reaching the newly set Sustainable Development Goals. It helps ascertain the level of the reduction of child morbidity and mortality in countries with poor performing health statistics such as seen in sub-Saharan Africa. This study seeks to evaluate level of coverage for basic childhood vaccinations, geographical variation and to identify the “hotspot of low performance” among sub-Saharan Africa countries.

Methods: The study used data from the cross-sectional, population-based Demographic and Health Survey (DHS) from different countries in sub-Saharan Africa. The study involved 28 countries with DHS that are within the time frame of 2010-2015. Descriptive and spatial data analysis methods were used to determine the coverage level and geographic variation in children aged 12-23 months who received all basic vaccinations at any time before the survey. Kruskal-Wallis test was also used in the analysis.

Results: The basic vaccination coverage ranged from 24.3% in Ethiopia to 90.1% in Rwanda. On average, the countries of West African, Central/East African and Southern African sub-regions recorded 57.2%, 56.2% and 69.2% respectively. There was no significant differences among the three sub-regions, $p=0.335$. Congo (Brazzaville), Congo Democratic Republic, Cote d'Ivoire, Ethiopia, Gabon, Guinea and Nigeria had regional hotspots of poor performance. Affar and North West regions of Ethiopia and Nigeria had the lowest performance at less than 10%. However, 11 of the countries had at least a region with a high level coverage.

Conclusions: The combined use of statistical and geographic system analysis

contributes to better understanding of the geographical disparity and identification of poor performing areas for vaccination coverage among children in sub-Saharan Africa. This is useful for customising intervention strategies for local regions, countries and more efficient allocation of limited resources.

Addressing London's Modern Urban Health Challenges: Learning from other Global Cities

Authors

1. Mr. Aaron Mills (Public Health England (London))
2. Prof. Yvonne Doyle (Public Health England (London))

Abstract

Purpose

150 cities have emerged as notable, with a global population less than 12%, they generate 46% of world's gross domestic product. These cities show a combination of communicable and non-communicable epidemiology and have stark inequalities and variable provision of primary care. Little comparative work has been published about policies that address city health challenges. It is urgent to move from describing problems towards leading large scale change which will address modern epidemics and reduce demand on healthcare systems.

Method

A small team visited New York to examine in detail how political and professional leaders address a range of complex health challenges. Practical methods were critically appraised with a focus on measurable outcomes over time and how these are communicated to the public. Research questions included; what methods led to large scale change? How important is political leadership? Were the lessons transferable?

Conclusion

Paris and NYC are addressing public health challenges by using evidence and empirical public health methods together with their various assets. Both cities have made differential but firm progress, at least some of which can be attributed to their direct action at various levels of government in each city. These methods and lessons are transferable but require political and in some cases, legal enablers. Evidence plays a crucial role in commencing programmes but social movements guided by exciting ambitions get action. It is important to publicly account for progress, good or bad. It is possible to change the health of urban populations if there is cooperation between political, professional and civil society. This is best done by working from the local level upwards. This is the method London is currently deploying. London has 10 ambitions for how it can be the healthiest global city and were developed in cooperation with key partners across the city.

Global Network of 'Living Labs': A Novel Healthcare Innovation Infrastructure for Urban Environments

Authors

1. Dr. Mark Geels (Amsterdam Health & Technology Institute)
2. Dr. Steven Van De Vijver (Amsterdam Health & Technology Institute)
3. Mr. Keerthi Prasad (Amsterdam Health & Technology Institute)
4. Dr. Milan Pleus (Amsterdam Health & Technology Institute)
5. Mr. Martijn Kriens (Amsterdam Health & Technology Institute)
6. Mrs. Ann Lore (Amsterdam Health & Technology Institute)
7. Mr. Michiel Heidenrijk (Amsterdam Health & Technology Institute)

Abstract

Worldwide but especially in developing countries, rapid, unplanned and unsustainable patterns of urban development are making cities focal points for emerging health hazards. Traditional approaches to solving the challenge of creating value in healthcare have often failed to achieve wide-scale, cost-effective, and impactful solutions. Novel, faster and iterative 'trial and error' methods are warranted to rapidly test healthcare innovations in real world environments. These evaluations need to be performed at appropriate scale and across different medical, cultural demographics that allow for reliable assessments of their effectiveness in everyday life. The Amsterdam Health & Technology Institute is a new, novel public-private partnership, which focuses on healthcare innovation in urban settings.

We will present our strategic and operational framework for a global network of 'living labs' in the Netherlands, China, US and Kenya. These labs provide real-time opportunities for rapid global testing and scaling of effective healthcare innovations in different urban health system contexts through Public-Private-Payer-People collaborations.

Examples of a 'City Health Dashboard' that combines, amongst others, health and socio-economic status using data visualizations will be presented. This dashboard allows care delivery professionals, health care payers, policymakers and researchers to understand the health status of urban populations, their demographics and their healthcare costs simultaneously. Subsequently, it enables the evaluation of the impact and effectiveness of healthcare interventions. Finally, we will present the design and methodology of a global, concurrently-run, cross-laboratory intervention study assessing the impact of home-based hypertension monitoring through the use of remote blood pressure monitoring devices. This study is a quintessential example how the novel methodology of living labs can accelerate innovation in urban health.

Equipping Community Health Workers to Turn the Tide Against Non-Communicable Diseases (NCDS) in Urban Settings

Authors

1. Ms. Sarah Shannon (Hesperian Health Guides)
2. Ms. Paula Worby (Hesperian Health Guides)

Abstract

The global disease burden of non-communicable diseases (NCDs) is projected to grow 17% over the next decade alongside continued mass rural-to-urban migration worldwide. Currently 82 % of NCD-related deaths occur in low and middle-income countries which are poorly equipped to prevent, diagnose, and treat chronic and debilitating conditions like diabetes, heart disease and cancer. As respected community members, Community Health Workers (CHWs) are positioned to organize community-based responses around changing the local food and health environment while also supporting individuals with the daily challenges of managing NCD-related conditions. Recognizing that training and supporting CHWs is an effective and holistic way to approach NCD prevention and management, Hesperian Health Guides developed its trademark user-friendly and heavily illustrated materials describing cancer, diabetes, and heart disease treatment and prevention, part of its major revision of the well-known *Where There is No Doctor*.

These new materials are modeled on the successes of organizations like Latino Health Access, a southern California non-profit that uses a promotora network aiding urban immigrants to organize exercise programs, screening days, home-based outreach, and otherwise deploy existing community strengths to address new challenges. Hesperian's new content lends itself to CHW-centered curricula for use in cities large and small in Africa, Asia and Latin America.

New chapters on Diabetes and Cancer were field-tested and assessed by health groups and dozens of individual experts in 10 countries. Feedback revealed critical data about local health beliefs and how easily these materials can be integrated into existing health education and delivery structures. CHWs demonstrated how their role with NCDs will increase capacity in otherwise overburdened health systems by: screening and referring patients, facilitating peer support groups for self-care support routines, offering individualized follow-up, and stimulating dialogue about community-level prevention.

Urban Health Tool Kit: An Aid to Plan and Implement Urban Health Program

Authors

1. Dr. Sainath Banerjee (IPE- Global)
2. Dr. Sumoni Mukhaerjee (Freelance)

Abstract

Key words: City Health Plan Planning Tool Monitoring Tool Vulnerability Assessment Household Survey Health Facility Assessment Health Resource Map Morbidity Profiling

For any individual or institution, the designing of an urban health program at the city level is always a daunting task. The inadequacy of reliable, appropriate and context specific information is common. The situation further aggravates with the presence of multiple stakeholders and the nature of their engagement with health. The National Urban Health Mission launched by the Ministry of Health and Family Welfare, government of India recognizes that the planning process in urban areas is complex and has to be inclusive in nature, with a focus on understanding and assessing the current status of health and health determinants. Dealing urban health issues at the city level is a challenge because of information gaps that existed. To begin with, one has to explore the city for location of slums and slum-like settlements in the city; especially for the unauthorized settlements. Understanding the functions of the health services and nutritional supplementation through respective departments is the next tasks to understand the issue of accessibility and reach particularly poor and marginalized. It is equally important to understand the city's morbidity profile, which at times is very unique in nature. For measuring progress, one has to understand household health profile for selected health and social determinants of health indicators. The current paper describes a host of tools which are essential during the planning and implementation of urban health program. The paper also discusses the efficacy of these tools as these are tested over a period of time and in multiple locations.

CS 7.5: LMIC LESSONS LEARNED – ENGAGING YOUNG PEOPLE IN ADVANCING A CULTURE OF HEALTH IN THEIR COMMUNITIES

Youth Focused Dialogues in Urban Informal Settlements: An Innovative Approach to Increase Contraceptives Uptake

Authors

1. Ms. Mercy Kamau (Jhpiego (an affiliate of John Hopkins University))

Abstract

Introduction

Young people face numerous Reproductive Health (RH) challenges due to lack of access to sexual and reproductive health (SRH) information and services especially in urban informal settlement. A key component of the Kenya Urban Reproductive Health Initiative “Tupange” – a 5-year program funded by the Bill and Melinda Gates Foundation – was to improve Family Planning (FP) access for the urban poor populations. One strategic approach was to conduct youth focused dialogues targeting young mothers and youths aged 15-19 in the urban informal settlements of Nairobi.

Methodology

Youth focused dialogues were facilitated within the catchment area of the 45 facilities supported by Tupange in Nairobi County on a quarterly basis. Nurses trained on youth friendly services led the dialogue in a participatory manner ensuring accurate information about FP, dispelling myths and misconceptions about FP and young people sexuality. Information, communication and education materials on FP and other RH services were disseminated. Young people in need of FP and RH services were referred to the link facility.

A representative sample of Nairobi women were interviewed at baseline and followed at end line of the Tupange project.

Results

Comparing Tupange baseline and end line results for youths aged 15-19 in Nairobi: The percentage using any FP method increased by 21.1% and using modern contraception by 21.8%. The method with the greatest increase was the injectable (28.6%). 28.2% of non-users at baseline reported using a modern method at end line.

Conclusions

Youth focused dialogues provide a healthy forum for accurate discussion on RH issues among young people empowering them to make right decisions about their RH. The young women get connected to FP services at their local health facility. This contributed to considerable increases in contraception prevalence among 15-19 year olds in the Tupange project.

Extent of Masculinity among Youth and its Influence on Risky Sexual behaviour: A Study of Urban Slum Communities in Mumbai, India

Authors

1. Ms. Ankita Siddhanta (International Institute for Population Sciences)

Abstract

Masculinity is a set of qualities, characteristics or roles generally considered typical of, or appropriate to, a boy or man whereas Hypermasculinity is a psychological term for the exaggeration of male stereotypical behavior such as an emphasis on physical strength, aggression and sexuality. Author analysed ASHRA (Alcohol Use, Sexual Health Risks and HIV Prevention among Young Men in Low Income Communities in Mumbai, India) data to find out the correlates of extent of masculinity and its influence on risky sexual behavior and sexual satisfaction among youth in urban slums of Mumbai. These chosen communities have low income families, accommodate migrants and are in close proximity to a substantial industrial sector. Author has used bi-variate and multivariate techniques for data analysis. The study found that one-fourth youth is having hypermasculinity which indicates that hypermasculinity is very much pervasive in the community. A little over one-third is having low masculinity whereas two-fifths is having moderate masculinity. Migratory status and standard of Living (SLI) and do not have a significant association with Hypermasculinity whereas, education, marital status

(both models) religion (both models), occupation (both models), exposure to pornographic materials, exposure to sexual stimuli and leisure time activities are having a strong association with hypermasculinity of the youth in Mumbai. High positive condom attitude is less and low condom attitude is more among the hypermasculine group than those having low masculinity. Exposure to mass media is negatively and leisure time activities, relational satisfaction with girlfriend/wife as well as sexual satisfaction are positively associated with hypermasculinity among the youth. Promoting equalized gender norms among the youth in the slums and discouraging control over their partner's sexuality is imperative. Awareness about gender equality and equity in sexual relationships minimizing sexual dominance in relationships should be promoted.

Adolescent Girls Initiative – Kenya: Research to Determine What Works for Very Young Adolescent Girls in an Urban Slum in Nairobi, Kenya

Authors

1. Dr. Karen Austrian (Population Council)
2. Dr. Eunice Muthengi (Population Council)
3. Ms. Taylor Riley (Columbia University)
4. Dr. Joyce Mumah (African Population and Health Research Center)
5. Dr. Caroline Kabiru (African Population and Health Research Center)
6. Dr. Benta Abuya (African Population and Health Research Center)

Abstract

Young adolescent girls residing in urban slums in Kenya are at risk of experiencing negative outcomes in the near future such as school dropout, early sexual initiation, unintended pregnancy, early marriage and sexual and gender-based violence. Therefore, it is critical to intervene before the myriad of challenges girls face result in outcomes that are irreversible or are costly to compensate for or reverse. Furthermore, in order to achieve well-being for girls in early and late adolescence, no single-sector intervention – whether it be education, health, livelihoods, or prevention of violence – will be adequate. While there is a growing literature on the effectiveness of single sector interventions for adolescent girls in urban slum environments, there is not currently data on which package of multi-sectoral interventions is the most effective.

The Adolescent Girls Initiative–Kenya (AGI-K), a four-year randomized controlled trial, will test combinations of interventions in four sectors in order to determine the most cost-effective approach to help girls make a healthy, safe and productive transition into adulthood. These interventions will be implemented in the Kibera slum of Nairobi, Kenya over the course of two years and will comprise a combination of girl-level, household-level, and community-level interventions.

This presentation will highlight key findings from a baseline survey of 2,394 girls ages 11-14 in the Kibera. It will include individual-level and household-level data in four sectors: violence-prevention, education, health and wealth creation. In addition,

descriptions of the interventions designed to address the issues illustrated by the baseline data, will be shared.

Improving Girl's Lives through Creative Interventions Strategies in the Mukuru Slum, Nairobi Kenya

Authors

1. Mr. Chacha Musya (C.Musya¹, M. Onchuru², U-Tena Performing Artists - Youth Organization)

Abstract

Background: Data from APHRC shows girls particularly those living in slums, have lower chance of completing secondary education. These barriers are enhanced by socio-cultural factors including: poverty, limited access to health services and quality education, gender roles, and traditional tribal practices. The aforementioned factors lead to majority of parents neglecting girl's education leading to high number of girls unable to transition to secondary schools. Time outside school may increase girl's vulnerability to early initiation into sex, dependency within relationships, and in some instances survival sex work. Furthermore, most girls lack knowledge and skills, which they would have gained in school to protect themselves from HIV, STI, pregnancy, and other harms.

Description: U-Tena recruits mentors and co-mentors from Mukuru who work with girls aged 11-17 where they lead participants in weekly sessions and group exercises around; monthly experience sharing and life-skills development. Topics such as, adolescent sexual health, Financial literacy and informed decision-making are covered. Parents are also counseled on the benefits of close relation with their girls.

Lessons learnt: Since the program's inception in 2012 where 200 participants were recruited, their decision making skills have improved as observed in the monthly meetings. Currently, school drop-outs due to pregnancy have reduced to 10%, a marked improvement from 50% dropout rate from previous years. Additionally, 100 girls were referred to other U-Tena programs. Schools in the slum report a 10% increase of girl's performance in literacy and numeracy. 65% of participants attended all 192 sessions.

Conclusions/Next steps: Interventions targeting girls from urban slums with parental counseling are more effective. Information and services need be tailored to the needs of girls within the context of their lives in the slum.

A Health Promotion Intervention to Reduce Bullying Among Early Adolescents in A Rural School in Sri Lanka

Authors

1. Ms. Krishani Jayasinghe (Rajarata University of Sri Lanka)
2. Dr. Manuja Perera (University of Kelaniya)
3. Mr. Najith Guruge (Rajarata University of Sri Lanka)

Abstract

Introduction and Objectives

Bullying is a leading health issue among school going adolescents, which needs immediate and effective actions. The aim was to develop and evaluate a health promotion intervention to reduce bullying among early adolescents in a rural school in Sri Lanka.

Methods

All students (n=240) in grades seven to nine participated in the intervention based on health promotion approach. The study design was participatory action research using mixed methods. The researcher engaged the students by discussing their future dreams and facilitating them to understand how bullying reduces their wellbeing and hinders their progress towards fulfilling their dreams. During the process, students were stimulated to identify and address determinants for bullying among themselves. The collectively identified determinants were, poor understanding on bullying, the school culture, promotion of violence by media, senior role models and positive attitudes towards bullying and violence. The actions to address them were identified and implemented collectively by the students. Changes of identified determinants were monitored using participatory methods. A self-administered questionnaire developed by the researcher and tools developed by students were used to collectively evaluate the intervention. Quantitative data were analyzed using Chi-Square statistic and Z test for difference of proportions and qualitative data were analyzed using thematic analysis method.

Results

The prevalence of verbal, physical and social bullying among participants reduced significantly along with the number of bullies and victims. Students' knowledge and awareness about bullying in the school improved significantly. School culture was changed positively with significant perceived improvement in values and attitudes.

Conclusion

The health promotion intervention conducted was effective in reducing bullying among adolescents in the selected school. The developed intervention model can be utilized to address bullying after modifications to the context of the setting.

Key words: Bullying, Adolescents, Health promotion, Participatory action research

CS 7.6: PLACE BASED ACTIONS TO PREVENT DISEASE AND PROMOTE HEALTH IN CITIES-06

Establishing Health and Demographic Surveillance System in Urban Slums: Recent Experience from Bangladesh

Authors

1. Dr. Abdur Razzaque (icddr,b)
2. Dr. Mohammad Iqbal (International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B))
3. Mr. Syed Hanifi (International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B))
4. Dr. Shehrin Mahmood (International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B))
5. Mr. Ahm Golam Mustafa (icddr,b)
6. Dr. Razib Chowdhury (icddr,b)
7. Mr. Dhiraj Kumar Nath (Asian)
8. Dr. Zahirul Islam (Embassy of Sweden, Bangladesh)
9. Dr. Abbas Bhuiya (International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B))

Abstract

Urban population in Bangladesh is growing rapidly. Currently 30% of 160 million of the country's population are living in urban areas. Bangladesh will face a huge challenge to ensure health of the urban poor with one-third of more than half of 200 million in 2050 living in slums. This is unique for the sheer size of the future slum population in Bangladesh. Availability of reliable data is a pre-requisite for effective programmes for the slum dwellers. Keeping this in mind icddr,b has recently started a Health and Demographic Surveillance Systems (HDSS) in three slums in and around Dhaka city among a population of 30,000. This paper presents the learnings in starting the HDSS.

Steps to start a HDSS involve identification of the geographic area, census of the population, numbering the households and regular visits to the households to update birth, death, migration and collect other information of interest.

Dispersed settlements of slums with varied sizes and stability was a challenge in choosing the slums. One of the slums included in the census might disappear soon and was substituted. Listing of the households with an indication of locations was another challenge given the disorderliness of the dwellings and having multiple households in very compact compounds. An attempt to have GIS codes for the households was abandoned for the settlement was so compact that household/compound GIS coordinates would not separate one compound from the other. It was revealed during the pretesting that recording of migration especially within surveillance slums would be a challenge. Absence of adult members during daytime for interview was another challenge.

Despite the challenges it was possible to establish the HDSS in the slums. Special data collection efforts will be needed to be made to collect data and many innovations will be required to maintain the surveillance.

Systematic Review of Quality Improvement Interventions for Prevention of Mother-to-Child Transmission Programmes in Sub-Saharan African

Authors

1. Dr. Olatunji Adetokunboh (Stellenbosch University, Cape Town)
2. Ms. Adeola Adetokunboh (Centre for Healthcare Research and Training)

Abstract

Background: Mother to child transmission of HIV infection remains a major public health concern in sub-Saharan Africa despite the notable scale up of HIV care and treatment services. In order to improve these services, quality improvement intervention of various prevention of mother-to-child transmission (PMTCT) cascade indicators was implemented in different African countries.

Methods: A systematic literature search for studies describing the approaches, progresses and challenges of PMTCT quality improvement interventions in sub-Saharan Africa interventions up to December 2015. We searched the following databases: PubMed, Web of Science, Google Scholar and Scopus. Bibliographies of included studies and conference proceedings were also searched. The risk of bias of included studies was assessed. A narrative synthesis method was used to analyse the outcomes.

Results: In total 3030 articles were screened, of which 13 met the inclusion criteria. The included studies were conducted in 8 African countries. The interventional approaches include formation of improvement teams which regularly examine performance gaps, identify root causes, develop and implement various change ideas to address the identified gaps. Another approach was the creation of learning networks for capacity building especially for managers, nurses and community health workers. Others include mentorship, on-site training, supportive supervision and service delivery standards action planning. Rapid scale up of fundamental components of PMTCT programme with the use of data-driven participatory processes especially to understand facility-level bottlenecks. Collaboration of non-governmental organisations and coordination by governmental partners. Healthcare workers successively implemented QI projects with dramatic improvement of key PMTCT indicators. Adapting processes such as data reporting, educational level, sustainability and policy-makers commitment are some of the challenges.

Conclusion: Quality improvement interventions can be implemented to improve outcomes in limited resource settings. However, a successive intervention still need a

detailed design, stakeholders buy-in, building up local capacity for sustainability and dependable data system.

Sukh Sustainability Model – Involving Government from Inception to Implementation

Authors

1. Dr. Haris Ahmed (Aman Health Care Services)

Abstract

Learning's of pilot project are shared with a notion that governments will scale-up the best practices. However this limits governments to contextually customize implantation at inception and learn from the process, identifying possibilities for scaling. Sukh Initiative provides that platform for government to partners at all stages of project implementation.

Background Sukh, an outcome of FP2020 commitment is equally funded by Aman, Bill and Melinda Gates and the David and Lucile Packard Foundations. Project goal is to improve contraceptive prevalence by 15% from the baseline, over a period of 5years (2013-2018); in a population of one million, from low income selected peri-urban communities of Karachi, Pakistan.

Method: Working with ExpandNet Sukh developed a sustainability model for 4 intervention areas: 1) Including Lady Health Workers (LHWs), community based mobilizers from the health department in FP demand generation activities. 2) Establishing FP/RH clinical training sites within health department facilities; 3) improving quality of services at Family Welfare Centers (FWCs); community based FP/RH service centers of population welfare department; and 4) including family life education (FLE) curriculum in "Board of Curriculum, Sindh". Departments of health (DOH), population welfare (PWD) and education were engaged through series of individual and collective interactions

Results: DOH allowed developing 3 training sites, and 250 LHWs are part of the mobilization team and has also endorsed the curriculum developed community mobilization. PWD allowed to work at 40 FWCs, train the staff on clinical competencies and conduct joint supervisory visits. Education department has allowed Sukh to conduct FLE trainings at public schools in project area. Curriculum Board has formed a joint task force to review FLE for its syllabus.

Conclusion: The support from government departments exceeded expectation. Focusing on partnership with the government, enhances political will and leads to greater and sustainable impact.

Social Capital Disparities Experienced by Refugee Youth in Urban Areas of British Columbia, Canada

Authors

1. Mr. Duncan Stewart (McCreary Centre Society)
2. Ms. Annie Smith (McCreary Centre Society)
3. Dr. Maya Peled (McCreary Centre Society)

Abstract

Background:

1,900 Syrian refugees are expected to arrive in British Columbia by February 2016, following refugees from South Sudan and Southeast Asia. There are ongoing reviews of the experience of recent refugees, including some who went through prolonged detainment at a youth custody centre. The 2013 BC Adolescent Health Survey (BC AHS) identified that 1% of youth in urban areas of British Columbia (BC) were in the province as a refugee. These youth may be lacking social capital, the important support networks in the lives of young people.

Methodology:

The BC AHS was conducted in Spring, 2013 with Grade 7 to 12 students across British Columbia, Canada (n = 29,832). The survey included 130 questions about health, including background information and measures of social capital.

Results:

Among refugee youth, 27% had lived in Canada for less than two years. Compared to youth who were born in Canada, refugee youth reported lower social capital, through weaker connections to their family, school, peers and community.

Refugee youth were less likely to be living with a parent, and more likely to be living with unrelated adults or on their own compared to those born in Canada. These youth had fewer close friends, and were more likely to report missing school because of bullying, employment, or family responsibilities. Refugees more frequently reported the lowest levels of school connectedness and were less likely to have post-secondary plans.

However, having strong social capital was associated with better mental health. Refugee youth who felt connected to school reported better overall mental health and higher self-esteem, as did those with supportive adults in their neighbourhood.

Conclusion:

Social capital is associated with better mental health ratings among refugee youth. These networks should be considered when supporting their transition to living in Canada.

CS 7.7: PLACE BASED ACTIONS TO PREVENT DISEASE AND PROMOTE HEALTH IN CITIES-07

Identifying the Intersection of Disaster Vulnerability and Mental Health Service Shortage in New York City

Authors

1. Mr. Daniel Carrion (Columbia University)
2. Dr. Patrick Kinney (Columbia University)

Abstract

Purpose: Climate change is expected to increase the frequency and intensity of severe weather events in many parts of the world, including the U.S. Northeast. Past storms in this region have demonstrated the need for ongoing public health planning, disaster preparedness, and building community resilience. Disasters are known to induce, exacerbate, and potentially prolong mental health conditions, namely post-traumatic stress disorder (PTSD) and depression. This presentation will examine the need to target disaster preparedness efforts towards communities that are under-served for mental health services and are more physically vulnerable to disaster.

Methods: This research utilizes Esri ArcGIS 10.3, Census data, and healthcare services data to examine the following in New York City: (1) the geographic distribution of mental health service shortage areas, (2) the geographic distribution of storm surge and flood risk, (3) the 'intersection' of mental health services shortage and storm surge/flood risk areas, and (4) the distribution of risk factors for PTSD and depression. Statistical pairwise comparisons are conducted in SAS 9.4 and will demonstrate any differences in risk factors for PTSD and depression between 'intersection' areas and other NYC regions.

Conclusion: Research is ongoing. To date, findings show that 1.15 million individuals live in 'intersection' areas wherein neighborhoods are vulnerable to flood/storm surge and exhibit a mental health service shortage. Notable, and statistically significant, demographic disparities are also present, with Latinos ($p < 0.0001$, Chi square) and those living below the federal poverty level ($p < 0.0001$, Chi square) being more likely to live in intersection regions. This research utilizes a geographic lens to inform ongoing research in disaster preparedness, health service planning, and health disparities. Preliminary findings suggest an opportunity to further integrate mental health services and policy as part of disaster preparedness initiatives. Doing so could lead to improved resilience within vulnerable and underserved communities.

Place and Health: Health Problems Experienced by Urban Dwellers in Gaborone, Botswana

Authors

1. Mr. Bailey Balekang (University of Botswana)

Abstract

Gaborone, the capital city of Botswana, is often described as Africa's fastest growing city because it is experiencing an increased influx of migrants from rural areas and neighboring countries. The growth of city has contributed to development of infrastructure (roads, hospitals, schools) and provision of social services. The objective of this study was to investigate health problems experienced by urban dwellers in Gaborone. The study used personal narratives which were taken from city dwellers. A total of 50 respondents participated in the study. The results showed that most of urban dwellers experienced lifestyle diseases such as diabetes, obesity, hypertension and depression. Other health problems include; chronic obstructive lung disease, kidney disease, stomach ulcers and sexually transmitted infections. The prevalence of diseases varied by age, education, ethnic, occupation and income. In addressing health problems of the city dwellers, there is a need for change in lifestyle and assessing the impact of culture on lifestyle. Interventions should be designed for specific group of individuals to address lifestyle diseases that urban dwellers face.

Urban Health Challenges of Coastal City: A Case Study of Surat

Authors

1. Dr. Vikas Desai (Urban Health And Climate Resilience Center)
2. Mr. Anuj Ghanekar (Urban Health And Climate Resilience Center)
3. Dr. Suresh Rathi (Urban Health And Climate Resilience Center)
4. Ms. Priyanka Jariwala (Urban Health And Climate Resilience Center)
5. Dr. Hemant Desai (Health)

Abstract

Surat is one of the 25 major cities on the long Indian coastline¹. Being a coastal city around 90% of Surat's geographical area is affected by some type of climate hazard (2).

Under the influence of risk factors like location, sanitation, socio demographic profile, increasing heat wave days, rising humidity, disturbed precipitation pattern and 24 floods in the last century Surat city have consistently faced public health challenges. This study is a retrospective analysis of impact of climate and floods on vector borne, water borne diseases and resurgent infections in Surat city.

As per history of vector borne disease, Surat experienced Filaria endemicity till sixties, high Malaria transmission in nineties and Dengue since 2009. Post flood disease trend indicates prolonged span of malaria, water borne disease upsurge and serious resurgent infections Plague (1994) and Leptospirosis (since 2006). Heat and health analysis reveals increase in all cause mortality during heat wave days (3). Vector borne diseases, new infection H1N1 and heat and all cause mortality is closely associated with increasing trend of humidity and minimum temperature. Analysis also shows differential spatial health and climate vulnerability within city.

Learning lessons from public health vulnerability, post 1994 city metamorphosed in to the cleanest and good governance city with well equipped urban health system and guidelines to manage health challenges, but continues to face challenges of new and resurgent infections.

Present analysis confirms high vulnerability of coastal cities to climate change and public health. Study indicates need for sustained efforts for climate and health surveillance, early warning system and evidence based interventions like “heat and health action plans”. A unique initiative Urban Health and Climate Resilience Centre of Surat Municipal Corporation is providing such technical support to Surat city.

Socio-Territorial Approaches to Health: A Multi-Disciplinary Study of Urban Health Inequalities in West Africa

Authors

1. Dr. Ellen Foley (Clark University)
2. Dr. Florence Fournet (Institut de)

Abstract

This panel presents the conceptual framework, methodology, and preliminary findings of the SANTINELLES (Santé, Inégalités, Villes) project, a multi-sited and multidisciplinary study of urban health inequalities in Saint Louis, Senegal and Bobo Dioulasso, Burkina Faso. Drawing from the disciplines of anthropology, entomology, geography, medicine, political science, and public health, the project offers a comparative analysis of how cultural, social, political, and economic processes materialize at the neighborhood level and subsequently shape vulnerability to disease and illness experience. The project focused on a total of eight neighborhoods (four in Saint Louis and four in Bobo Dioulasso) selected to represent the heterogeneity of neighborhoods in these mid-sized West African cities. Data from expert interviews, oral histories, household surveys, clinical exams, socio-medical interviews, and illness interviews inform our analysis about how socio-territorial processes shape neighborhood and city-level epidemiological patterns. This panel will focus on our findings related to two medical conditions: arterial hypertension and Type II diabetes.

Key words: socio-territorial processes, health inequalities, chronic disease, mid-sized cities, West Africa

Socio-territorial Approaches to Health: Living with Type II Diabetes and Hypertension in Bobo-Dioulasso and Saint Louis

Authors

- 1 Dr. Ellen Foley (Clark University)
- 2 Prof. Gérard Salem (Université P)
- 3 Dr. Florence Fournet (UMR MIVEGEC, IRD, Montpellier, France et Institut de

Recherches en Sciences de la Santé Bobo-Dioulasso, Burkina-Faso)

- 4 Dr. Daouda KASSIE (UMR AGIR, Cirad, Montpellier, France)
- 5 Ms. Clara Squiban (Université Paris Ouest Nanterre La Défense)
- 6 Ms. Lucie Vialard (LADYSS-Université Paris Ouest Nanterre La Défense)
- 7 Dr. Augustin Zeba (Institut de Recherche en Sciences de la Santé, Bobo-Dioulasso, Burkina Faso)

Abstract

This paper presents some of the socio-cultural findings from the SANTINELLES project, which takes a socio-territorial approach to examining health inequalities in Bobo Dioulasso, Burkina Faso and Saint Louis, Senegal. As part of this larger study, we interviewed male and female adults living in eight neighborhoods about their experiences living with Type II diabetes and hypertension. In particular, we sought to understand their experience of diagnosis, their subsequent therapeutic itineraries, and the social and economic challenges they faced managing these chronic conditions. Our interviews demonstrate that accessing medical care regularly and following dietary recommendations requires significant financial resources. Few individuals have health insurance and many rely on their social networks to finance their care. Beyond economic challenges, many individuals revealed that the lifestyle changes associated with the treatment for these conditions pose threats to their notions of self, identity, and sociality more broadly. Notions of self and identity are embedded in food culture, particularly *ceeb u jen* (fried fish with fried rice) and *attaya* (heavily sugared green tea). Eating from the common bowl and drinking tea are fundamental to social life, and some respondents were unable or unwilling to forgo common meals. The notion of chronic, ultimately incurable diseases also posed challenges. We found that many patients engage in episodic treatment of their conditions. Once their condition has stabilized, many patients return to their preferred diet and cease taking medications. In conclusion, we discuss commonalities in illness experiences in both urban settings and the ways that neighborhood residence shaped health-seeking strategies.

CS 7.8: PLACE BASED ACTIONS TO PREVENT DISEASE AND PROMOTE HEALTH IN CITIES-08

Assessment of Immunization Status in the Urban Slums; Mothers' Education and Low Socio Economic Status Remained Crucial Contributors to Low Immunization Coverage Among Children in Pakistan: Cross Sectional Study

Authors

1. Ms. Sumera Inam (School of Public Health, Dow University of Health Sciences)
2. Ms. Nadia Shah (School of Public Health, Dow University of Health Sciences)

Abstract

Background: Substantial morbidity and mortality due to infectious diseases in children under five years of age is major public health concern in Pakistan. In this study, we

determined the factors related to incomplete immunization in children between 0 to 18 months of age.

Methods: Cross-sectional survey was conducted in Gulshan Town using two stage cluster sampling. Random number list was used to select the UC's. Systematic random sampling was used to select household with at least one infant of age 0-18 months. Data collection was based on a questionnaire. Vaccination coverage was assessed by vaccination card and parents' recall. Chi-square test and multilevel logistic regression model were used to identify the determinants of partial and full immunization status.

Results: Approximately 74 % children were found to be partially vaccinated. Whereas about 14% were fully vaccinated and 13% were not at all vaccinated. Forgetting the schedule (68.1%), carelessness (4.8%), child sickness (0.5%) and not using vaccination (0.5%) were factors affecting low vaccination status. Children living in slum areas (OR = 1.53, 95% CI [1.24-1.89]) or belonging to low socioeconomic status (OR = 1.53, 95% CI [1.24-1.89]) were less likely to be completely immunized. Children of educated (OR = 1.53, 95% CI [1.24-1.89]) or partially educated (OR = 1.64, 95% CI [1.35-1.99]) mother were more likely to be immunized.

Conclusion: Immunization coverage among Pakistani children belonging to slum areas, low socioeconomic status and low educated mothers remained low. Knowledge and mothers education can serve as protective factors against low immunization coverage.

Multi Sector Collaboration; Pathway to Cervical and Breast Cancer Control in Nigeria

Authors

1. Dr. Foluso Ishola (Youth Society on Cancer Nigeria (YSCN); Global Youth Coalition against Cancer (GYCC))

Abstract

Introduction

In Nigeria, cervical and breast cancer are two of the leading, and often preventable, causes of cancer death in women. They account for more than 40% of all women's cancer and about two-thirds of cancer deaths. This growing burden of women's cancers reflects the relative lack of attention and resources devoted to cancer care and control in Nigeria.

Methods

This article reviewed 15 peer reviewed manuscripts on collaborative cancer control programs in low resource settings. It highlights the limitations to breast and cervical cancer control in Nigeria and proposes creative and effective strategies drawn from other countries that adopt integrated, multi sector strategies to comprehensive cancer control with collaboration of stakeholders at all levels.

Results

Resources for cancer care will be most effective if they strengthen primary care and the

entire health system and integrate cancer care into platforms already in place for other diseases. Cervical cancer screening could be integrated into HIV services or health providers in cervical cancer screening clinics could be trained in clinical breast examination. For this, comprehensive and coordinated development of programs, collective action and collaboration between government, nonprofit, private and public organizations, community groups and individual members is necessary. By building capacity through multi sector partnership, Nigeria significantly increases the bandwidth that is available to support national cancer control efforts. However, high level political commitment is needed as successful cancer control strategies invariably depends on government support.

Conclusion

Objectively measured improvements in cervical and breast cancer outcomes have been documented through innovative and collaborative cancer control programs being implemented in various lower resource settings. Nigeria needs to find the political will to provide and coordinate needed resources in a sustainable way to reduce its burden of cervical and breast cancer.

Improving Girl's Ability to Complete Secondary School Through Peer Intervention in the Mukuru Slum, Nairobi Kenya

Authors

1. Mr. Peter Chacha Musya Baru (U-Tena Performing Artists - Youth Organization, Nairobi, Kenya¹, U-Tena Arts and Education Society, Vancouver, Canada 2)
2. Ms. Caitlin Johnston (U-Tena Arts and Education Society, Vancouver, Canada)
3. Mr. Michael Onchuru (African Population and Health Research Center)

Abstract

Data from African Population and Health Research Center (APHRC) shows girls living in slums rarely complete secondary education. Barriers to education are enhanced by social, cultural, and structural factors. Parents often neglect girl's education. Time outside of school may increase girl's vulnerability to early initiation into sex, dependence in relationships with older partners, and in some instances survival sex work. Further, most girls lack the knowledge and skills which they would have gained in school, to protect themselves against sexual risks including, pregnancy, and STI.

Peers (trained as mentors) from the Mukuru slum work with girls aged 11-13. Mentors facilitate weekly group sessions in; literacy, numeracy, adolescent sexual health, and empowered decision making. Parents are also engaged to discuss the benefits of girls having education. Participants, who score > 250/500 in a post program assessment, are awarded a scholarship to secondary school.

Since 2013, 494 participants have completed the program. To-date, none of the participants have dropped out of school due to pregnancy, an improvement over the

50% dropout rate from previous years. Schools in the slum report a 10% increase in performance. 65% of participants attended all 84 sessions. Interventions targeting girls are more effective if delivered by their peers.

Research conducted simultaneous to the program was used to inform progress and needed improvements in real time, including changes in life skills development and poverty reduction strategies. Information and services need to be tailored to the needs of girls within the context of their lives in the slum. Parents must also be included in the intervention to ensure success.

HIV Testing Strategies for Reaching Urban Hispanic Young Adults: A University-Community Partnership

Authors

1. Dr. Michelle Hospital (Florida International University)
2. Dr. Eric Wagner (Florida International University)
3. Dr. Staci Morris (Florida International University)
4. Dr. Melissa Howard (Florida International University)
5. Dr. Juliette Graziano (Banyan Health Systems)
6. Ms. Sofia Fernandez (Florida International University)

Abstract

Miami-Dade County ranks No. 1 in the nation in new HIV infections per capita [1]. However, only half (54%) of Miami-Dade residents under 65 y/o report ever being tested for HIV; only 19% report having been tested in the previous year [2]. HIV remains a significant public health concern particularly among young adults. In Florida, 16% of all newly diagnosed HIV infections were among persons under 25 y/o; among these, Miami-Dade contributed the largest percentage of under-25 y/o HIV cases (24%) [3]. Hispanics are also disproportionately affected; 51% of all reported HIV diagnoses in Miami-Dade in the year 2013 were among Hispanics [4]. Florida International University (FIU), a large Hispanic-serving institution located in Miami-Dade, is leading the SAMHSA-funded project entitled, "Miami-Dade Partnership for Preventing Health Risks among Young Adults." This partnership represents a collaboration between FIU and two Miami community-based organizations, Union Positiva, and Spectrum Programs, to reduce substance abuse, HIV, and hepatitis C among Hispanic young adults. This interdisciplinary research team developed and implemented a culturally sensitive strategic plan for addressing prevention needs among Hispanic young adults that includes health screenings, point-of-care HIV testing and counseling, and social media advocacy/awareness campaigns. Focus groups (n=30) were conducted with community stakeholders to examine the strategic plan and proposed campaigns. Stakeholder feedback was incorporated into the final design and approach. Substantial increases in HIV testing among Hispanic young adults (143% increase during first month of campaign) and the burgeoning reach of our social media campaigns (e.g., #MissHIVaria, 1,000 Facebook likes, 800 Instagram followers) have been documented.

Ongoing outcome and impact assessments are being conducted and will be presented along with collaboration strategies. Preliminary results show that academic-community partnerships are critical in developing culturally and developmentally sensitive prevention campaigns that can successfully 'advance a culture of health' among urban Hispanic young adults.

CS 7.9: PLACE BASED ACTIONS TO PREVENT DISEASE AND PROMOTE HEALTH IN CITIES-09

Assessment of Healthcare Workers Knowledge on HealthCare Waste Management in Selected Health facilities in Abuja and Benue State, Nigeria

Authors

1. Dr. Moyosola Bamidele (John Snow Training & Research Institute Inc)
2. Dr. Abimbola Sowande (John Snow Training & Research Institute Inc)
3. Dr. Olufunke Jibowu (John Snow Training & Research Institute Inc)
4. Mr. Kelechi Amaefule (John Snow Training & Research Institute Inc)
5. Mr. Bala Muazu (John Snow Training & Research Institute Inc)
6. Dr. Jennifer Pearson (John Snow Training & Research Institute Inc)
7. Dr. Ngozi Agbanusi (John Snow Research & Training Institute, Inc.)

Abstract

The risk associated with healthcare waste (HCW) and its management has gained attention across the world in various events, local and international forums, and summits. However, the need for proper healthcare waste management has been gaining recognition slowly due to the substantial disease burdens associated with the poor practices. The aim of this paper was to examine health workers knowledge on healthcare waste management in selected health facilities in Abuja and Benue state, Nigeria.

Cross-sectional approach using stratified sampling techniques was used to select sixteen AIDSTAR-ONE project health facilities in Abuja and Benue state across the facility level (primary, secondary and tertiary). Data from the study was analyzed using descriptive statistics.

The results show that a high proportion of health workers know about segregating types of wastes: infectious waste (98.2%), sharps (98.2%) and general waste (96.5%). However, knowledge of waste segregation into recyclables and chemicals was poor (17.5%). The percentage of health workers who knew about color-coding of waste ranged from 71.9% in primary facility to 91.7% in tertiary facility. Knowledge of health care waste treatment and disposal was generally poor, although about 91% knew about open burning in a hole or enclosure, only 27% were familiar with the low-temperature incineration. A proportion of SPs who identified burial as a means of waste disposal (77.6%) was higher than for any other method. Results also showed that although all 12

primary health facilities observed were segregating sharps from general waste; only eight (75%) were segregating wastes more broadly into general, infectious, and anatomical and highly infectious groups.

Increasing Access to Quality Health Care Using Health Technology to 'Cut-Out' Urban Communities in Nigeria

Authors

1. Mr. John Ede (Ohaha Family Foundation)

Abstract

Quality health is a fundamental right of all Nigerian citizens. While primary health care (PHC) centres are relatively uniformly distributed throughout local government areas (LGAs) in Nigeria, the 'cut-out' urban population tend to underuse the basic health services. Unfortunately, there is a huge gap in the implementation of medical breakthroughs due primarily to distance apart and rugged terrain of access to quality healthcare centers. The main goal of this article take a careful look on how to BUILD LOCAL/TRADITION capacities to reach the 'cut-out' communities and "marginalized" population, providing quality healthcare services by members of communities, peer and youth groups; the reason for the population mix is to ensure step down trainings is carried out and overcome distance and language barriers using the readily available resources to ensure that quality healthcare breakthroughs are accessible to all. With a population of about 178 million and reporting more deaths due to malaria than any country in the world, Nigeria became the seventeenth PMI country in 2010. Malaria accounts for 60% of outpatient visits and 30% of hospitalizations among children under-five in Nigeria. The Demographic and Health Survey (DHS) 2013 reported an infant mortality of 69 per 1,000 live births and an under-five mortality of 128 per 1,000 live births in the preceding five-year period. Impressive progress has been made in malaria control efforts in recent years.

The goal of primary health care (PHC) was to provide accessible health for all by the year 2000 and beyond. Unfortunately, this is yet to be achieved where about two-thirds of Nigerians yet to be reached with quality healthcare

(<http://www.fao.org/countryprofiles/index.asp>) and they deserve to be served with all the components of PHC.

KEY WORDS: Health care, medical intelligence, medical technology systems, Nigeria, IDPs, public health

Towards an Evaluation of the Local Scale Health and Climate Related Ecosystem Services of Street Trees

Authors

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Abstract

Urban tree planting programmes are being encouraged to improve the sustainability of urban centres and to enhance human health and well-being. Space constraints mean that in many cities opportunities for planting may be limited to kerbside locations. However, the net impact of (street) trees on human health and the environment at local scales is not clear and generalised approaches for evaluating their impacts are not well developed.

We use an urban ecosystems services framework to evaluate the direct, and locally-generated, ecosystems (dis)services provided by street trees. We focus our review on the services commonly used to justify new street tree or street tree retention initiatives. These include 'climate and air quality regulation' and 'aesthetics and cultural services'. We argue that current scientific understanding of the impact of trees on climate and health in the urban environment has been limited by reductionist regional-scale approaches. These often consider vegetation generally and/or single out individual ecosystem (dis)services without considering the wider synergistic impacts on urban ecosystems. This may result in planners and policymakers leaning towards 'single parameter optimisation' decision making strategies. This may be problematic when a single intervention (such as street tree planting) offers different outcomes and has multiple effects and potential trade-offs in different places.

We argue for a multi-scale, holistic approach to evaluate the (dis)services provided by street trees. We demonstrate the importance of identifying the specific aim of the intervention, the scale of the desired biophysical effect and an awareness of a range of impacts when choosing i) tree species, ii) location and iii) density of tree placements. We offer suggestions to guide decision makers and planners towards the strategic use of street trees as an effective tool in developing resilient and resourceful cities in the current era of climatic change.

Built Environment and its Linkages to Health in an Urban Settlement: A Study of Selected Localities in Greater Mumbai City

Authors

1. Ms. Vidya Yadav (INTERNATIONAL INSTITUTE FOR POPULATION SCIENCES, MUMBAI)

Abstract

The built environment is a complex socio-ecological system, where multiple factors are interacting in different way. Basically it is a cultural landscape that changes with time and space. With the above context, the study tries to capture the role of built environment in determining health of an individual particularly communicable and lifestyle diseases. In this regard present study has conducted primary survey collecting both quantitative and qualitative information. For collection of data study opted two stage selection procedure at first stage, three wards from three respective zones: Island City (Dadar), Western suburban (Bandra) and Eastern suburban (Chembur) of Greater Mumbai city has been selected. Secondly, four different housing typologies like High rise residential buildings, Old colonies (resettled more than 100years ago), Slums and Slum rehabilitated houses has been selected within selected wards for the survey. The main criteria for area selection is existence of desired housing structure on those wards. And secondly, those housing typologies were selected due to variation in their housing structures in built forms as well as dissimilarity in their socio-economic aspects. By using quota sampling, total 600 households (i.e., 200 households from the each zone through the survey of 50 households of each housing structure) is surveyed. Result shows that high rise buildings and old colony dwellers enjoys better access to amenities like drinking water, toilet facility, proper garbage disposal and drainage facility compared to slums and slum rehabilitated houses. In spite of shifting from slum to rehabilitated houses, the living condition remains deteriorated. Open defecation is common problem among slum households, which leads to prone to infectious diseases particularly diarrhoea. High rise residential dwellers reported more lifestyle diseases like Diabetes and High Blood Pressure. In spite of staying in unhealthy living condition slum dwellers reported less morbidities and chronic diseases compared to other housing structures.

CS 7.11: EVIDENCE FOR ACTION IN POLICY AND PROGRAMS-13

Urban-Rural Disparities in Obesity Levels: A Global Trends Analysis

Authors

1. Ms. Honor Bixby (Imperial College London, on behalf of NCD-RisC)

Abstract

Urbanisation is one of the major demographic shifts characterising the last century. Current estimates of the global population living in cities are at 54%. Certain health

outcomes such as infant mortality and life expectancy provide evidence of an urban health advantage. Although urban lifestyles are frequently typified by behavioural risk factors for noncommunicable diseases (NCDs), empirical evidence for the impact of urban living on these leading causes of global mortality remains ambiguous. Previous studies include data from a single time-point or location and the comparability of results is further limited by their use of different approaches to classify urban settlements. This study quantifies the prevalence of obesity, an established risk factor for multiple cancers and cardiovascular diseases, in urban and rural populations of countries worldwide and trends over recent decades.

Population-based surveys that measured participants' height and weight using standardised protocol were systematically collated. A Bayesian hierarchical model was used to estimate the prevalence of obesity (body mass index ≥ 30 kg/m²) by urban and rural place of residence in the adult population of 200 countries and territories, for each year between 1985 and 2014.

Data from 1608 studies, involving 18.3 million participants, were pooled for analysis. Preliminary investigations confirm the upward trend of obesity levels globally with the levels highest in Oceania. Obesity is more prevalent among urban than rural residents of Latin and America and the Caribbean, North and Sub-Saharan Africa, Central Asia and the Middle East, particularly in women aged 40-59. The same is seen in women over 60 in Central and Eastern Europe, with the opposite in younger-ages. In other regions, urban-rural differences are less apparent.

These comparable estimates of obesity levels in urban and rural populations worldwide provide an important resource for investigating the contribution of urban living towards this major public health problem.

Sanitation for People with Disabilities: A Framework for Research and Practice

Authors

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Abstract

More than 15% of the world's population has some form of disability, 80% of who live in low- and middle-income countries, where basic needs, such as sanitation, often go unmet. Due to environmental, attitudinal, and institutional barriers, approximately 360 million people with disabilities lack access to improved sanitation, nearly 150 million of who practice open defecation, which, in turn, presents health risks to the broader

population. Providing individuals with assistive technologies is the most common approach, as community health workers often seek solutions that do not require modifications to existing facilities. Designing inclusive facilities and/or rethinking infrastructure design may, however, be more effective in reaching a wider population and taking a step toward achieving the UN's goal of "sanitation for all" by 2030.

Among the greatest barriers is the lack of research on the efficacy and scalability of solutions. What are the roles of cultural factors, such as individual and social acceptance of solutions? What are the roles of economic and technological factors, such as local capacity for design, production, and implementation? What is the interplay between policy revisions, attitudinal and behavior change, and modifications to the built environment? This paper, therefore, includes academics and practitioners from public health, environmental engineering, rehabilitation sciences, anthropology, and architecture, planning, and development, and provides a framework for future research and practice.

Urban Health System Development in the Philippines: A Policy Analysis

Authors

1. Mrs. Rosalie Espeleta (Department of Health-National Capital Regional Office)

Abstract

Urbanization, the social determinants of health, health inequities, its challenges, and effects in health outcomes, are realities that government, and different stakeholders at various level must plan and address. The objective of this analysis is to look into the performance level / current status of policy implementation, challenges encountered by stakeholders, lessons learned and possible strategic actions that could contribute in developing and enhancing urban health systems implementation. This includes programs and strategies, the planning tools and frameworks, and the capability building component.

Results of policy analysis on Urban Health Systems Development (UHSD) revealed that the policy is good, and a significant "agree" response was obtained in the areas of relevance, quality, applicability, and comprehensiveness.

The policy was perceived as difficult to implement and major reasons cited are gaps on the "how" of implementation mechanisms, lack of implementing rules and regulations, weak involvement of other stakeholders, structure, overlapping roles and responsibilities of key players, weak advocacy, and information dissemination, and the lack of monitoring tool.

Program Performance and perception on UHSD policy is good but need to review and improve on Healthy Cities Initiative since implementation is weak; no information dissemination on Environmentally Sustainable Healthy Urban Transport (ESHUT),

policy adoption of Reaching the Urban Poor (RUP) Manual of Procedure, and integration of social determinants of health in the City Leadership and Governance Program (CLGP).

Recommended new strategies and programs to strengthen implementation includes Healthy Settings, Health in All Policy (HiAP), CLGP, and the City Health Systems Roadmap which integrate the social determinants of health indicators, and health inequity between the rich and the poor, which the Philippines is currently conducting some initiatives to strengthen leadership and governance in health.

The Effect of Urbanization on Insulin Resistance

Authors

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Abstract

Purpose

Cardiovascular disease (CVD) is of growing concern in South Asia and has developed alongside rapid urbanization. India, in particular, shoulders a heavy burden of CVD yet little is known of the relationship between CVD and changes in the built environment. We hypothesized that urbanization would be associated with insulin resistance (IR), a major underlying abnormality driving CVD, in a cohort of adults in India.

Methods

The PURSE-HIS study was designed to investigate the prevalence and progression of CVD and its risk factors. Participants over 20 years of age were recruited from India Census designated urban, semiurban and rural areas in the state of Tamil Nadu. Participant residences were geocoded and used to assign MODIS satellite-derived land cover and Euclidian distance from urban center as measures of urbanization. IR was defined by homeostasis model assessment of IR (HOMA-IR) in the highest quartile. Our analysis excluded participants with diabetes. Separate models for men and women were adjusted for age, anxiety, BMI, physical activity, stress, socioeconomic status and energy intake (N= 1766).

Results

Distance from urban center was significantly associated with an increased odds of IR for

both genders. A distance of <20km resulted in an OR of 2.1 (95%CI: 1.5-3.0) for males and 1.7 (95%CI: 1.3-2.2) for females compared to the referent group (61-80km). Urban land cover was associated with an OR of 1.3 (95%CI: 1.1-1.5) for females only, while a Census designation of urban/semiurban was associated with an OR of 1.4 (95%CI: 1.1-1.7) for males.

Conclusions

Participants residing in urban or semi-urban areas had increased risk of IR. Differences were found based on gender and with metrics of urbanization. Urbanization as an independent predictor of IR indicates that changes in built environment may explain increases in CVD incidence in India and other rapidly urbanizing countries in South Asia.

Influencing Active Travel Behavior: The Importance of Social Norms

Authors

1. Dr. William Riggs (Cal Poly, San Luis Obispo)

Abstract

The ability to influence active transportation behavior offers an opportunity to address societal issues such as transportation congestion, air quality, and public health issues such as obesity. As a result a body of working is beginning to explore the behavioral dimensions that drive travel, including both social and behavioral norms. Research suggests that social forces may play an equal or paramount role to price / economic levers and that the psychological pull of social but more work is needed evaluate how market vs. social nudges work together to influence transportation decisions.

To evaluate this a group of roughly 500 participants were offered differing incentives in 4 identical trials. These incentives included various monetary amounts, a free gift or a social nudge tapping into altruistic values, in our case benefits to the environment. After tests for homogeneity, the results indicated that the social nudge had a high degree of effectiveness, as compared to both the financial incentives and gifts. Furthermore the results indicated that mixing market and social norms caused both to be less effective. These findings that travel incentive programs that focus solely on fiscal may be missing out on a significant opportunity. A focus on social norms and value may provide a tool to facilitate greater changes in travel behavior that can nudge individuals to more healthy and climate-sensitive modes of travel such as walking, biking and transit.

CS 8.2: LMIC LESSONS LEARNED – STRATEGIES FOR COMMUNITY ENGAGEMENT

Human Resilience: The Community and Public Strength to Promote Healthy Urban Space

Authors

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4. Ms. Adriana Carneiro (UNICAMP)
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8. Dr. Geraldo Delgado Neto (Faculty of Jaguariuna)
9. Mr. Anderson Augusto Dal'Bó (Faculty of Jaguariuna)

Abstract

Introduction: The necessity of urban public policies that protect the interest of the community, developing the construction of an inclusive and healthy territory, contributes to the decentralization of government and the strengthening of community governance. The formation and conservation of collaborative networks supported by intersectoral such as political and legislative bases generate sustainable urban interventions. The research's source is the Network of Potentially Healthy Cities, a Brazilian network established in 2003, which aims to enable, expand and monitor strategies in the construction of a healthy municipalities.

Objective: The purpose is to present facts that indicate the effective applicability of the network as this supports the development of public policies and social movements of a healthy city.

Methods: Compiled qualitative data related to the proposals of the Network's actions and their repercussions as well as bibliographic data for health promotion, healthy municipalities and municipal official documents.

Results: In ten years since the start, it has been possible to identify changes in the development of actions to promote and enhance the capability of the municipalities through health promotion projects. Intersectoral action is shown to be possible if work is combined between community groups and institutions to implement governance. The social awareness reinforces values and principles of healthy urban planning, transforms social interaction in a network of feelings and cooperation with focus on life's quality as well as achieves happiness. Projects started in other political mandates were continued and increased by those involved, allowing more flexible and inclusive urban planning.

Conclusion: Integrated management with the population's wishes demonstrates the importance of building a healthy city, considering the collective thoughts as a tool for quality of life, which aside from concern with actions that provide welfare, aims to ensure its effectiveness and give proposals and ensure human resilience, basic subsidies for healthy urban planning.

Engaging Community Stakeholders Using Data for Decision Making to Improve an Urban Community Health Worker Program in the Slums of Freetown, Sierra Leone

Authors

1. Ms. Emily Cummings (Concern Worldwide)
2. Ms. Khadijatu Bakarr (Concern Worldwide)
3. Ms. Megan Christensen (Concern Worldwide)
4. Dr. Henry Perry (Johns Hopkins Bloomberg School of Public Health)

Abstract

BACKGROUND: There is renewed interest in and a growing body of evidence on Community Health Worker (CHW) programs. Some are credited with high population coverage of maternal and child health interventions and gains in child survival. The densely populated, unplanned and transient nature of urban environments requires special consideration. Concern Worldwide is implementing a five-year project in ten urban slums of Freetown, Sierra Leone to reduce maternal and child morbidity and mortality. Operational research (OR) is testing a participatory community-based health information system using data gathered by CHWs to determine if and how community stakeholders can use data for decision making, and whether this contributes to improved health behaviors and outcomes.

METHODS: 1,323 volunteer CHWs and Peer Supervisors were trained to make monthly home visits to disseminate health messages, check for danger signs and collect data on vital events and morbidity. In the OR intervention area, bimonthly community health data review (CHDR) meetings are conducted and CHW performance data and health data, including verbal autopsy results, are presented to community stakeholders.

RESULTS: To improve the quality of vital events registration and identification of children with serious morbidity, CHDR meetings have so far focused on CHW performance and data quality. Actions taken by the community demonstrate increased ownership of CHW activities by assigning community leaders to neighborhoods for supervision and follow-up. In intervention and comparison communities respectively, CHWs who complete monthly reports is 48% and 34%; Peer Supervisors reporting is 88% and 75%; and the average number of households reached per CHW per month is 16.5 and 13.4.

CONCLUSIONS: Preliminary evidence suggest that stakeholder engagement with data may help to improve the functionality of this urban CHW program; an integral step in achieving complete vital events registration and active monitoring of morbidity data to improve health outcomes.

A Model for Engaging Communities in Infectious Disease Prevention and Control in Informal Urban Settlements: Lessons from Ebola

Authors

1. Prof. Meredith Minkler (University of California, Berkeley)
2. Dr. Frederick Marais (Department of Health Western Cape Government)

Abstract

The 2014 Ebola outbreaks in Freetown, Sierra Leone and West Point, Liberia, cast in stark relief the critical, yet often neglected, role of informal urban settlements at the intersections of place and health, particularly in infectious disease prevention and control (IPC). When informal settlements are discussed in relation to disease outbreaks, the understandable focus is on the deep poverty, crowding, inadequate health infrastructure and related factors making urban slums ripe for public health emergencies. As the Ebola outbreaks illustrated, however, a missing link in disease control in informal settlements often lies in the failure to adequately apply principles of community engagement. These include the early, active and sustained involvement of affected communities, and their trusted leaders, networks and lay knowledge, in helping inform more socially and culturally appropriate IPC approaches.

We draw on experiences of health care workers and residents in Freetown and other urban settlements; organizations including CDC, WHO and the Infection Control Africa Network; and leaders in community engagement, informal settlement mapping, and infectious disease control, to present an eight step model for creating within informal settlements environments emphasizing reciprocal learning and trust, bidirectional communication, asset and risk mapping and planning for sustainability. We illustrate successful efforts including the engagement of traditional healers and their union in Freetown, during the last months of Ebola, to successfully break final transmission chains. We further illustrate how often minor adjustments to the IPC protocol, taking into account the “community protocol” (cultural values, customs and practices) were able to improve community receptivity and discourage harmful practice such as the hiding of ill family members.

We conclude with lessons learned for a more community-engaged approach to IPC in informal urban settlements, and efforts underway with WHO to test the model’s applicability to the prevention and control of measles and other infectious diseases.

Citizen Participation in Delivery of Urban Environmental Health Can Make a Difference

Authors

1. Mr. Dhiraj Kumar Nath (Asian Development Bank)
2. Dr. Md. Nurul Islam (Dhaka City Corporation)

Abstract

Author: Dhiraj Kumar Nath: Urban Health Expert and Staff Consultant, Asian Development Bank.

Topic: Citizens participation key to ensure environmental health

Citizens participation can make a difference in delivery of urban public and environment health care services in city corporation and municipalities. The result derived from a study conducted in the catchment areas of Dhaka City Corporation Chittagong City Corporation and Barisal City Corporation of Bangladesh under Urban Public and Environmental Health Sector Development Project, supported by Asian Development Bank. The project mission is to improve accessibility to health care and its optimization, reduction of diseases and their relation to climate changes by involving citizens in solid waste, medical waste, food and water safety and primary health care services with pro-poor targeting and gender responsiveness.

A community participation plan developed to facilitate the participation of citizens and stakeholders groups where service delivery alliances consisting of civil society representatives, private sector providers at facility and ward levels were formed. Waste Pickers Livelihood Training Program started to absorb waste pickers into paid jobs with community-based organizations contracted for municipal service delivery within the project areas.

The study, conducted in three city corporations on six wards taking two from each. Interviewers developed a questionnaire mainly asking the role of ward level committees and their role to train waste pickers for 5 days with the compensation package of Tk. 81 per day. Ward level committees also involved van operators, rickshaw pullers, street sweepers and com-posters to transfer household waste to short transfer stations before taking to scientific landfills.

The study result reveals improvement of awareness on urban public health, preventing health care in comparison to other urban local bodies not covered under the Project.

Initial findings indicate citizens participation can be empowering driver to make difference and attain universal health coverage by 2030.

CS 8.3: URBAN HEALTH-ENVIRONMENTAL HEALTH-01

Population Cardiovascular Health and Urban Environments: The Heart Healthy Hoods exploratory study in Madrid, Spain

Authors

1. Dr. Usama Bilal (Johns Hopkins Bloomberg School of Public Health)
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3. Ms. Silvia Alfayate (Universidad de Alcala)
4. Mr. Pedro Gullon (Escuela Nacional de Sanidad)
5. Dr. Francisco Escobar (Universidad de Alcala)
6. Dr. Isabel Del Cura (Madrid Salud)
7. Dr. Maria Sandin (Universidad de Alcala)

8. Dr. Manuel Franco (Universidad de Alcala)

Abstract

Background: Our aim is to conduct an exploratory study to provide an in-depth characterization of a neighborhood's social and physical environment in relation to cardiovascular health. A mixed-methods approach was used to better understand the food, alcohol, tobacco and physical activity domains of the urban environment.

Methods: A median area of around 16,000 residents in Madrid was selected. Residents cardiovascular health data were obtained from the Madrid Primary Healthcare System. Quantitative audit tools were used to assess type and location of food outlets and food availability; tobacco and alcohol points of sales; characterization of streets for walking and cycling; and use of parks and public spaces. Eleven semi-structured interviews were conducted with key informants to help understanding the relationships between urban environment and cardiovascular behaviors.

Results: Electronic Health Records of the entire population of the area showed similar prevalence of risk factors compared to the rest of Madrid/Spain (prevalence of diabetes: 12%, hypertension: 34%, dyslipidemia: 32%, smoking: 10%, obesity: 20%). The food environment was dense and rich, with many small stores (n=44 stores) and a large food market with 112 stalls. Residents highlighted the importance of these small stores for buying healthy options. Alcohol and tobacco environments were also very dense (n=91 and 64 outlets, respectively), dominated by bars and restaurants (n=53 bars/restaurants) that also acted as food services. Neighbors emphasized the importance of drinking as a socialization mechanism. Open spaces were mostly used by seniors that remarked the importance of accessibility to these spaces and the availability of destinations to walk to.

Conclusion: This experience allowed testing and refining measurement tools, drawn from epidemiology, geography, sociology and anthropology, to better understand the urban environment in relation to cardiovascular health.

Climate Change and Productivity Growth in Nigeria

Authors

1. Mrs. Adejumo Oluwabunmi (Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria)

Abstract

This paper analyzes the economic impacts of climate change-induced adjustments on the performance of the Nigerian economy, using a Autoregressive distributed lag estimates (ARDL). The ARDL approach enables comparison of the effects of climate change to the overall growth of the economy because responsiveness to shocks is likely to depend on the macroeconomic structure of the economy. Although, in recent times,

the effect of overall climate change on productivity is projected to be relatively limited in developing economies, but it is projected that the scenario may become worse thereafter. Given the quest for industrial advancement, projected reduction in areas like agricultural productivity is imminent. Even though the time scales involved and the low starting point of the economy leaves ample time for factor substitutability (i.e., replacing reduced land productivity with increased use of capital and labor) and increased overall productivity, nonetheless, industrial policies should be geared towards autonomous climate adaptation. The study results can inform policymakers when choosing between direct climate-change adaptation policies or measures aimed at strengthening the fundamentals of the economy, as well as a contributor to mitigating unforeseen circumstances.

Living Environment and its Association with Child Health in Urban India: A Comparative Analysis of Slum versus Non Slum Dwellers?

Authors

1. Mr. Kaushlendra Kumar (Evidence Action)
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Abstract

Malnutrition is one of the leading causes of morbidity and mortality in children under the age of five in developing countries. The role of living environment in determining children's nutritional health has gone largely unnoticed until recently. This study explores the relationship between living environment and children's nutrition in India using third round of National Family Health Survey data on children less than five years of age. The study sets out to answer the following questions: First, what is the level of child malnutrition and how it varies among different socio-economic groups? Second, is living environment an important determinant of child health in India? The broad objective of the study is to assess the relationship between living environment and child health by the urban slum and non-slum dwellers in eight metro cities of India namely Chennai, Delhi, Hyderabad, Indore, Kolkata, Mumbai, Meerut, and Nagpur. However, the specific objectives of the study are to analyze the level and differential of child health and survival in India and to examine the determinants of child health and survival. The core hypothesis of this research paper is that children living in slum areas are more likely to experience under nutrition and less likely to survive in comparison to children residing in non-slum areas of urban India. The preliminary analysis shows that the level of child malnutrition differs considerably across the subgroups of population. Living environment also affects children's nutritional status. Finding suggests that in the interest of improving the nutritional status of children, living environment should be improved in slum areas of India.

CS 8.4: PLACE BASED ACTIONS TO PREVENT DISEASE AND PROMOTE HEALTH IN CITIES-02

Socio-territorial Approaches to Health in Saint Louis and Bobo-Dioulasso: Key Findings of the SANTINELLES Project

Authors

1. Dr. Florence Fournet (Institut de)
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3. Dr. Daouda KASSIE (UMR AGIR, Cirad, Montpellier, France)
4. Ms. Lucie Vialard (LADYSS-Université Paris Ouest Nanterre La Défense)
5. Ms. Clara Squiban (Université Paris Ouest Nanterre La Défense)
6. Dr. Augustin Zeba (Institut de Recherche en Sciences de la Santé, Bobo-Dioulasso, Burkina Faso)
7. Prof. Gérard Salem (Université P)

Abstract

The SANTINELLES project in Saint Louis, Senegal and Bobo Dioulasso, Burkina Faso sought to measure spatial health disparities and to understand them in the context of the physical environment, but also in regards to the social, economic, and historic processes in each city. We aspired to compare the presence and severity of health inequalities among neighborhoods in each city as well as between the two cities, rather than comparing the overall prevalence of disease in each city. Our key health indicators included malaria, anthropod-borne viruses, arterial hypertension, diabetes, nutritional status, anemia, and access to medical care. Our findings indicate that infectious and parasitic diseases remain significant in these urban settings, but non-communicable diseases were also important. We found significant health disparities among the neighborhoods in each city and important differences in the disease burdens of the two cities. The double burden of chronic and infectious diseases is challenging not only to individuals, but also to households that are faced with making difficult financial trade-offs to access medical care.

SANTINELLES in West Africa: Conceptual Underpinnings

Authors

1. Dr. Florence Fournet (IRD)
2. Prof. Gérard Salem (Université de Nanterre)

Abstract

The SANTINELLES project (2012-2015) in Bobo Dioulasso (Burkina Faso) and Saint-Louis (Senegal) employed a comparative transdisciplinary approach to highlight three inter-related processes in the production of health inequalities: inequalities in exposure to health risks, socio-spatial inequalities in health status, and the effects of socio-spatial

inequalities on meeting health needs. Examining these processes in each research site allowed us to evaluate the links between vulnerability, risk, and inequality and to understand the socio-spatial production of health. This paper explains how we operationalized these key concepts to design a multi-sited, multi-method comparative research project. We will highlight the following dimensions of the project: (1) our assertion that health inequalities in urban neighborhoods reflect the social production and management of urban space; and therefore it is these processes that reveal the genesis of urban health disparities; (2) by using a variety of bio-markers, both infectious and non-infectious, we measured the prevalence of intra-urban health disparities and produced health profiles of subgroups to demonstrate how the accumulation of pathologies affects particular segments of the urban population; (3) we examined access to health care in a holistic fashion, considering relations of solidarity (among neighbors, across generations), understandings of illness and disease etiology, gender relations, geographic proximity to biomedical facilities, medical pluralism, and the influence of therapy managing groups; and (4), we argue that urban space and urban settings reflect historical, social, political, and environmental processes, and the convergence of these factors produces health disparities. Our approach moves beyond merely measuring socio-spatial health inequalities to develop a more robust concept of the socio-territorial production of health.

Population Health Index: A Tool for Identifying Geographical Health Inequalities

Authors

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4. Ms. Iwa Stefanik (Department of Geography, Centre of Studies on Geography and Spatial Planning (CEGOT), University of Coimbra)

Abstract

Purpose: Health inequalities have been increasing in Europe, namely within urban areas, reinforcing the need to evaluate and select policies with a potential to lessen them. To address this challenge, comprehensive tools are required for evaluating population health in multiple dimensions and in multiple geographical levels, from national to local. Two research projects (Portugal: GeoHealthS; European Union: EURO-HEALTHY) produce evidence on the role of a Population Health Index as a multidimensional tool for identifying geographical health inequalities. The aim of this presentation is to demonstrate the application of the Population Health Index to the Lisbon Metropolitan Area, Portugal.

Methods: The Population Health Index is based on a socio-technical approach that

introduces transdisciplinary research which takes into consideration not only a set of indicators regarding health determinants and health outcomes (e.g. demographic, social, economic, environmental, lifestyle, and health care), but also the points of view of stakeholders and experts from various areas of knowledge.

Conclusions: The geography of the Population Health Index reveals inequalities in major areas of concern for population health, mainly those related to the social, economic, physical and built environment (e.g. water and sanitation, solid waste treatment, housing conditions, public security; road safety; air pollution). The results have the potential to improve the understanding of the local decision-makers regarding the major problems that affect population health, and to illuminate areas of priority for intervention.

Valuing Community Empowerment in an Urban Regeneration Context as an Alternative Pathway to Health Gains: A Discrete Choice Experiment

Authors

1. Ms. Camilla Baba (University of Glasgow)
2. Dr. Emma McIntosh (University of Glasgow)
3. Prof. Carol Tannahill (Glasgow Centre for Population Health)

Abstract

Introduction:

Increasingly regarded as Population Health Interventions, Urban regeneration programmes address social inequalities, and seek to improve residents' quality of life and health. Within such programmes, the role of the community has become increasingly recognised, with policy-makers emphasising the need for activities that foster Community Empowerment and involve communities in programmes' delivery. It is envisaged that will lead to future health gains, with more empowered communities reporting better wellbeing.

Aim:

Identify and value features of Community Empowerment in an urban regeneration context to inform future policy.

Methods:

Literature review conducted to identify key features of Community Empowerment within urban regeneration programmes. Analyses of cross-sectional data (n=1772) was carried out as part of the Glasgow GoWell neighbourhoods regeneration study to test the causal relationship between Community Empowerment and self-reported health. A UK representative population survey (n=302) Discrete Choice Experiment (DCE) was then conducted to elicit preferences for features of CE and willingness to give up time for Community Empowerment activities.

Results:

Regression analysis of the GoWell data highlighted significant associations between Community Empowerment and improved mental wellbeing. The DCE mixed logit model analyses demonstrated that respondents' strongest preferences are shown for the delivery of Community Empowerment activities which require less time commitment, offer opportunities to participate, fully explain decision-making processes, increase social interactions with their neighbours, have help and support from stakeholders and, keep them informed of the regeneration programme. Respondents' strongest preferences were for delivery of Community Empowerment activities that increase sense of belonging and feeling informed about the regeneration programme. For these activities, participants indicated they were willing to give up over 13 hours/month.

Conclusion:

The author is able to provide robust valuations for each Community Empowerment feature in order to inform future cost-effective investment in Community Empowerment activities as part of the delivery of urban regeneration programmes.

CS 8.5: PLACE BASED ACTIONS TO PREVENT DISEASE AND PROMOTE HEALTH IN CITIES-05

Risk for New HIV Diagnosis Among a Cohort of Persons Receiving a Supportive Housing Intervention — New York City, 2006–2012

Authors

1. Dr. Christopher Lee (Epidemic Intelligence Service, Centers for Disease Control and Prevention; Division of Epidemiology, New York City Department of Health and Mental Hygiene)
2. Dr. Ellen Wiewel (Division of Disease Control, New York City Department of Health and Mental Hygiene)
3. Dr. Sarah Braunstein (Division of Disease Control, New York City Department of Health and Mental Hygiene)
4. Dr. Sungwoo Lim (Division of Epidemiology, New York City Department of Health and Mental Hygiene)

Abstract

Background: Unstable housing is a risk factor for HIV infection, but unknown is whether providing housing decreases HIV incidence. Using a quasi-experimental design, we assessed whether HIV diagnosis rate was lower among persons placed into a supportive housing program than among unplaced applicants.

Methods: We studied 18,004 HIV-negative adults who applied for New York/New York III Supportive Housing between November 2006–September 2012. Subjects were followed until they received a diagnosis in the HIV registry or censored when they died

or on September 30, 2012. Treatment was defined as having received housing placement. We used propensity score weighting to balance the sample regarding baseline demographic, behavioral, and housing characteristics. We calculated incidence rate ratios (IRRs) for HIV diagnosis by using Poisson regression.

Results: Compared with control subjects ($n = 12,757$), treated persons ($n = 5,247$) were more likely to be older, male, abuse substances, and to have spent more days in homeless shelters at baseline. Crude HIV diagnosis incidence was similar between groups (control incidence rate [IR]: 12.2/10,000 person-years; treatment IR: 12.0/10,000 person-years). Propensity score weighting successfully eliminated observed differences in baseline characteristics. In the intention-to-treat analysis, HIV diagnosis incidence was similar between groups (IRR: 1.0; $P = .99$). Persons who received ≥ 2 years of placement ($n = 1,894$) had lower rates of HIV diagnosis (IRR: 0.4, $P = .11$), although this difference was statistically insignificant.

Conclusions: Propensity score weighting reduced bias between treatment and control groups. Those who received ≥ 2 years of housing placement had a substantial but non-significant reduction of risk for HIV diagnosis. Analysis using a longer follow-up period with more events might clarify association between housing intervention and HIV infection.

Social Determinants of the Fast Food Environment Near California's Public Schools

Authors

1. Dr. Emma Sanchez-Vaznaugh (San Francisco State University)
2. Dr. Brisa Sánchez (University of Michigan)
3. Ms. Aiko Sofia Weverka (Institute for Geographic Information Systems, San Francisco State University)

Abstract

Background: There is strong interest in the fast food environment near schools since children spend large amounts of time in or around schools. Prior research has observed greater concentrations of fast food restaurants (FFR) near schools attended by students of color and schools in socioeconomically disadvantaged neighborhoods. Far less is known about whether there is a neighborhood socioeconomic pattern near schools attended by students of color. Further, FFR availability may have changed over time by urbanicity and neighborhood socioeconomic advantage, but little is known about this issue.

Objectives: To investigate patterns of FFR according to school neighborhood socioeconomic advantage, urbanicity, race/ethnic composition of students, and time.

Methods: Using the National Establishments Time Series, enrollment data from the

California Department of Education, 2000 and 2020 US Census Data, and urbanicity from Nielsen PRIZM segmentation database, we generated FFR counts within 0.75 mile service areas for 7,722 California public schools. We calculated mean FFR counts for service areas of schools by school's neighborhood income, urbanicity, and racial/ethnic composition of the student body. The study does not use human data, exempting it from IRB review.

Results: In urban areas, schools in low income neighborhoods had greater concentrations of FFR than schools in affluent neighborhoods, regardless of racial/ethnic student enrollment, except for schools with majority black students. Between 2000 and 2010, there were little to no changes in FFR availability; however, small changes resulted in greater FFR availability in low income neighborhoods. In non-urban areas, schools had fewer FFR than those in urban areas, there was no income pattern in FFR availability, and changes in FFR between 2000 and 2010 were smaller than in urban areas.

Conclusions and implications: Schools in low income urban areas had greater concentrations of FFR. Reducing environmental disparities in FFR availability requires simultaneous consideration of urbanicity and socioeconomic advantage.

Psychosocial Factors Associated with Disaster Preparedness in a Sample of Vulnerable Elderly Community Members in San Francisco

Authors

1. Ms. Ezinne Nwankwo (University of California, San Francisco)
2. Prof. Elena Portacolone (University of California, San Francisco)
3. Ms. Qi Zhi (University of California, San Francisco)
4. Prof. Victoria Raveis (New York University)
5. Prof. Robyn Gershon (University of California, San Francisco)

Abstract

Even though the elderly are known to be at increased risk of disaster-related morbidity and mortality, several studies have shown that they are alarmingly underprepared for disasters. Although the risk factors for lack of preparedness in this population are not well characterized, there is some evidence that certain psychosocial factors, such as risk perception and self-efficacy, may play an important role. We recently examined this issue in a subset of urban, community-dwelling elderly at particularly high risk of adverse outcomes associated with disaster events - those receiving in-home supportive care.

The purpose of our study was to determine the role of social and behavioral factors with respect to disaster preparedness of vulnerable elderly. A sample of 50 elderly homecare recipients living in San Francisco were recruited to participate in 1.5-hour long in-depth interviews in their homes. An interview guide was developed that addressed the main

constructs of a social-cognitive theory of preparedness, including: personal characteristics (e.g., functional health and disability status, socioeconomic status, language and culture, etc.), predisposing social-cognitive factors (e.g., knowledge, attitudes, beliefs, perceptions, response self-efficacy, etc.) and social factors (e.g., social support, family structure, dependence on social services, housing and the built environment, etc.). Our goal was to identify factors that served as barriers or facilitators to preparedness. We found that in this sample, serious health problems; financial and resource limitations; sense of isolation, futility, and inevitability; and lack of social support all served as barriers to preparedness. Elderly homecare recipients who had strong social support (care givers, family members, neighbors) were more likely to prepare for disasters. Information from this study will inform policies and practice of governmental and non-governmental agencies serving the elderly in San Francisco, and may have similar utility in other urban areas.

Comparing Local Availability and Accessibility to Healthy Foods Across Countries: A Case Study in Madrid (Spain) and Baltimore (USA)

Authors

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6. Dr. Thomas Glass (Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, US)
7. Prof. Joel Gittelsohn (Global Obesity Prevention Center at Johns Hopkins, Department of International Health, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, US)
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Abstract

The places where we buy food influence individual dietary behaviors, making local food environments a good example of a mass influence on population diets. Cross-cultural comparison studies, using standardized and reliable methods, may help understanding the relationship between food environments and diet-related health outcomes.

We aimed to make a cross-national comparison between Madrid (Spain) and Baltimore (US), systematically characterizing the retail food environment in two average

neighborhoods in terms of type, and location of food stores, and accessibility and availability of healthy foods. We assessed one neighbourhood (~15,000 residents) in each city selecting median areas in terms of sociodemographic characteristics (segregation, education, ageing, and population density). Store audits were conducted with the same tool collecting data on (a) the number and types of retail food stores present, (b) their overall healthy food availability and (c) availability of fruits & vegetables. Street network analysis (200m, 400m and 800m) of food stores with high healthy food availability were mapped in each city to estimate residents' accessibility.

We found 40 stores in Madrid and 14 in Baltimore. The presence of small food stores carrying fresh foods in Madrid contrasted with the high density of corner and chain convenience stores in Baltimore. Around 80% of Madrid residents lived within less than 200m from a food store with high healthy food availability. In contrast, 95% of the residents in the Baltimore neighborhood lived at a distance of more than 400m from a food store with high availability of healthy foods.

These results may help promoting interventions from local city agencies to allocate resources to improve existing small-sized food stores, and to improve walkable urban environments. These actions may influence purchasing decisions of residents, especially for those who lack adequate access to public transportation or car ownership.

Situation Analysis on Urban Health Equity in Nepal

Authors

1. Dr. Babu Ram Gautam (Urban Health Resource Center Nepal)
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Abstract

Background

Since 2007 majority of population in the world today lives in urban areas. By 2030 six out of every ten people will be city dwellers and which is predicted to grow seven out of every ten people by the year 2050. The common health & social challenges in urban areas include; overcrowding, air pollution, rising level of risk factors, urban life style leading physical inactivity and harmful use of alcohol, tobacco and triple threats by infectious diseases, non communicable diseases and injuries, road traffic accident & violence.

Nepal

More than 17% people of the live in urban area, which is predicted to grow 50% of total population by the year 2035. The urban poor comprise 25% of the total urban population in which the slum population is 61.% and squatters are 7%. Total Fertility Rate in urban among women from the lowest wealth quintile 4.7 compared to women from the highest wealth quintile 1.3. The median age of marriage among women in the 20 - 49 years age group in the lowest wealth quintile found 17 years. Only 18% of women from the lowest wealth quintile received antenatal care against 84 % from the

overall urban population.

The urban poor are not getting health services due to low priority. The roles and responsibility of the stakeholders is unclear and has not owned quality essential health care service to urban poor. Increasing burden of preventable diseases, changed urban life style and high drop out rates of TB cases are the challenges.

Conclusion

To ensure health and social equity in urban areas needs to develop and strengthen healthy public policy. The roles and responsibilities of key stakeholders should be clearly defined. The quality of services and referral mechanism should be improved along with development of updated Urban Health Management Information System.

CS 8.6: LMIC LESSONS LEARNED – THE BUSINESS COMMUNITY AND URBAN ECONOMIC DEVELOPMENT

Understanding the Urban Healthcare Landscape: Is There Method in the Madness?

Authors

1. Prof. Alayne Adams (International Center for Diarrhoeal Disease & Research, Bangladesh (icddr,b))
2. Dr. Rubana Islam (International Center for Diarrhoeal Disease & Research, Bangladesh (icddr,b))

Abstract

Background

Rapid urbanization in low and middle income countries like Bangladesh has been accompanied by a proliferation of healthcare services. What meets the eye is a metaphorical jungle which is difficult to navigate or regulate. Until recently, little was known about the configuration of the urban healthcare landscape, nor the extent to which effective coverage is achieved especially for poor and disadvantaged populations. A GIS mapping project of 7 city corporations in Bangladesh has enabled an indepth examination of the logic of the urban healthcare landscape and how it might be harnessed to improve service quality and coverage for the urban poor.

Method

A geo-referenced census of health facilities disaggregated by type of facility was superimposed on maps indicating population density and the location of poor urban settlements. Patterns were identified as regards what types of facilities are located where.

Results

27,000 health facilities in 7 city corporations were mapped of which 1% are public, 13% NGO, and 86% private. Health facilities concentrate in areas with high population density. The public sector largely operate through tertiary and specialized hospitals while NGOs, both government and international donor supported, focus on primary healthcare and outreach services. In smaller cities, greater proximity and coordination

coverage of NGOs is apparent around poor settlements. Except for institutions offering emergency services, most public and NGO services have daytime hours only. Privately owned doctor's chambers locate close to poor residents and operate in evening hours. Private clinics and diagnostic centres are clustered around affluent areas and public hospitals.

Conclusions

Private for-profit and non-profit providers complement the public sector by filling gaps in urban primary healthcare in terms of geographic coverage and hours of service. The dominance of the private sector in urban service provision merits strategic consideration in health policies, but not without vigilant stewardship by government.

Investing in Urban Health: Evidence from Three Asian Countries

Authors

1. Dr. Inez Mikkelsen-Lopez (Asian Development Bank)
2. Dr. Eduardo Banzon (Asian Development Bank)
3. Dr. Susann Roth (Asian Development Bank)
4. Dr. Altantuya Jigjidsuren (Asian Development Bank)
5. Dr. Claude Bodart (Asian Development Bank)
6. Dr. Ida Pantig (Asian Development Bank)
7. Dr. Brian Chin (Asian Development Bank)

Abstract

Failure to promote urban health, particularly essential primary care services, is a key barrier to achieving universal health coverage. Political commitment and strategies for improving health in urban areas, however, often lack evidence about how to design, implement and monitor large scale interventions. Urban health in low and middle income countries has tended to be eclipsed by larger rural development health programs.

The Asian Development Bank (ADB) has extensive experience in supporting development projects in urban areas, including urban health and related sectors (water and sanitation, clean energy and infrastructure). This working paper summarizes the evidence from the implementation of three urban health interventions, namely the Bangladesh Urban Primary Health Care Services Delivery Project, the Mongolia Health Sector Development Projects, and in India, the National Urban Health Mission. All three urban health interventions focus on supporting quality primary services, in addition to strengthening the health system, including governance, health information systems, and capacity building. The modality of service provision ranges from entirely public sector, to partnerships with both not-for-profit and for-profit providers.

This multi-country evidence suggests that Mongolia, Bangladesh and India are all making progress towards universal health coverage by providing affordable services to the poor and vulnerable populations (slum dwellers and nomads). All three health system interventions share common challenges in providing adequate and appropriate health services for their urban population, particularly weak referral systems, dominance

of an unregulated private sector and fragmented inter-ministerial collaboration. Based on these findings, a framework is presented to support the planning and the development of urban health systems across three aspects: Governance, Service Delivery, and Financing. Strong urban health systems will have an integrated and flexible basis across the public and private sectors to meet the dynamic health care needs of the population they are designed to serve.

Engaging the Private Sector to Address Urban Health Issues in India

Authors

1. Mr. L.M Singh (IPE- Global)
2. Dr. Sainath Banerjee (IPE Global)
3. Mr. Shailesh Kumar (IPE Global)
4. Ms. Radhika Sarin (IPE Global)

Abstract

Key Words – Urban poor, urban health, inclusive business, private sector participation

Urban population in India has increased phenomenally over the last few decades. Limited economic opportunities in rural areas have drawn people to cities in search of employment opportunities and a better life. However, most Indian cities lack the necessary infrastructure to provide quality services to the burgeoning urban population. Thus, the poor often settle in slums with almost no services and poor quality of life. To compound matters further, they are generally informally employed, live in poor health and sanitary conditions and have almost no social capital. Such vulnerable groups face a disproportionate burden of ill-health. The urban poor are chronically underserved when it comes to basic necessities, especially healthcare. Despite challenges of access, the urban poor represents a significant untapped market. However, in the last decade or so, the poor are being recognized as “clients” rather than “beneficiaries”, and healthcare sector has seen high numbers of innovations. Several inclusive business models (IBMs) today exist in healthcare delivery, outreach and in medical technologies. These IBMs have significant potential to improve the landscape and health outcomes for the poor in sustainable ways. Scaling up IBMs in the private sector would lessen the healthcare burden on the public health system. Increasing private sector participation in the provision of healthcare, would create a complete health ecosystem that provides affordable, accessible and quality healthcare services to the underserved.

Mapping the Two-Year Progress of the National Urban Health Mission Policy of India

Authors

1. Dr. Shahab Siddiqui (Ministry of Health and Family Welfare, India)

2. Dr. Jatin Dhingra (Pricewaterhouse Coopers India)

Abstract

Introduction:

Unavailability of effective and responsive health care services has led to over dependence of the urban poor on the unorganized private sector and high out of pocket expenditure in India.

Recognizing the significant gap in availability of public health services in urban areas, the National Urban Health Mission (NUHM) was approved by Government of India as a sub-mission under an overarching National Health Mission (NHM) for providing equitable and quality primary health care services to the urban population with special focus on slum dwellers and vulnerable population like homeless, rag-pickers, migrant workers etc.

Methodology:

All 36 State Programme Implementation Plans (PIPs) and the administrative approvals under NUHM for financial years 2013-14 to 2014-15 were examined. The article maps two year progress of key elements in urban health planning and budgeting across States in India.

Conclusion:

The NUHM has given a separate identity to the health of urban poor. Based on the principles of equity, flexible financing, leadership and political commitment the decision has led to an increased focus on health of the vulnerable urban poor. Till 2013, the urban poor were seldom talked about in most of the health discourses and were overlooked as an extension to rural coverage. With the launch of NUHM there has been an increase in the number of States/UTs which have planned for the Urban Health (29 in 2013-14 to 35 in 2015-16). During the last two year there has been considerable increase in the approval of budget for the same with corresponding increase in coverage (764 to 993 cities). Similar increase has been registered in the infrastructure development and HR including frontline workers. There has been a definite shift in the urban health planning and resource allocation, paving a way forward for a strengthened health system for urban health service delivery.

Health Equity in a Thriving City and Dying Villages: A Study of Multidimensional Healthcare Access in Urban-Villages of Delhi, India

Authors

1. Mr. Rakesh Chandra (Jawaharlal Nehru University, New Delhi)

Abstract

Healthcare as a significant component of human development, is of particular interest in the process of urbanization. Generally, urban populations are found to have better average health than their rural counterparts. But whether such advantages are equally distributed to all in a city, is a question worth asking. Equity of health is most commonly defined in terms of equal access. Available literatures suggest three major dimensions

of healthcare access i.e., availability (physical access), affordability (financial access), and acceptability (Socio-cultural Access). This study conceptualized healthcare access as a multidimensional concept (structured on availability, affordability and acceptability) and attempted to measure households' healthcare access in Urban-villages and in planned residential urban neighborhoods (PRUN) of Delhi, India. It also analyzed factors of accessibility of healthcare in study area. This study was based on primary data, collected through household survey. A total 512 households were selected in 8 urban-villages and 3 PRUNs. To provide a brief statement of various dimensions of healthcare access, a composite index of accessibility (based on non-linear/ Categorical PCA) was designed. This composite index itself was the product of aggregation of the three of accessibility indices: 1) Index of Geographical Access; 2) Index of Economic Access; 3) Index of Socio-cultural Access. Measurements obtained on different dimensions as level of healthcare access (High, medium, low etc.) were further linked to the households' characteristics through Partial Proportional Odds regression model. It was found that a significantly high percentage of sample household located in PRUN had high level of access of health care over all the three parameters (Geographical Dimensions; Economic Dimensions; and Socio-cultural Dimensions). On the other hand households belonging to the urban villages fared poorly over different parameters including composite index. In analyses of determinants of healthcare accessibility nothing were found as significant as location of households' and standard of living.

CS 8.9: PLACE BASED ACTIONS TO PREVENT DISEASE AND PROMOTE HEALTH IN CITIES-03

Preparedness of the US Mass Fatality Infrastructure

Authors

1. Prof. Robyn Gershon (University of California, San Francisco)
2. Ms. Qi Zhi (University of California, San Francisco)
3. Ms. Ezinne Nwankwo (University of California, San Francisco)
4. Prof. Jacqueline Merrill (Columbia University)

Abstract

Converging factors are creating a “perfect storm” worldwide- in terms of large scale disasters and resultant mass fatalities. In the last dozen years alone, a wide range of natural and anthropogenic disasters resulted in exceptionally high numbers of fatalities. Recent examples include the 2004 South Asian tsunami (~220,000-230,000 deaths), 2005 Kashmir earthquake (~75,000 deaths), 2008 Sichuan, China earthquake (~87,000), 2009-10 H1N1 pandemic (~20,000 deaths), the 2010 Haiti earthquake (~200,000 deaths), the 2011 Great East Japan mega-disaster (~22,000 deaths), 2014 West Africa Ebola virus disease epidemic (~11,000 deaths) and 2015 Nepal earthquake (~8,500 deaths).

The management of mass fatality incidents (MFI) is extremely challenging and complex,

and requires the cooperation and collaboration of a large network of public and private agencies and organizations. In the United States, we refer to this network as the “mass fatality infrastructure.” To assure the readiness of this infrastructure, it is important to assess operational, organization, and resources sharing capabilities. A barrier to this has been the lack of appropriate metrics for each of the sectors comprising the infrastructure.

To address this gap, in 2014-2015, we developed and tested preparedness metrics for five major MFI sectors in the US: medical examiners/coroners; death care industry; departments of health; offices of emergency management; and faith-based organizations. Internet survey responses from 879 representatives of these sectors indicated highly variable levels of preparedness across sectors. Overall, the infrastructure as a whole had a composite score of 51%- only about half of the key capabilities for preparedness were in place. Particularly serious gaps in capabilities were noted for managing MFI that involved hazardous agents. Strategies for addressing these deficiencies were identified. This information may be of interest to other countries that are interested in assessing and improving their MFI capabilities.

Strong, Effective and Functioning Collaboration among Stakeholders: An Opportunity for Healthy Urban Governance in Bangladesh

Authors

1. Ms. Sadia Afrin (International Centre for Diarrhoeal Disease Research, Bangladesh)
2. Dr. Dewan Md. Emdadul Haque (International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B))
3. Dr. Shams El Arifeen (International Centre for Diarrhoeal Disease Research, Bangladesh)

Abstract

Bangladesh is experiencing a significant demographic change due to rapid urbanization, industrialization and escalating migration from rural to urban areas. Presently, about 27% of people live in urban areas, and this proportion is expected to reach 50% by 2040.¹ This situation requires particular attention to urban population health, especially for poor slum dwellers.

Objectives of this study were

- To explore policy platforms and existing government coordination mechanisms which guide and support basic health services for urban population
- To identify gaps and opportunities for strengthening coordination mechanisms among urban health actors

Methods:

- Review of existing policy documents

- Semi-structured interviews with government and non-government key informants
- Round table discussion to obtain stakeholders' collective viewpoints
- Data analysis was performed thematically followed by summarizing contents.

Through literature review, a number of multi-sectoral policies have identified which address urban health as a priority concern. Along with a government approved Urban Health Strategy, two ministries exclusively work for urban health in Bangladesh. The Ministry of Local Government, Rural Development and Cooperatives (MoLGRDC) is solely responsible for providing urban primary health care; on the other hand, the Ministry of Health and Family Welfare is responsible for providing secondary and tertiary level health care. NGOs, donors and charitable organizations are also present here to provide health services to urban population.

Although urban health is a prime concern in relevant health guidelines, the responsibilities of different actors are not well defined. A little is cited about inter-ministerial coordination, sectoral-involvement and monitoring issues. These circumstances have created ambiguities among stakeholders' roles and gaps in coordination mechanisms.

Key informants recommended that a structured policy-strategy is needed to address urban health coordination gaps. Developing a separate Urban Health Unit under MoLGRDC can be a better approach for a well functioning urban health system in Bangladesh.

Urban Sanitation in India: Concerns and Initiatives

Authors

1. Dr. Ulimiri V Somayajulu (Sigma Research and Consulting)

Abstract

An attempt is made in this paper to review the urban sanitation situation, policy and programme initiatives in India using the policy documents and other reports available. India's urban population is estimated to increase from 377 million in 2011 to 600 million in 2031.

Sewerage network is not available in 4861 out of 5161 cities/towns, 18% of urban households defecate in the open and less than 25% of all waste water is treated. Lack of treatment of waste water is costing India \$15 billion in treating water borne diseases. Cost per DALY due to poor sanitation is 90\$ while cost due to poor hygiene practices is 15\$.

As per the study carried out by Ministry of Urban Development (2010), none of the 423 study cities was "healthy" and "clean", with only 4 cities fared better and 190 cities are on the brink of emergency. There is pressure on freshwater resources as about 2500 million litres are disposed directly into the Ganges River alone and about 4,250 million litres into its tributaries.

National Urban Sanitation Policy attempts to deal with the sanitation issues such as: poor sanitation awareness, overlapping institutional responsibilities, poor supply-driven approach in provision of sanitation, the urban poor who face economic constraints in accessing safe sanitation.

The issues include : low infrastructure, low investments, investments made on an ad hoc basis, high investment needs, low service coverage, norm based approach, focus on individual projects and asset Creation, uncertainty over land tenure, weak Institutional Framework, low maintenance of assets, no coordination, limited technical expertise and capacity.

Recent initiative Swachh Bharat Mission covers rural as well as urban areas gives emphasis to individual and school toilets with corporate sector encouraged to take up this as part of CSR.

Urban Transport in India: Initiatives and Challenges

Authors

1. Mr. Tilak Mukherji (Sigma Research and Consulting)
2. Dr. Ulimiri V Somayajulu (Sigma Research and Consulting)

Abstract

In this paper, an attempt is made to review the urban transport situation, policy initiatives and emerging issues in India on the basis of available reports and documents.

Indian Government came out with transport policy in 1966 and in 1980 .

Urban travel in India is predominantly through walking, cycling and public transport, including intermediate public transport. In spite of higher growth of motorised two wheelers and cars in the last two decades (15% and 10% per annum respectively), car ownership remains at 3–13 per cent of the households and two wheelers at 40–50 per cent. Dependence on cycle rickshaws and bicycles is higher in smaller cities, while in some medium-size cities (1-3 million population), private buses were introduced.

Of India's urban residents, nearly 100 million people live in urban slums and travel patterns of these people are different from residents in formal housing. While cycling and walking account for 50 to 75 per cent of the commuter trips for those in informal sector, people from formal sector depend on buses, cars and two wheelers. Thus, in spite of higher risk and a hostile infrastructure, low cost modes are used due to lack of other choice.

Public transport is the predominant mode of motorised travel in mega cities with buses carrying 20 to 65 per cent of the total passengers excluding those who walk. The

minimum cost of public transport use accounts for 20 to 30 per cent of the family income for nearly half of the city population living in unauthorised settlements/slums.

Some of the recent initiatives such as metro rail in Delhi, Mumbai etc, BRT corridor and odd- even use of own car use in Delhi are the right steps in the right direction. However, accidents still remain an issue to be addressed in the policy.

Confident, Trained Slum Women's Groups Negotiate to Make Urban Governance More Responsive and Overcome Socio-Environmental Exclusion

Authors

1. Dr. Siddharth Agarwal (Urban Health Resource Centre)
2. Ms. Shabnam Verma (Urban Health Resource Center)
3. Mr. Neeraj Verma (Urban Health Resource Center)
4. Mr. Kabir Agarwal (Dept. of Economics, University of Mumbai)
5. Mr. Mayaram Sharma (Urban Health Resource Center)
6. Mr. Chhail Bihari Sharma (Urban Health Resource Center)
7. Mr. Shrey Goel (University of California, Berkeley)

Abstract

Purpose: The urban vulnerable are excluded from the benefits of India's urbanizing economic progress. Women are worse off, having lower social status and weak control over finances, decision making.

Urban Health Resource Centre (UHRC) works across 400,000 slum/informal-settlement population in Agra and Indore to form women's groups improve social cohesion, collective negotiation to improve urban governance.

Methods: UHRC advocates for efforts to address vulnerability of urban slum/informal-settlement populations, and facilitates civic authority action in response to community needs. Platforms for interaction are created for these purposes. Slum women are trained and mentored to submit need-specific petitions, send reminder requests, maintain paper trail, negotiate tactfully. They are motivated to persevere and succeed through focussed efforts at accessing government/civic services and entitlements. Schemes and entitlements are also explained to women.

Outcomes: In Indore-Agra, during April 2013-March 2015, negotiation capacity cultivated in women-groups with training, skill-building, mentoring led to 37000 persons among urban vulnerable communities benefitting from piped water supply, 12000 population benefitting with metered electric connections. Streets in 33 slums were paved benefitting 100000 urban slum/informal-settlement population, 140,000 population benefitting from regular cleaning of drains. 14000 persons not previously having government ID and proof of address obtained these crucial documents which enable legitimacy as citi-zens and facilitate access to government schemes and services. Appreciation, sustained mentoring, training builds collective confidence, negotiation

skills among urban disadvantaged communities to work towards overcoming exclusions, vulnerabilities and enhance access to services, entitlements. Social recognition, respect, confidence and skills acquired are factors that keep women motivated.

Conclusions: Lessons from Indore and Agra, have resulted in Government of India's National Urban Health Mission (NUHM) mandating Women's Health Groups (Mahila Arogya Samiti) as the demand side intervention. The approach of slum women's group led negotiation for services, entitlements is adaptable across growing Indian and other developing country cities.

CS 8.10: PLACE BASED ACTIONS TO PREVENT DISEASE AND PROMOTE HEALTH IN CITIES-10

Is the Neighborhood Food Environment Associated with Dietary Patterns in Middle Income Countries? Data Analyzes from ELSA-Brasil Study

Authors

1. Dr. Leticia Cardoso (Oswaldo Cruz Foundation)
2. Dr. Amy Auchincloss (Drexel University)
3. Dr. Simone Santos (Oswaldo Cruz Foundation)
4. Dr. Dora Chor (Oswaldo Cruz Foundation)
5. Dr. Rosane Griep (Oswaldo Cruz Foundation)
6. Dr. Sheila Alvim (Federal University of Bahia)
7. Dr. Ana Diez-roux (Drexel University)

Abstract

Background: Perceived measures of availability / accessibility of healthy food in neighborhood have been pointed up as consistently related to multiple healthy dietary outcomes in developed countries. The food environment and it's relationship with diet and health are scarcely studied in low and middle income countries.

Objective: To analyze the association between the perception of availability of healthy food in neighborhood and dietary patterns of Brazilian workers and to investigate if this association is different across urbanization level of the city.

Methods: We evaluated 11,462 participants at the baseline (2008-2010) of the Longitudinal Study of Adult Health (ELSA-Brasil), a multicenter cohort of civil servants between 35 and 74 years old conducted in six capitals in Brazil. The neighborhood average perception of healthy food availability was calculated using an adapted self-reported scale answered by participants who lived in the same neighborhood. The neighborhoods were created using spatial aggregation based on SKATER ('Spatial Kluster Analysis by Tree Edge Removal'). Three food patterns were identified using principal components analyses and a standardized individual score was estimated for "Fruits and Vegetables" and "Traditional and refined foods" patterns. Linear Models were estimated using R.

Results: After age, sex, education, income and marital status adjustment, a direct

association was observed between availability of healthy food and fruit and vegetable dietary pattern, and it was stronger in the more urban ($\beta=0.046$; p-value: 0.003) versus less urban cities ($\beta=0.020$; p-value: 0.128). An inverse association was detected between the healthiest food environment and “Traditional and refined foods” pattern but there is no difference across the cities.

Conclusion: These results suggest some similarities with previous results found in developed countries and suggest some effect modification by urbanization level in a middle income country.

Services Accessed by Homeless and Street-Involved Youth in British Columbia

Authors

1. Mr. Duncan Stewart (McCreary Centre Society)
2. Dr. Maya Peled (McCreary Centre Society)
3. Ms. Annie Smith (McCreary Centre Society)

Abstract

Background: Homeless and street-involved youth are among the most vulnerable populations in Canada and experience significant health inequities. These young people require support in their communities to be resilient in response to the challenges in their lives.

Methodology: The 2014 Homeless and Street-Involved Youth Survey (HSIY) was completed by 689 youth (aged 12-19) who were homeless, precariously housed, or involved in a street lifestyle. The survey was administered by experiential youth between October 2014 and January 2015 in cities and towns across British Columbia.

Results: Homeless and street-involved youth most commonly accessed youth centres, safe houses, dental services and job training. However, the most helpful services for participants were youth centres, dental services and food banks, which were each helpful for at least 80% of youth who accessed them. Youth who accessed these services and found them helpful frequently reported better outcomes, including those who found job services helpful being more likely to have had paid employment in the past month.

Youth most commonly reported that the services they needed more of in their communities were job training/work experience, safe and affordable housing, and access to safe houses, shelters or traditional housing. These priorities were the same as when the survey was previously conducted in 2006.

Conclusion: Although homeless and street-involved youth had accessed and benefited from numerous programs and services in their communities, there has been no change in the types of services that these young people require more of.

Multi-Sensory Experience, Positive Distractions and Well-being: The Role of Consumption Spaces in Total Healing Environment Paradigm

Authors

1. Dr. Zdravko Trivic (Department of Architecture, School of Design and Environment, National University of Singapore)

Abstract

Our understanding and experience of the built environment are primarily shaped by multi-sensory and emotional modes of exchange with space. Meaningful interaction with environmental stimuli and processing of multi-sensory information are vital for physical and psychological well-being. Yet, due to increased urban densification, hybridization and intensification, our contemporary cities are often either sensory overwhelming or sensory depleting.

The premise is that in order to trigger suggestive and positive relationships between space and users, all segments of urban developments would need to acquire an active role of healing. Consequently, the objective of this paper is to discuss the capacities of contemporary shopping spaces to overcome the mere consumption motifs and to acquire a health-supportive role, in spite of their manipulative design and “quasi-publicness”. Shopping malls have become influential model for various urban developments (including healthcare) and are tightly knitted into the everyday environment of many dense Asian cities, such as Singapore, Hong Kong or Tokyo. In these cities, they may arguably be seen as perpetual laboratories of “positive stress” (positive distractions). Qualitative approach employed consists of discourse analysis of health and space related theories and a comparative case study analysis of consumption spaces in Singapore (and Belgrade, Serbia). The case study analysis combines spatial explorations, first-person observations, participatory photo-journeys, multi-sensory mapping, interviews and on-site questionnaires.

Key findings show that consumption space users tend to seek positive stimulation. The richness and arrangement of overall sensory information available in space (visual and spatial complexity, tactile, auditory, olfactory and gustatory) considerably shape users’ subjective perception of and emotional response to shopping environments. The presence of nature, micro-climate, way-finding, access, safety and hygiene, but also subjective bodily and mental self-awareness, crowd and shared identity, social activities and phantasmagorical experiences, are perceived as important ingredients of “healing places” and as “stress fighters” within high-density urban contexts.

Closing the Gap on Unmet Family Planning Needs of the Urban Poor in Kenya

Authors

1. Ms. Margaret Kilonzo (Jhpiego)

Abstract

Background.

Women living in low-income urban areas in Kenya have a significant unmet need for family planning, according to a survey conducted by the Urban Reproductive Health Initiative in 5 urban cities. The poorest quintile tended to have the largest proportion of women reporting an unmet need for family planning and this proportion declined as wealth increased. The unmet need among married women ranged from 16% in the richest quintile, 26% among the middle quintile to a high of 76% among the poorest quintile. This suggest poor women are at a greater disadvantage than richer women hence the need to focus on poor women to address this key gap.

Methodology

Implementation took place within a period of 3.5 years with primary focus on the urban poor. A household longitudinal survey of women of reproductive age was used to measure changes in unmet need. Women were categorized into 5 wealth quintiles (poorest, poor, middle, rich and richest) based on household characteristics. Community Health Volunteers living within the slums were identified and trained on family planning to enable them distribute pills, condoms and refer clients for long-term method within their communities. Family planning mobile outreaches were also conducted on a monthly basis targeting poor households. The services were offered free of charge.

Findings

The greatest change in family planning uptake by wealth quintile was among the urban. On average use of modern family planning increased from 23.2% to 42.5% and 29.5% to 44.4% within the urban poorest and poor respectively.

Conclusion

Strategies to reach the poor can help expand overall family planning service access and close the gap among the poor and the rich, ultimately leading to, less burden on strained social services, natural resources, and improved maternal and child health.

An Analysis of Spatio-Environment and Health Inequalities in Addis Ababa, Ethiopia

Authors

1. Dr. Ranavijai B. Singh (Ethiopian Civil Service University)

Abstract

The dimensions of environmental and health inequalities in spatial context is one of the concern to be critically analyzed to comprehend environmental justice. Addis Ababa harbors about 3.5 million plus population, the seat of Ethiopian federal government and headquarters of African Union (AU), where socio-economic, spatio-environment and health inequalities is commonly visible. The aim of the present study was to analyze the relationship (based on exposure and effects) between socio-economic, spatio-environment, and health conditions in the diverse neighborhoods of the city. To achieve the objective, six different types of neighborhoods (Kara-the informal settlement, Summit-the condominium housing, Cherkos-slum settlement, Lideta- slum upgraded, Merkato-old central commercial cum residential area and Akaki-industrial cum residential settlement) were selected purposively. With aid of social, environmental and health indicators, inequalities were analyzed. Total of 300 households (50 from each neighborhoods) were selected randomly and questionnaire survey was conducted to obtain information's form the households on the issues under the study. Further, field observation using checklist was also conducted particularly to complement the information about the spatio-environment condition in selected neighborhoods. Chi-square test was conducted to check significant relationship between socio-economic status and health effects, and spatio-environment condition and health effects. Simple comparative analysis of spatial environment of different neighborhoods was also done. The findings reveal that, low income households living in low standard housings in Kara, Cherkos and Merkato neighborhoods are highly exposed to environmental and health hazard, particularly with waterborne and indoor air pollution and related health effects. In Akaki neighborhoods is more households complained of sound and dust pollution from heavy vehicles and Akaki river pollution due to industrial discharge. It was also found that, spatio-environment condition of Summit and Lideta neighborhoods comparatively better off with rest of neighborhoods as they are newly planned housing area.

CS 9.1: EVIDENCE FOR ACTION IN POLICY AND PROGRAMS-01

Making the Case for Public Health Programs - Insider Advocacy Tips

Authors

1. Mr. Brent Ewig (Association of Maternal & Child Health Programs)

Abstract

The U.S. Congress has recently considered cuts to public health porograms of historic proportions. This session will explore the latest federal budget developments and focus on short term and long term strategies to ameliorate the worst outcomes for public health systems. We will share insights from advocates working in Washington, DC to educate federal policymakers, and explore the need for sustained and strengthened partnership across public health partners.

if this session is selected for a roundtable it would be adapted to focus more on facilitated dialogue on these issues rather than presentation.

Participants will gain understanding of current federal budget proposals and what they mean for public health systems.

Participants will learn about what key public health advocacy messages have been developed, which seem to resonate with policymakers, and which are areas to avoid.

Facilitated dialogue will help participants learn how other partners are preparing to avoid cuts and what strategies are available to maintain core capacities.

Improving Air Quality in New York City Through Cleaner Heating Fuels: Novel Methods for Fine Scale Evaluations of Public Health Impacts

Authors

1. Mr. Iyad Kheirbek (New York City Department of Health and Mental Hygiene)
2. Dr. Thomas Matte (New York City Department of Health and Mental Hygiene)

Abstract

Background: Fine particulate matter in air has been associated with many adverse health outcomes. Beginning in 2008, New York City (NYC) began a process of air quality monitoring and pollution-attributable health analysis to provide data instrumental in developing local air quality interventions.

Methods: First, we used a library of neighborhood mortality and hospital admission data, linked to local air pollution data, to estimate the overall impact of air pollution exposure on mortality and morbidity in NYC. Second we used data from a unique street level neighborhood air quality monitoring network, the NYC Community Air Survey (NYCCAS), with local geodatabases to model and map air quality to identify hot spots and important sources of pollutant spatial variability. Third, we developed a deterministic modeling framework that uses local data on pollutant emissions and health outcomes with high spatial resolution air quality and health impact modeling to quantify the benefits of emissions reduction strategies.

Results: NYCCAS data demonstrated higher concentrations of several air pollutants in NYC neighborhoods with the greatest density of residual oil-burning boilers. Findings from these studies have been shared in public reports and testimony, spurring legislation, regulation and voluntary initiatives to shift to cleaner heating fuels. We estimated that when fully implemented, clean heat measures will prevent almost 300 premature deaths and over 700 hospitalizations and emergency department visits due to fine particulate matter exposures annually, with the majority of the benefits expected to occur in low income neighborhoods. City-wide air quality monitoring demonstrated a 69% decline in ambient sulfur dioxide levels after implementation of clean heat regulations.

Conclusions: Combining local air quality surveillance and health benefits modeling can

provide valuable information for prioritizing, evaluating, and supporting local urban air quality interventions. These methods are applicable in other cities for assessing impacts of local air pollution sources.

Urbanization, Inequality in Housing, Living Environment Presents Health and Well-being Risks – Calls For Ensuring Quality in Social Housing Policy and Programs

Authors

1. Mr. Kabir Agarwal (Department of Economics, University of Mumbai)
2. Dr. Siddharth Agarwal (Urban Health Resource Center)
3. Dr. Prakasha Sahoo (Formerly, Urban Health Resource Centre)

Abstract

Purpose: India's 377 million urban population is expected to rise to 535 million (38%) by 2026 . India will add 404 million urban dwellers between 2014 and 2050 . With urban commercial growth, pursued under Government's "smart-cities" mission, urban India's social-equity progress will depend on progress of poor urban populations. This study highlights inequalities in housing conditions in urban India, and need for quality housing for the urban poor as a step towards inclusive urbanization.

Methods: National Family Health Survey-3 (2005-06) data was analyzed to assess housing situation of poorest urban quartile vis-à-vis richest urban quartile for India. Poorest quartile of urban population was categorized based on NFHS-3 wealth-index.

Findings: Comparing poorest quartile of urban India in 2005-06 with richest urban quartile, 18.3% had piped-water supply at home against 76.5% among richest quartile; 37% had sanitary toilet, compared to 95.8% among richest quartile. Lack of toilet, water causes women, girls to eat less, drink less water to minimize urge to address nature's calls, and fetch water from distant locations. Among poorest quartile, 45.6% households had >5 persons/sleeping-room, against 7.8% among richest urban quartile; 32.5% households had separate cooking-space, against 96.7% among richest urban quartile. Tuberculosis prevalence among people living in houses with >5 persons/sleeping-room is twice as high as those living in houses with <4 persons/sleeping-room, and is 2.2 times higher among people without separate cooking-space as compared to those with separate coking-space. Chronic child (0-59 mths) under-nutrition (height for age <-2SD), is two times higher among households without separate cooking-space.

Conclusion: Urban vulnerable constitute the fastest growing segment of urban India. Housing, water/sanitation, need to reach all urban vulnerable to achieve equitable prosperity. Community engagement in planning and implementation of housing programs is crucial to address indignities faced by urban vulnerable.

Lessons from Abroad on Access to Healthcare for Vulnerable Populations

Authors

1. Dr. Deborah Kim-Lu (CUNY Graduate Center)

Abstract

My presentation highlights valuable cross-national learning opportunities in healthcare policy from Germany and the United Kingdom that can provide insight for the U.S. in terms of improving access to healthcare for vulnerable populations. While these countries possess distinct differences in political economies and healthcare system structures, I argue that lesson drawing is a worthwhile pursuit, regardless of whether aspects of the political, social, and economic context may vary among countries being compared. Using ground rules for comparative studies by Kieke, Okma, and Marmor (2013), I demonstrate that learning from other countries is indeed valuable because examples of other countries' successes and failures can serve as illustrations of what can be done better in the U.S.

More specifically, I selected Germany and the United Kingdom as case studies because these countries have identified vulnerable populations with similar access to healthcare barriers as the ones found in the U.S. and have implemented innovative and targeted interventions to address such barriers. My in-depth analyses of these healthcare systems and key provisions of care shows that one key take-away from these case studies is that the ability to successfully integrate vulnerable populations into a mainstream healthcare delivery model is closely linked to the underlying principles of their healthcare systems. Strong social solidarity and commitment from government are the key elements necessary to achieve better health and healthcare access outcomes. Nevertheless, trying to adapt lessons like these in the U.S. context will be challenging at best due to the "bewildering complex of service and insurance inequalities", which make it much more difficult to address the barriers faced by vulnerable populations in accessing healthcare as compared to the United Kingdom's more centralized and coordinated healthcare system (Light, Portes, & Fernandez-Kelly, 2009b). I will also discuss what can be done to enact change.

CS 9.2: EVIDENCE FOR ACTION IN POLICY AND PROGRAMS-02

Potential of Integrated Disease Surveillance Project for Improved Municipality Disease Surveillance in Pune, India

Authors

1. Ms. Eva Pilot (Maastricht University)
2. Prof. Thomas Krafft (Maastrich University)
3. Dr. Vivek Singh (Public Health Foundation India)
4. Dr. Sudhir Patsute (Naidu Infectious Disease Hospital, Pune)

Abstract

The purpose of the presentation is to provide an insight into the complex and fragmented set up of municipal disease surveillance in the Indian context. With the implementation of the Integrated Disease and Surveillance Program (IDSP) the central Indian government tried to bridge existing surveillance components and programmes and to integrate them under one umbrella. The funding from central level for the implementation of the program was provided just for rural areas through the National Health Mission (NHM). Despite the NHM's broader focus as compare to the earlier National Rural Health Mission continues to be delay and neglect of implementation in urban areas. The potential and challenges of the implementation within the Pune Municipal Cooperation will be assessed and recommendation will be provided.

Methods: The research is based on a literature search, semi-structured expert interviews and infectious disease surveillance concept mapping.

To conclude the IDSP initiative has improved the traditionally difficult monitoring of disease burden and outbreak control but is still rather patchy and has challenges which needs to be address like the urban area coverage with strengthening hospital based disease surveillance. The IDSP continuous to face serious challenges this needs to be overcome to strengthen the early warning capacity and bridge the urban rural divide in the interest of public health.

Lack of Basic Amenities for Urban Slum Dwellers: A Framework of Paradigm Shift to Bring Sustainable Development for Them

Authors

1. Ms. Nuzhat Sharmin (Brandenburg University of Technology, Germany)

Abstract

The lives of urban slum dwellers are threatened by the lack of access to the most basic human requirements – water, sanitation, shelter, health, and education in almost all low- and middle-income countries globally. Same is the situation in Bangladesh. This study has been conducted to find out the causes and miseries of the slum dwellers and suggest possible paradigm shift to bring sustainable development in their livelihoods. The information and data were obtained from different sources including private, non-governmental and UN organizations particularly UNDP. More than one billion people live in slums all over the world. In the developing countries one out of three people live in urban slums. Bangladesh has 3.4 million people living in 5,000 slums of its capital. Slums are often economically vibrant in many developing country cities. Around 60% of employment in the informal sectors is from slum dwellers. But their lives are miserable with manifestation of deep poverty, unrealistic regulatory frameworks, ill-convinced policies, inadequate urban planning, weak institutional capacity, and larger microeconomic factors. These settlements lack basic municipal services such as water, sanitation, waste collection, storm drainage, street lighting, paved sidewalks and road of emergency access. The lack of these amenities is grossly responsible for their sufferings from different kinds of diseases including diarrhea, cholera, diabetes,

intentional and unintentional injuries, tuberculosis, rheumatic heart disease, cardiovascular diseases, cancer and HIV infection. Given that the slum dwellers are part of the urban populace and they are the most strong force of the economy of the low- and middle-income countries particularly in Bangladesh, the governments should pay attention to upgrade their living standard with housing, streets, footpaths, drainage, clean water, sanitation, sewage disposal, employment, education and healthcare. All these can be provided through integrated plan of housing.

Comprehensive Health Impact Assessment for Active Travel: a "PASTA" project approach

Authors

1. Dr. David Rojas-Rueda (ISGlobal, Centre for Research in Environmental Epidemiology (CREAL))
2. Ms. Esther Anaya (Imperial College London)
3. Ms. Ione Avila-Palencia (ISGlobal, Centre for Research in Environmental Epidemiology (CREAL))
4. Dr. Christian Brand (Oxford University)
5. Dr. Tom Cole-Hunter (ISGlobal, Centre for Research in Environmental Epidemiology (CREAL))
6. Dr. Audrey De Nazelle (Imperial College London)
7. Dr. Evi Dons (VITO)
8. Dr. Regine Gerike (University of Dresden)
9. Dr. Thomas Goetschi (University of Zurich)
10. Dr. Sonja Kahlmeier (University of Zurich)
11. Ms. Natalie Mueller (ISGlobal, Centre for Research in Environmental Epidemiology (CREAL))
12. Dr. Annika Nilsson (TRIVECTOR)
13. Dr. Fabio Nussio (Rome Mobility Agency)
14. Mr. Juan Pablo Orjuela (Imperial College London)
15. Dr. Luc Int Panis (VITO)
16. Dr. Francesca Racioppi (WHO - EUROPE)
17. Dr. Elisabeth Raser (BOKU)
18. Dr. Carsten Rothballer (ICLEI)
19. Mr. Julian Sanchez (London)
20. Dr. Christian Schweizer (WHO - EUROPE)
21. Dr. Tina Uhlmann (BOKU)
22. Dr. Sandra Wegener (BOKU)
23. Prof. Mark Nieuwenhuijsen (ISGlobal, Centre for Research in Environmental Epidemiology (CREAL))

Abstract

Introduction: PASTA (Physical-Activity-through-Sustainable-Transport-Approaches) is a European project that aims to promote and assess active travel and develops a new

comprehensive Health Impact Assessment (HIA) model for active travel (AT).

Methods: Conduct workshops and individual interviews with experts and stakeholders in seven study cities (Antwerp, Barcelona, London, Orebro, Rome, Vienna, and Zurich). Conduct a systematic review (SR) on active travel HIA, and cost benefits analysis. Quantify the health risk and benefits related with AT interventions and assess the uncertainties. Report and communicate the results to stakeholders, experts and citizens.

Results: The workshops and interviews showed their importance to identify: 1) the main policies on AT; 2) the priorities and expectations of HIA in the decision-making process; 3) data sources; and 4) key stakeholder-networks for participation and dissemination. The SR showed research gaps in: 1) identification and quantification of health determinants of AT (e.g. physical activity, traffic hazards, air pollution, etc.); 2) selection relative risks based on the weight of evidence; 3) harmonization of methods, definitions and assumptions used; and 4) the close collaboration between urban planners, transport practitioners and health experts.

Conclusions: The novel mixed methods approach of integrating stakeholder and expert workshops, interviews, systematic reviews and evidence-based approaches in the HIA process are necessary advancements for comprehensive HIA of AT.

CS 9.3: EVIDENCE FOR ACTION IN POLICY AND PROGRAMS -03

Urban Diabetes – Understanding the Challenges and Opportunities

Authors

1. Prof. John Nolan (Steno Diabetes Center)
2. Prof. David Napier (University College London, Department of Anthropology)
3. Dr. Malene Bagger (Novo Nordisk A/S)
4. Mr. Niels Lund (Novo Nordisk A/S)

Abstract

Purpose:

Cities concentrate people, opportunities and services, including those for health. When cities are planned, managed and governed well, life flourishes and health outcomes can surpass those seen in rural areas. But cities can also concentrate risks and hazards to health – this is evident in the case of type 2 diabetes. Two-thirds of the 415 million people with diabetes live in and around cities¹. The number of people with diabetes is set to rise to more than 640 million by 2040 and with this the number of people with diabetes living in cities¹.

The form and composition of cities – their size, density, diversity and complexity – provide tremendous opportunity for understanding the drivers behind type 2 diabetes,

thus making cities a focal point for developing interventions that can break the rising curve of diabetes.

Methods:

The Cities Changing Diabetes Programme was initiated in 2014 by Novo Nordisk A/S, Denmark, in a global cross-disciplinary partnership with Steno Diabetes Center, Denmark, and University College London (UCL), United Kingdom, with the aim of understanding the urban diabetes challenge and placing it high on the global urbanisation agenda. In each of five cities (Mexico City, Copenhagen, Houston, Shanghai and Tianjin) – varying in terms of population, culture, setting and size - the research is performed by local academic partners in collaboration with UCL.

Conclusions:

In each of the cities, the extent of the urban diabetes challenge is mapped by applying quantitative research and an understanding of the drivers behind urban diabetes is generated through qualitative research. Together this will uncover new knowledge about the local diabetes burden, the social factors and cultural determinants behind urban diabetes. The work will act as a platform for the programme to grow globally and serve as a resource for many different stakeholders.

Integrating Health and Housing to Address the Needs of Vulnerable Populations

Authors

1. Mr. Jeremy Cantor (John Snow Research & Training Institute, Inc.)
2. Dr. Joshua Bamberger (San Francisco Department of Public Health)

Abstract

This proposed session is intended to highlight challenges and opportunities in aligning health and housing resources in order to expand permanent supportive housing for vulnerable, high cost homeless populations. The session will include a review of recent JSI research on elements of effective cross-sector initiatives and detailed presentation of San Francisco's efforts. A set of discussion questions will be posed throughout to stimulate interactive audience participation.

Treating immediate health crises for homeless individuals without addressing underlying issues amounts to a "band-aid" approach that virtually guarantees a cycle of expensive clinical utilization. Estimates of the annual public sector costs of an "average" high-utilizing homeless individual are as high as \$150,000 depending on population criteria and methodology (e.g., are criminal justice or costs to libraries of adding extra staff to respond to the needs of homeless individuals included?). Growing awareness of those costs; broader recognition of the impact of social determinants of health on patterns of illness, injury, and health expenditures; expanded Medicaid coverage through the Affordable Care Act; and policy and regulatory changes have resulted in a robust interest in better integration between health and housing.

Permanent supportive housing —rental housing paired with intensive case management services and provided in alignment with the principles of Housing First —has an unparalleled evidence base for improved health outcomes and reduced utilization of health care and other systems. The housing and health sectors share many high-level aspirations for the individuals they serve, yet have separate funding streams, professional training, and departmental authorities, leading to virtual silos even when activities are focused on the same geography and population. There is an emerging body of innovative practice on how to blend funding, engage leadership, share data, and integrate services. We will share conceptual, policy, and practical approaches that are being used to spur innovative initiatives.

Utilization of Recommended Maternal Health Care Services among First Time Adolescent Mothers: A Comparative Analysis of Rural versus Urban India

Authors

1. Mr. Kaushlendra Kumar (Evidence Action, New Delhi)
2. Dr. Shrividya Malviya (All India Institute of Medical Sciences (AIIMS), New Delhi)

Abstract

This work is an attempt to study first time urban adolescent mother's health seeking behaviour during pregnancy and delivery in India as compared to first time rural adolescent mothers. It is hypothesized that utilization of maternal health care services among first time urban adolescent mothers are low in India. The third round of National Family Health Survey (NFHS-3) data, conducted during 2005-06 is used. The present study is based on sample of currently married adolescents aged 15-19 years (n=24,811) who had given their first birth prior to five years of survey. This sample is divided into two parts i.e. first time rural adolescent mothers and first time urban adolescent mothers. Three dependent variables are considered for analysis viz. at least one ante-natal care, full ante-natal care and institutional delivery including other key covariates. Descriptive analysis is carried out to understand differences in utilization of select maternal health services between these two groups. Descriptive analysis will be followed by multivariate regression analysis. Though findings of the paper suggest that first time urban adolescent mothers are more likely to use maternal health care services than their rural counterpart in India. However, magnitude of utilization of these services are still very low among first time urban adolescent mothers. It is found that only around 25% of first time adolescent mothers in urban India received recommended full antenatal care. Further, it is evident that only around three-fifth of first time adolescent urban mothers delivered in institutions. These percentages were found even lower in rural India. It is important that programs aimed at improving maternal health in country include targeting adolescent mothers irrespective of place of residence. Urban adolescent need equal attention in this regard.

CS 9.4: EVIDENCE FOR ACTION IN POLICY AND PORGRAMS-04

Implementing a Large-Scale Testing-For-Tickets Intervention to Impact HIV Awareness and Testing Uptake in 3 Large Urban Jurisdictions: Successes, Challenges and Lessons Learned

Authors

1. Ms. Jennifer Chapman (Urban Coalition for HIV/AIDS Prevention Services (UCHAPS))
2. Prof. Matty Lehman (The Children's Hospital of Philadelphia)
3. Prof. Peter McLoyd (Ruth M. Rothstein CORE Center)
4. Ms. Marlene McNeese (Houston Department of Health & Human Services)

Abstract

Established in 2007, with the goal of raising AIDS/HIV awareness in the Houston/Harris County community through education and HIV screening of youth (ages 15-35), the Hip Hop for Houston (now Houston Hits Home) intervention offers free and exclusive Hip Hop concert tickets for participants that receive HIV screening and attend a one-hour health educational session. To date, under the leadership of the Houston Department of Health and Human Services and in partnership with various community agencies and partners, Houston Hits Home has reached more than 50,000 youth and now includes a multiplicity of clinical and non-clinical preventive screening and services.

In 2011, given similar concerns and recognizing the success and impact of Houston's initiative, the Urban Coalition for HIV/AIDS Prevention Services (UCHAPS) initiated and organized a peer-to-peer technical assistance (TA) exchange between Houston's Department of Health and Human Services and community members from Philadelphia and Chicago. This TA-exchange allowed the UCHAPS-sponsored visitors an opportunity to work directly alongside and learn step-by-step how Hip Hop for Houston was implemented and how it might be adapted or modified and put into action in each home city.

Today, four years after that TA-exchange, both Philadelphia (Hip Hop for Philly) and Chicago (Step Up Get Tested) have implemented successful large scale testing events within their own jurisdictions and while each shares similarities, each has also been adapted and modified to ensure maximum impact for those at greatest need of HIV prevention education and testing.

Program implementation from each initiative will be presented and include: conducting large community screening events, including incident command structures, protocols for safety and security; ways to mobilize the community around large scale testing events including engagement of and successful collaboration with both traditional and non-traditional partners; and incorporating other public health and prevention services into large scale testing events.

Why Women in Urban Settings Fail to use Available Maternal Health Services: Qualitative Study in Urban Areas of Ethiopia

Authors

1. Dr. Mirgissa Kaba Serbessa (School of Public Health; Addis Ababa University)
2. Dr. Girma Taye (School of Public Health; Addis Ababa University)
3. Mr. Muluken Gizaw (School of Public Health; Addis Ababa University)
4. Mr. Israel Mitiku Hatau (School of Public Health; Addis Ababa University)
5. Mr. Zelalem Adugna (John snow Inc. Ethiopia)
6. Mr. Addis Tesfaye Berhanu (John snow Inc. Ethiopia)

Abstract

Background: Ethiopia is one of the countries with high maternal death across the world. Among others such high maternal morbidity is attributed to limited turn out to use antenatal care (ANC), delivery and postnatal care services. Even in urban centers, where health service coverage is expected to be relatively better, still women are not using ANC, institutional delivery is postpartum care (PNC) attendance is low. This study aims to identify reasons why urban women fail to use such services in purposively selected towns.

Methods: We conducted eleven Focus Group Discussions with selected community members, 40 in-depth-interviews with stakeholders and 15 case studies with residents of selected urban quarters that are characterized as slums. Interviews were transcribed, read and themes were developed following the study objectives. Findings from the different groups were triangulated and interpreted.

Result: Study participants anonymously argued that there are positive changes in maternal health service utilization since Urban Health Extension Program started operating in urban settings. Yet, students, daily laborers, widows, divorced, separated, commercial sex workers, house maids, migrants and those who are worried about their HIV sero-status were usually reluctant to use ANC services, deliver at health facilities and attend PNC. Reasons were categorized under individual characteristics, perceived institutional capacities and friendliness of service providers and socio-cultural factors including socially sanctioned expectations.

Conclusion: Although service utilization in urban setting is relatively better, coverage of maternal health service is far from reality. This study shows that blanket programmatic approach should give way to intervention targeting specific section of population. Furthermore, programs are expected to address individual, institutional and socio-cultural factors in tandem to improve maternal health service utilization in urban setting.

Assessment of Urban Flood Risk in Nigeria, a Case Study of Lafia Zone

Authors

1. Dr. Moyosola Bamidele (John Snow Training & Research Institute Inc)
2. Mr. Thomas Wakayi (College of Education, Akwanga)

Abstract

The aim of this research is to map flood vulnerability zones, as well as generating data on the nature of behavioral responses of the floodplain dwellers to the risk of flooding which will serve as a governmental guide in the control and management of flood in Lafia, Nigeria.

Rainfall data for a period of 30 years (1980-2010) was collected from the archive of the Nigerian Meteorological Agency in Lafia. The analytical techniques employed include regression, standardized rainfall anomaly index, 5-year moving average and Gumbell Extreme probability theory. The flood risk map was done using the flood risk assessment of 9 environmental parameters of 16 flood-prone areas used in this study based on the rating procedure of Clarke's principle (Clarke, 1951). 300 questionnaires were administered to the flood plain dwellers using systematic random sampling.

Results of analysis of annual rainfall trend shows that Lafia has upward trends of rainfall, which is statistically significant since $P < 0.5$ (alpha level), an indication that the upward trends could be random and consequently, the possibility of flooding. Heavy rainfall of long durations and river overflow were identified as the most important causes of flooding in Lafia. Analysis of the behavioural responses of floodplain dwellers shows that there is greater stability in the population, as majority of them have stayed in the area for a period of 12 years and above. The population has knowledge of the hazard before moving to the area but due to their strong cultural attachment to land, majority of them considers the flood hazard either of little significant or sufficient enough to force them to consider alternative. The elements identified in the study for the control of flood risk include legislation, risk evaluation, land-use control and zoning, building codes as well as structural and non-structural measures of flood control.

CS 9.5: EVIDENCE FOR ACTION IN POLICY AND PROGRAMS-05

Small Business and Community Health: A Health Impact Assessment and Literature Review

Authors

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Abstract

Health Impact Assessments (HIA) offer a method of systematically assessing the positive and negative health consequences of policies, plans and projects implemented outside the health sector, but have not previously examined small business support programs and their effects on community and individual's health. Though improved socioeconomic conditions and lower unemployment show clear correlations with improved population health, specific mechanisms connecting the small business sector and health in economically deprived areas remains under explored through HIA and the public health literature. Boston's regional planning agency, the Metropolitan Area Planning Council (MAPC), in partnership with the Harvard Center for Population and Development Studies conducted a Health Impact Assessment (HIA) that examined the potential health impacts of changing state funding support for the Massachusetts' Small Business Technical Assistance (SBTA) Program. The SBTA program's purpose is to support new and growing small businesses in disadvantaged areas of the state, including small towns, immigrant neighborhoods, and communities of color. To assess potential health links and impacts, the project team conducted an exhaustive literature review connecting small business to community health. Given limited previous scholarship on the direct association between small business and health, to determine potential pathways of impact the review combined literature across disciplines such as economics, sociology, urban health and public health. The team identified several mechanisms for these impacts including: improved community connectivity, reduced unemployment and crime, and increased investment in the local economy. Small businesses likely produce small but meaningful benefits to the health of communities, particularly in economically underserved areas, suggesting the importance of continued funding for programs that support small businesses, such as the SBTA. The HIA connects literature in various disciplines to form a better understanding of the mechanisms of small business impacts on health, especially among the most vulnerable communities.

Explaining the Variation in Child and Adult Health and Nutrition Outcomes in Bangladesh's Cities: Evidence from Empirical Decompositions

Authors

1. Dr. Quynh Nguyen (World Bank)
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Abstract

Bangladesh, a lower-middle income country with the eighth largest population in the world, has experienced rapid urbanization and the growth of large slums, accompanied by steeper improvements in rural health and nutrition outcomes. Attention is thus shifting to the health and nutrition status of urban residents. Until recently, urban health research was mostly qualitative or based on quantitative surveys of small purposive samples, mainly of the capital Dhaka. In this study, we use data from a recent multi-

topic urban survey of over 12,000 households representative of all cities in the country and slum and non-slum neighborhoods within these cities. In addition to the advances in sample coverage, size, and representativeness, the survey atypically captures an array of health and nutrition outcomes for children and adults (including non-communicable diseases such as hypertension, diabetes, and mental health for the latter).

Apart from adult obesity, hypertension, and diabetes where the opposite pattern is found, the health and nutrition status of slum residents is poorer than for non-slum residents. Individual, household, and community characteristics that capture most elements in the WHO's SDH framework are more favorable for non-slum residents. We estimate regressions of the relationship between the various health and nutrition outcomes and these characteristics, separately for slum and non-slum residents. Results suggest that the effects of most characteristics on outcomes are insignificant for either slum or non-slum residents. We decompose differences in mean outcomes between slum and non-slum residents into the portion due to differences in the effects of characteristics versus the portion due to differences in the mean levels of characteristics between slum and non-slum residents. Results suggest the dominant role of differences in mean characteristics. Ongoing analysis, to be completed shortly, explores which particular mean characteristics contribute most towards explaining differences in mean outcomes between slum and non-slum residents.

The Role of the Maternal, Neonatal and Child Health (MNCH) Handbook in Establishing a Continuum of Care For Mothers, Newborns, and Children: BRAC's Experience from Urban Slums of Bangladesh

Authors

1. Dr. Tamjida Sohni Hanfi (BRAC)
2. Dr. Nauruj Jahan (BRAC)
3. Dr. Kaosar Afsana (BRAC)

Abstract

Background:

In Bangladesh, the major barriers to achieving improved maternal, neonatal and child health (MNCH) are low levels of health education, discontinuity in maternal healthcare and lack of women's empowerment. Globally, it's already proven that Health literacy plays a fundamental role in addressing these obstacles and leading to improved outcomes in MNCH. The MNCH Handbook is a multifaceted health promotion tool that educates the community, facilitates communication with healthcare providers, and keeps record of the beneficiary's ongoing health status. BRAC introduced MNCH Handbook to a unique community based MNCH project of BRAC called Manoshi in 7.1 million urban slum dwellers in 12 City Corporations in Bangladesh. Since then there has been significant impact and an exceptional response from health care service providers and beneficiaries.

Objective:

This paper aims to demonstrate the achievements of Manoshi through exploring the utility of the handbook in improving health outcomes.

Methods:

Data was extracted from the BRAC's Management and Information System and baseline survey in 2007 by ICDDR,B.

Results:

The Handbook keeps health records of both mother and child and used as a training module. In 2014, modern contraceptive use rose to 65%. 4+ Antenatal care visits rose from 27% to 81%. Significant increases of 8.1% to 99% in 3+ postnatal care visits were obtained. Out of 148,687 deliveries 11% took place at home (86% in 2007) and 89% (14% at baseline) at facility based centers.

Conclusion:

The MNCH handbook is a very useful tool for realizing a comprehensive approach. Ultimately, it acts as a bridging tool between mothers and care providers. The results reflect major behavioral change within the community; and a substantial advancement in MNCH. This paper reveals the potential of the MNCH Handbook across Bangladesh and suggests its implementation on a wider scale in the future.

Improving Accessibility and Utilization of Healthcare Services for Urban Poor Through Implementation of a Maternity Referral System in the Mumbai Metropolitan Region, India

Authors

1. Ms. Aurelia Dsouza (Society for Nutrition, Education & Health Action)
2. Mrs. Ruchi Deshpande (Society for Nutrition, Education & Health Action)

Abstract

Complications related to pregnancy and childbirth are among the leading causes of morbidity and mortality in women of childbearing age in developing nations. The MMR of Mumbai for 2010-2012 was 158 [MDG target– MMR 109] despite having a vast public health infrastructure. It has been estimated that 74% of maternal mortality could be averted if all women received appropriate and timely emergency obstetric care. Around 42% of Mumbai's population constitutes urban slum population and is heavily dependent on its multi-tiered healthcare system. Lack of an organized referral system between different levels of care meant that pregnant women often travelled long distances to tertiary facilities while secondary facilities remained under-utilized.

Main contributing issues were different administrative authorities across different levels of care, lack of awareness on services available in secondary facilities, inadequate emergency obstetric care services, and absence of communication or set referral processes in place including no standardized documentation.

SNEHA partnered with Mumbai Corporation for establishing a maternity referral system, which has then been scaled up to adjacent 3 corporations. To address gaps through a

participatory approach, the processes employed included buy-in from administrative authorities, mapping of referral linkages taking into account travel distances and availability of services, introducing referral documentation, regular referral meetings and feedback.

SNEHA has successfully established 6 intra-regional and 4 inter-regional referral linkages across 4 corporations. There is significant improvement in referral documentation in Mumbai from a baseline of 40% to 85% (2014-2015), improvement in utilization of secondary facilities as referral centres from 15% to 67% and subsequent reduction in utilization of tertiary facilities from 35% to 21%. Additionally, 80% cases were appropriately referred according to set protocols.

Health emergencies being unpredictable, having a strong referral system in place can prevent delays in accessing care. It has potential to reduce mortality, without requiring massive resource allocation.

CS 9.7: EVIDENCE FOR ACTION IN POLICY AND PROGRAMS-07

Measuring Environmental Determinants of Health: A Review of Complexity in Benchmarking Systems

Authors

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2. Dr. Nicole Zimmermann (Institute of Environmental Design and Engineering, Bartlett School of Environment, Energy and Resources, University College London)
3. Prof. Paul Wilkinson (Department of Social and Environmental Health Research, London School of Hygiene and Tropical Medicine)
4. Prof. Michael Davies (Institute of Environmental Design and Engineering, Bartlett School of Environment, Energy and Resources, University College London)

Abstract

Introduction: Many urban health benchmarking systems are produced with the aim of informing policy, thereby acting as a form of evidence. There is wide recognition that the urban environment's impact on health is a complex system, with a noted lack of frameworks addressing this challenge. With previous reviews of benchmarking systems focusing on population health or systems of national relevance, it remains unclear how they account for complexity or help practitioners deal with real-world complexity. This literature review aimed to identify and analyse benchmarking systems, particularly with regard to their representation of the complex range of factors influencing health in urban areas.

Methods: We identified systems by reviewing bibliographic databases, grey literature

and scanning references. For inclusion, systems needed to have a purpose beyond academic research and be defined as an index, assessment process, standard or framework that uses summary measures to understand, compare, or predict the urban environment's impact on health. We extracted and analysed launch date, presentation of results, scale, geography, scope, indicators, origin, purpose, methodology, evidence, weighting, complexity, and uncertainty.

Results: Thus far we have analysed 24 urban health benchmarking systems meeting the inclusion criteria, comprising 667 indicators. These indicators related to the environment and four other domains: health, 15 (63%); health care, 8 (33%); behaviours, 19 (79%); and demographics and social environment 16 (67%). Complexity was mentioned by 7 systems, with 3 addressing it by methods including: many indicators; socioeconomic and 'ethno-racial' stratification; and diverse metrics.

Conclusion: Very few systems attempted to measure or represent the complexity of urban health. Of the three systems which attempted to address complexity, it is unclear whether their methods would be sufficient to represent this complex system. Further research is needed to identify whether indicator systems can accurately reflect the complexity of urban health systems to support policy.

Integrating Health Impact Assessment with New York City's Community Planning Process: A Critical Reflection on Policy Transfer

Authors

1. Dr. Kimberly Libman (The New York Academy of Medicine)
2. Ms. Lindsey Realmuto (The New York Academy of Medicine)
3. Ms. Shauneequa Owusu (The New York Academy of Medicine)

Abstract

Health Impact Assessment (HIA) is an internationally recognized policy framework and practice for community and decision-maker engagement that has been used to advance place-based health promotion in the context of local development. HIA can also be a tool for advancing health and equity in cities by identifying the how action in 'non-health sectors' may influence the opportunities for health within and between populations. HIA is still a developing practice in the US, with limited existing legal frameworks to make their findings binding. The East Harlem HIA was conducted in response to New York City (NYC) Mayor Bill de Blasio's Housing New York, which aims to build or preserve 200,000 affordable housing units through mandatory inclusionary housing. In response, local leaders in East Harlem organized a grassroots effort to inform any re-zoning in this community, called the East Harlem Neighborhood Plan (EHNP). The EHNP recommended that a binding HIA be conducted in relation to any future zoning changes, which precipitated debates about the legal, practical, and political feasibility of integrating HIA with NYC's Universal Land Use Review Process and New York State's Environmental Quality Review Act. Such integration raises practical and conceptual concerns over funding, workforce capacity, meaningful community engagement, evaluation and monitoring of the implementation of statutory recommendations. This

paper describes the methodological integration of HIA and this community planning process. Examples from San Francisco and London, suggest potential policy mechanisms for creating a statutory integrated impact assessment process in NYC. Two key tensions encountered while incorporating HIA into the EHNS that should be addressed in future integrated impact assessments in NYC are discussed. One tension regards minimum standards of practice and specific concerns from the community about its engagement; the second is between maximizing research rigor with real limitations on time and resources.

Urban Space, Public Policy and Health Inequalities: Bamako in the Heart of the "Cancer Plan" in Mali

Authors

1. Dr. Abdoul Karim Doumbia (Aix Marseille Université (France) / Université de Bamako (Mali))

Abstract

African cities are generally known for their fast and often less well controlled growth, but also for the attraction they exert on the peripheries in terms of offers and access to care. With the emergence of non-communicable disease called civilization as public health problems, this tends to be amplified in low-income countries where states are often required to operate the "strategic choice" by limiting their actions to only large cities. These "political choice" when they operate in the health sector, are often a source of inequality in access to health care both within cities and between cities and suburbs. Our study aims to explore the impact of public policies on access to care in African cities in emergence period of chronic non-communicable diseases through the example of the national policy in the fight against cancer in Mali. It shows that if the answer given by the authorities, is a measure of socio-health challenge of cancer in Mali, it nevertheless creates inequalities in access to cancer care among the Malian population in general and Bamako particular, and a greater attention on the part of policymakers should be given to women and children most affected by the disease.

Improving Access to Urban Primary Health Care Services in Bangladesh: Need for Improved Coordination and Harmonization in Policies

Authors

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Abstract

Bangladesh's urban population is expected to overtake the rural population by 2040, and a significant part of the increase will be in poorer, informal settlements known as slums. The Ministry of Health's current primary health care service (PHC) provision largely excludes the urban poor, with the Ministry of Local Government actually overseeing service delivery through contracted NGOs.

Secondary data analysis was conducted on urban health status from Bangladesh Urban Health Surveys conducted in 2006 and 2013. A literature review of policy documents on urban health service delivery was also conducted.

Expansion of city areas and a rapidly rising urban population pose new challenges for effective PHC service delivery. During 2015-2029, the urban population in Bangladesh is expected to grow from 54 to 81 million, and Dhaka to become the world's 6th largest city with 27 million people. Cities are currently characterized by large inequalities in socioeconomic and health-related conditions. Slum populations are markedly poorer and less educated; and substantially fewer women living in slums receive ANC from medically trained providers, give birth in a health facility, and optimally feed their children, compared to their urban counterparts. Despite improved access by NGOs in recent years, urban people, including the slum population, are increasingly using the private sector for health services. Existing programs and policies on MCH services are not addressing the gaps in PHC coverage and basic health services have yet to be managed efficiently either in the public or NGO sector.

The post-2015 development agenda focuses on achieving Universal Health Coverage (UHC) by 2030, which is unlikely to be achieved without addressing the gaps in PHC coverage in urban areas. Building effective liaison among the different organizations of the Bangladesh government, NGOs, and private entities is crucial to support PHC service delivery in the urban context and eventually achieve UHC.

Understanding How "Urban Health" Got onto the Agenda of Ethiopia: Retrospective Analysis Using Hall's Theoretical Model

Authors

1. Mr. Zelalem Adugna (John Snow, Inc.)

Abstract

Context and purpose: Ethiopia, one of the fast urbanizing countries in the world, has embraced the concept of 'urban health' though it is at its infancy. The purpose of this article is to analyze, describe and present how 'urban health' has got onto formal health policy agenda of Ethiopia.

Methods: Hall's theoretical model which proposes that only when an issue and likely responses are high in terms of legitimacy, feasibility and support do they get onto government agenda.

Results: The provision of community-based 'urban health' service has a legitimacy because the rural Health Extension Program was considered effective and the government has the obligation to expand the interventions to urban areas. It was feasible because it was perceived by the policy makers that extending Health Extension Program to urban centers can be done by employing the technical knowledge and experiences from the rural health extension program. Support was expected since the rural health extension program was presented as a strong case in improving maternal and child health indicators of Ethiopia. As expected, policy entrepreneurs outside the government took advantage of agenda setting opportunities to move urban health concept onto the government's formal health policy agenda.

Conclusion: Advocates of urban health may apply Hall's model to prospectively analyze the odds of successfully putting 'urban health' on government's formal policy agenda. The following key policy research questions should be pursued and appropriately described. Does the government feel obligated for 'urban health' interventions? How does policy entrepreneurs inside and outside the government perceive about the feasibility of implementing urban health in terms of technical knowledge and resources? Who are the supporters and opponents of introducing 'urban health' and why?

CS 9.8: EVIDENCE FOR ACTION IN POLICY AND PROGRAMS-08

Evidence Based Obstetric and Newborn Practice is Poor in Northern Ethiopia

Authors

1. Mr. Girmatsion Fisseha (Mekelle University)
2. Prof. Yemane Berhane (Addis Continental Institute of Public Health)
3. Prof. Alemayehu Worku (Addis Ababa University)
4. Dr. Wondwossen Terefe (Mekelle University)

Abstract

Background: Improving maternal and neonatal health remain the most elusive of the Millennium Development Goals. Improving quality of obstetric care is one of the strategies in Health sector development program IV (HSDP IV) of Ethiopia. It is aimed to deliver quality health services as central for improving the health status of the population. In addition, satisfying patients and clients is the primary goal of the

Government's reform program. Therefore, the aim of study was to assess quality obstetric service in Northern Ethiopia.

Methods: A mix of methods of facility survey was employed using both quantitative and qualitative method of data collection from December 2014 to February, 2015 in Northern Ethiopia. The study subjects were health facilities, skilled birth attendants, laboring mother, postpartum mother and registers at facilities. For health facility survey, 32 health facilities, all skilled birth attendants and 216 laboring mothers for observation, exit-interview and charts review were included. Data were collected using observation, facility audit, face to face and in-depth interview, and document reviews. Standardized questionnaire and checklist was developed to collect data. Data were analyzed by STATA version 12.0. Descriptive analysis of data was performed and data were weighted using principal component analysis.

Result: The response rate for this study for both the observation of childbirth and exit interview was 100% (216). Quality obstetric and newborn care accounts for more than half of births (53%) and (55%) respectively. Most mothers got quality obstetric care during first-stage of labour. About 57% of births experienced non-beneficiary obstetric practice and some were inappropriate practice. Rate of episiotomy was high and birth companion was not allowed in one fourth of births. Emergency obstetric care utilization among health facilities were poor (53%). More than half (59%) of health facilities had poor structural quality service, not read for delivery service.

Conclusion: overall there is poor quality obstetric and newborn service in terms of the three components input, process and output. This indicates the needs for more improvement to obstetric and newborn service for early preparedness to prevent and control of complications to mothers and newborns during childbirths and to make the facility more attractive so that the mother can use childbirth service in future and to achieve the intended strategies.

Small Job and Bigger Outcomes: Community Advocacy and Sensitization for Better Development. Jedidiah Koomson

Authors

1. Mr. Jedidiah Koomson (Ghana Health Service)

Abstract

Background:

This paper indicates the outcome of a social inclusion initiative to promote sustainable environment, health and development in a rural district in Ghana, for it has been known that on a smaller individualistic scale, sustainable development is not as costly to enact as it is for larger companies. In southern Ghana, in 2012, drinking water sources were becoming polluted by the activities of farmers and unlicensed small scaled miners. The water company in charge of making portable water available to the people had to fight a running battle with the miners to stop their illegal activities. Fishermen were polluting the ocean. Bush burning as a traditional farming practice had been making the land infertile for far too long.

Methods:

Through the use of open learning, social advocacy, community mobilization, and scientific information dissemination, 550 farmers and 303 fishermen were organized to use sustainable environmental practices for health development and economic support. Lecture, discussion, brainstorming methods, and case-studies from different countries were used to facilitate learning and effective decision making.

Results:

After one year, 525/550 of the farmers were identified to have consistently used acceptable ecological farming practices. The use of pesticides had vanished. All the fishermen (303/303) had stopped the use of the harmful chemicals in the sea. Those who tried at first to continue the harmful and unacceptable practices had their produce banned from the market. The chiefs and opinion leaders agreed to summon the recalcitrant, and publicly shamed them as elements of social and environmental destroyers.

Conclusion:

Sustainable development is not a task accomplished by just one person, however, it starts with one person; by making small changes in our daily lifestyle, the benefit to future generations is inevitable.

Urbanisation and Mental Health in South Asia: Concerns

Authors

1. Dr. Ulimiri V Somayajulu (Sigma Research and Consulting)

Abstract

An attempt is made in this paper to assess impact of urbanization on mental health in South Asian countries using the available reports and secondary data.

South Asian countries are developing economies with significant proportion of population poor and vulnerable. Higher burden of disease and over stretched primary health care delivery system make the people more vulnerable with regard to mental health. Urbanisation affects vulnerable urban population - elderly, children, adolescents, and women.

Rapid urbanisation led to creation of fringe population that lives from hand to mouth and pushing them towards poverty. Poverty and mental health have complex and multidimensional relationship. Urban population is affected by changes in cultural dynamics that lead to mental health issues.

Determinants of urban mental health include increased speed and decreased costs of communication and transportation, exceeding human capabilities to live under conditions of security and mutual support and concern, scale of urban life leading to anonymity, indifference, and narrow self interest, growing fear, powerlessness, and anger of urban residents. The multiculturalism of cities contributes to increased

tolerance, better quality of life, and socio cultural stimulation but it also contributes to heightened social tensions, inter ethnic striving, and cultural conflicts, that have mental health implications.

Most migrants come from rural areas and bringing with them values, beliefs, and expectations about mental health with them that are different from the ones they encounter in their new location. Migrants face isolation, poor health, poverty, unemployment, and inadequate housing.

This region faces social, economic, and health challenges, including pervasive inequality, violence, political instability, limited resources, higher burden of disease, already compromised primary health care delivery system, stigma associated with mental illness, poverty, and illiteracy.

There is need for research on mental health of migrants and policy in terms of judicious use of resources, and balanced approach to development.

Slum Primary Healthcare Models involving State, Municipal and Civil Society Partners: A Comparison of Three City-Models in India

Authors

1. Mr. Gautam Chakraborty (Population Foundation of India)
2. Dr. Sainath Banerjee (IPE Global)
3. Dr. Sachin Gupta (USAID/India)

Abstract

USAID funded Health of the Urban Poor (HUP) program was implemented in India to provide design support to the Indian government for a pro-poor urban health program across India. This involved testing different primary healthcare models across 238 slums in three demonstration cities of Jaipur, Pune and Bhubaneswar from 2011 to 2014, covering 357,732 populations. Jaipur was a NGO-led model, Pune was Municipal-led and Bhubaneswar was a convergence-model involving the State and the Municipal Corporation.

The objective was to compare the performance of the three city models of primary healthcare implemented over a three-year period.

Methodology included Baseline and End-line household surveys, covering the HUP intervention slums, drawing a sample of 400 slum households in each of the three cities. Both the surveys used the same quantitative survey tool and the sampling frame of listed households.

Service utilization showed marked increase in all the three cities, with Bhubaneswar showing better performance and Jaipur showing the least improvement. In

Bhubaneswar institutional deliveries improved from 71.8% to 92.8% and complete immunization among children (12 to 24 months) improved from 60.8% to 85.0%. In Pune, the institutional delivery rate remained same whereas complete immunization improved from 71.1% to 81.1%; whereas in Jaipur both indicators showed marginal decline. Looking at the behavioral change, Jaipur seems to have performed better in improving the percentage of slum households practicing water purification in their homes from 29.3% to 48.5%. In Pune it improved from 37.8% to 51.6% and in Bhubaneswar from 39.0% to 44.6%.

The above comparison shows that NGO-led primary healthcare model in slums can result in comparatively better behavior change outcomes. But a convergence model where both the State and Municipal body partner to provide services is likely to result in better uptake of primary health services.

CS 9.9: EVIDENCE FOR ACTION IN POLICY AND PROGRAMS – 09

Better Together: A Best Practices Strategic Collaborative Model for Urban Jurisdictions and Metropolitan Areas Responding to HIV

Authors

1. Ms. Jennifer Chapman (Urban Coalition for HIV/AIDS Prevention Services (UCHAPS))
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3. Mr. Sam Rivera (Urban Coalition for HIV/AIDS Prevention Services (UCHAPS))

Abstract

Founded as a collaborative of community representatives and local government officials funded to provide prevention services from the US Centers for Disease Control and Prevention, the Urban Coalition for HIV/AIDS Prevention Services (UCHAPS), and the strategic framework upon which it is based, involves the establishment of partnerships of people living with HIV, community leaders, health department representatives and government officials from heavily impacted urban jurisdictions in the US.

UCHAPS jurisdictions are among the epicenters of the urban HIV epidemic, representing over one third of the nation's persons living with HIV. Operating under the philosophy of parity, inclusion and representation, UCHAPS is comprised of delegations of members from community and government, elected from select urban centers. The coalition is co-chaired by a civil society representative and a government official. Jurisdictional delegates represent the best thinkers and leaders in HIV within each locale, and as such are often at the forefront of piloting and evaluating new interventions and disseminating best practices through its membership network.

Using a peer-to-peer based model of technical assistance through in-person meetings and committee calls, UCHAPS delegations convene to review and discuss topics of

interest or pressing need by exchanging expertise and sharing information, ideas and resources gathered from the day to day realities of managing and implementing HIV programs. As HIV prevention pioneers, UCHAPS jurisdictions are often on the leading edge of responding to HIV prevention challenges, using knowledge and lessons learned from the field.

The UCHAPS collaborative framework is based on the belief that by working together - with community and government at the same table, in equal number, with equal decision making authority - the local HIV response can be managed and implemented more efficiently and effectively. UCHAPS jurisdictions have achieved reductions in incidence through application and exchange of evidence-informed best practices in public health.

Promoting Food Justice and Tobacco Control in Urban Food Deserts: A Case Study of Community Action and Policy Change in San Francisco

Authors

1. Prof. Meredith Minkler (University of California)
2. Ms. Jessica Estrada (Tenderloin Healthy Corner Store Coalition)
3. Dr. Jennifer Falbe (University of California, Berkeley)
4. Ms. Susana Hennessey - Lavery (San Francisco Department of Public Health)
5. Mr. Ryan Thayer (Tenderloin Neighborhood Development Corporation)

Abstract

In food deserts like San Francisco's Tenderloin District, the high density of tobacco outlets and lack of access to healthy food contribute to high rates of morbidity and premature death among the neighborhoods' largely low income residents. The many "corner stores" in such neighborhoods are saturated with tobacco, alcohol, sodas and sugary snacks, but typically provide little or no healthy food.

We demonstrate how a broad, community- led coalition, in collaboration with local health department and university partners, helped study and address this problem, beginning the transformation of local retail environments, achieving high level community engagement and helping secure a municipal policy promoting food justice in the city's poorest neighborhoods.

Drawing on data from a multi-method case study analysis, we describe and analyze the Tenderloin Healthy Corner Store Coalition, from its genesis through its key role in helping craft, pass and implement the policy creating the Healthy Retail SF program. Utilizing point-of-sale data collected before and after eight stores were redesigned through the program, and annual store assessment data collected by the Coalition in two thirds of the Tenderloin's 70 corner stores, we examine changes in the availability, display and advertising of healthy and unhealthy products. We share initial data showing both improved sales of healthy foods and some decrease in tobacco sales in the Tenderloin's HRSF stores, plus a "ripple effect" through which dozens of non-HRSF

stores have also made health promoting changes that may help reduce neighborhood food insecurity.

Finally, we discuss how food justice coalitions and programs like HRSF can contribute to both environmental justice (fair distribution of environmental hazards and resources for living) and procedural justice, through which community members get a place at the policy-making table, and stay at the table, helping make decisions that affect their lives and the life of their communities.

Health Service Availability and Mapping in Urban Slums: A Descriptive Analysis of Health Facility Data in Two Kenyan Communities

Authors

1. Mrs. Tova Tampe (George Washington University)
2. Dr. Amira Roess (George Washington University)
3. Dr. David Rain (George Washington University)
4. Dr. Cheng Huang (George Washington University)

Abstract

Purpose

Limited available evidence suggests urban slum inhabitants are at a disadvantage for accessing health services compared to other urban residents. Given the growing needs of marginalized urban populations in developing countries who tend to seek care via private formal or informal service providers, measurement of health service availability within slum communities using context-appropriate, adapted tools that include the informal sector is crucial. This study's aims are to describe the formal and informal health services available in two urban slums in Kenya. Results from this health facility assessment are further compared to the population-based Service Provision Assessment (which does not take into account informal providers) to better understand how service availability in slums compares to availability at the national and regional levels.

Methods

We analyzed 2011 health facility census data from formal and informal providers in two Kenyan slums: 11 facilities in Nyalenda slum of Kisumu, and 35 facilities in Langas slum of Eldoret. A version of the World Health Organization's Service Availability and Readiness Assessment that was adapted to include informal providers was administered. We descriptively analyzed general characteristics of facilities including human resource capacity, interventions provided, and general equipment available. We further mapped findings using spatial data for all facilities to illustrate the distribution of services. Similar secondary data from the 2010 Service Provision Assessment were analyzed and compared to this study's results.

Conclusions

This study provides a detailed picture of health services availability within two urban slums in Kenya. Standard population-based assessments fail to include informal providers and this results in an incomplete sample of facilities. Notably, our method captured that 36% of facilities in Nyalenda and 43% in Langas were private retailers or informal providers. These findings should be incorporated into slum health interventions, monitoring and evaluation of health systems strengthening, and urban health policy development.

Poverty as the ‘Cause Of Causes’: Call for Action and Research into Addressing Poverty to Improve the Health of Urban Communities: Evidence from Pakistan

Authors

1. Dr. Aftab Akbar Ali Mukhi (The Aga Khan University)
2. Dr. Nazila Bano Khalid (Aga Khan Health Service, Pakistan & Aga Khan Social Welfare Board for Pakistan)
3. Dr. Tazeen Saeed Ali (The Aga Khan University)

Abstract

Background & Purpose

The social factors and processes presented in the ‘Socioeconomic Determinants of Health’ model have proven to create health inequities in various settings. Our study whilst exploring access, cost, & consequences of limited accessibility to mental health services also looked at the dynamics of the structural deficiencies in social and health system and how poverty catalyses the vicious cycle of social and health inequities.

Methods

We conducted a sequential mixed-methods study in the slums of Karachi from July – September 2015 using purposive sampling. We explored the service utilization patterns and costs of accessing mental health services through a cross-sectional survey. We also explored through qualitative methods, the determinants of reduced access including poverty and low socio-economic status and conducted a limited contextual analysis in terms of measures in place to improve the access of poor to services through better economic opportunities.

Results

Out of 115, only 31% earned regularly with two-thirds (67%) earning less than 5000 Pakistan Rupee (PKR) (roughly equivalent to 50 US Dollars a month), that is below the threshold of poverty line. Around 70% considered the consultation, medicines and travel costs to be high which for most, reached to around a total of 1000 (around 10 US Dollars) PKR per visit. The qualitative inquiry identified the interplay of limited economic opportunities, lack of employment & income-generating activities and loss of income as a result of illness and caregiving as further compounding the circumstances of poor. These coupled with social stigma, exclusion and bias towards poor and fragile health and social system fuel the cycle of poverty.

Conclusions

The consistent emergence of poverty as a cause of health inequities and poor health outcomes demands research and action to prevent fragmented urban societies of the future in context of rapid migration and urbanization in LMICs.

Assessment of the Targeted Programme for the Use of Female Condoms in the Urban Settings of the Three States in India

Authors

1. Mr. Sunil Thomas Jacob (UNFPA)

Abstract

A female condom promotion program among Female Sex workers was implemented in the states of Jharkhand, Odisha and Rajasthan in India from 2010-2013 by UNFPA in partnership with State AIDS control society in the urban settings of three states of Rajasthan, Odisha and Jharkhand. The baseline was undertaken in the year 2010 and the endline was undertaken in 2013. The major objectives of the study were to 1) To estimate the current use of female condom by the sex workers both with paying clients and non paying partners 2) To analyse changes in behaviour of the sex workers regarding consistent condom use from the baseline 3) To analyse perceptions around female condoms and its use by the sex workers with paying and non paying partners and 4) Suggest future strategies to improve the FC promotion in these areas.

In each state, districts representing the universe were selected using probability proportion to size technique. Accordingly 568 female sex workers in each state were estimated with a total of 1704 female sex workers being estimated for the three states. In-depth interviews were also carried out for 4 stakeholders (NGOs), 4 peer educators and 24 key-informants in each state. The purpose of in-depth interviews was to understand the challenges faced, opportunity provided and the extent to which the programme has been successful.

The study revealed that 1) The level of awareness of Female condoms had increased from 77.8 percent in the baseline to 94.3 percent in the end line. 2) The use of FC has also gone up as 56.7 percent of the FSWs had ever used female condom in their lifetime against 28.8 percent reported in the baseline which was a statistically significant improvement and 3) The communication campaigns are key to increased use of Female condoms among Sex workers.

CS 9.10: EVIDENCE FOR ACTION IN POLICY AND PROGRAMS-10

Health Management Information System for Maternal & Newborn Health in Urban India

Authors

1. Mr. Dipankar Bhattacharya (Save the Children, India)
2. Dr. Benazir Patil (Save the Children, India)
3. Dr. Uzma Syed (Save the Children, USA)
4. Dr. Lara Vaz (Save)
5. Dr. Sudeep Singh Gadok (Save the Children, India)
6. Dr. Rajesh Khanna (Save the Children, India)

Abstract

Background

Analysis of the NFHS III data indicate that although the Neonatal Mortality Rate (NMR) is lower in the urban areas (28.7) than the rural areas (42.5), the same is worse amongst the urban poor (36.8). Despite the launch of National Urban Health Mission (NUHM) in 2013, service delivery mechanisms are still being developed with no dedicated system to report progresses in urban areas. Save the Children's Saving Newborn Lives program and Population Foundation of India's Health of the Urban Poor (HUP) project piloted a HMIS at community and facility level in two cities of Pune and Bhubaneshwar.

Methodology

In consultation with the two city corporations, a gap analysis was carried out comprising of mapping of current reporting systems, field visits and review of different levels of health facilities. A comprehensive HMIS was developed and piloted for six months under the project and the findings were shared with the government bodies. The analysis explored the reasons for non-availability of data from the community through follow up interviews and validated the findings through triangulation with the facility level data.

Result

Reviews indicated that information around vulnerable communities generally missing; insufficient data to undertake analysis by diseases, by health providers and facilities. The study ensured that new indicators on neonatal health are added and disaggregated analysis was carried out. Some of succinct findings suggested that the share of public and private health care facilities vary across the two cities, particularly in the uptake of delivery and postnatal care. This has been validated by the analysis of the facility level results.

Conclusion

Continuous engagements with the urban local bodies in developing a comprehensive

HMIS and systematic documentation of key processes can help develop the cities a feasible HMIS for MNH services in urban areas.

Health Characteristics of Slum Dwellers in a Medium Sized City in North Central Nigeria

Authors

1. Dr. Musilimu Adeyinka ADETUNJI (Federal University Lokoja, Kogi State, Nigeria)

Abstract

Millions of urban residents in Nigeria live in slum areas. The health challenges of slum dwellers emanate from households' less accessibility to basic necessities of life such as portable water, modern health facilities and prompt disposal of waste, generated in their neighborhoods. In-adequate provision of these facilities to urban poor makes them prone to unhygienic conditions and so, they are more vulnerable to diseases. It is against this background that the study was designed to examine the characteristics of slum dwellers and their health challenges in Lokoja, north central Nigeria so as to develop appropriate data base for sustainable health programme. An average of one hundred and fifty questionnaires was randomly distributed to slum dwellers in three major areas identified in Lokoja. The questionnaire was designed to elicit information on the characteristic of household residential units occupied by slum dwellers', facilities available in their neighborhood such as waste management techniques, water sources, accessibility to modern waste disposal as well as provision of health services in their areas. Descriptive and inferential statistics were used to analyze the data. The findings reveal that slum dwellers are less accessible to health facility in the study area. Further analysis shows that more than 60% of respondents are vulnerable to environmental health challenges such as cholera, diarrhea and malaria. The result of the analysis indicates that sanitary environment and garbage disposal pose series of health challenges to slum dwellers in the study areas. The study also indicates that socio-economic characteristics of slum dwellers such as income, education, s, cultural beliefs and political factors are highly correlated with their health status of slum dwellers. The study concludes that local, state and federal governments should provide basic necessities of life for urban poor who live in slum environment, as this might improve their standard of living.

Environmental Exposure and Health Problems among Male Leather Tannery Workers: A Study of Kanpur City, India

Authors

1. Mr. Gyan Chandra Kashyap (International Institute for Population Sciences, Mumbai.)

2. Prof. Shri Kant Singh (International Institute for Population Sciences, Mumbai.)

Abstract

The tanning industry is known for polluting environment due to the use of many hazardous chemicals in tanning process. Leather tannery workers are more susceptible to many chemicals and physical hazards as they are exposure to lot of hazardous materials and processes during tanning work. Tannery workers are exposed to many health problems. This study aims to investigate the association between environmental exposure and health problems among male leather tannery workers. A cross-sectional household study was conducted from January to June, 2015 on tannery and non-tannery workers as a part of PhD program from the Jajmau area of Kanpur city, India. The sample of 286 tannery and 295 non-tannery workers has been collected from the study area. A symptoms shown the highest prevalence of symptoms of asthma, cough first thing in the morning (24.13%), feeling of tightness in chest (10.14%), cough most days and night at least 3 months (11.54%), cough up with phlegm most days and night for 3 months in previous year (11.19%), chest contestation (17.83%) among the tannery workers compared is the higher to their counterpart. The symptoms of TB, breathing difficulty (14.34%), excessive sweating especially at night (18.53%), fatigue (25.17%) and weight loss (14.69%) these symptoms often experienced by the tannery workers. Having “cough first thing in the morning” had statistically significant association with the chemicals in the air, high exposure (OR= 9.55**, $p<0.05$) among the tannery workers. Results from the logistic regression analysis for low back trouble that the age was significantly associated with low back trouble in age group >36 (OR=4.16***, $p<0.001$). This study concluded that the working condition at tannery had exposure to lots of hazardous materials and processes during tanning work and its enormous linkages between health problems of the leather tannery workers of Kanpur city, India.

Urban and Transport Planning Related Exposures and Mortality: A Health Impact Assessment for Cities

Authors

1. Ms. Natalie Mueller (Centre for Research in Environmental Epidemiology (CREAL))
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7. Mr. David Donaire-González (Centre for Research in Environmental Epidemiology (CREAL))

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13. Mrs. Antònia Valentín (Centre for Research in Environmental Epidemiology (CREAL))
14. Prof. Mark Nieuwenhuijsen (Centre for Research in Environmental Epidemiology (CREAL))

Abstract

Background: By 2050, almost 70% of people globally are projected to live in urban areas. As the environments we inhabit affect our health, urban and transport designs that promote healthy living are needed. We conducted a health impact assessment study for exposures related to urban and transport planning in Barcelona. We estimated the number of premature deaths preventable from compliance with international exposure recommendations for physical activity (PA), air pollution, noise, heat, and access to green spaces.

Methods: We developed and applied the Urban and TranspOrt Planning Health Impact Assessment (UTOPHIA) tool to Barcelona. Exposure estimates and mortality data were available for 1,357,361 Barcelona residents. We compared recommended with current exposure levels. We quantified the associations between exposures and mortality and calculated population attributable fractions to estimate the number of premature deaths preventable under compliance with exposure recommendations. We also modeled life-expectancy and economic impacts.

Results: Annually 8.5% of mortality (N=1,273) could be prevented, if international recommendations for performance of PA, exposure to air pollution, noise, heat, and access to green space were complied with. The biggest share in preventable deaths was attributable to increases in PA, followed by exposure reductions in traffic noise, air pollution, and heat. Access to green spaces had smaller effects on mortality. Compliance was estimated to increase average life expectancy by 187 (95% CI: 72-242) days and result in savings of 4.0 (95% CI: 2.1-5.7) bn €.

Conclusions: Environmental exposures and PA factors can be modified by changes in urban and transport planning. We recommend considering health impacts when designing cities and emphasize the need for (1) the reduction of motorized traffic through the promotion of active and public transport and (2) the provision of green infrastructure, as suggested to provide PA opportunities as well as air pollution, noise, and heat mitigation.

CS 9.11: EVIDENCE FOR ACTION IN POLICY AND PROGRAMS-11

Fatigue and Driving: A Case Study in Cape Coast Metropolis

Authors

1. Dr. Ogunleye-Adetona Comfort Iyabo (University of Cape Coa)
2. Mr. Essilfie Felix (University of Cape Coast, Ghana.)

Abstract

Human and goods transportation is a major aspect of life. For instance it facilitates movement and helps in the transaction of business. Drivers of these vehicles therefore play a crucial role in the phenomena of transportation. Because of the nature of their work, they go through stressful situations especially the commercial drivers whose major concern is to maximize profit and inadvertently experience but ignoring the fatigue that comes with such acts. Generally, fatigue affects task performance: a reduction in alertness, longer reaction times, memory problems, poorer psychometric coordination, and less efficient information processing (Lyznicki, et al (1998). Not surprisingly, these general effects on task performance are mirrored by similar effects when the task concerns driving. Fatigue has specific consequences on driving behaviour this however varies with on how persons react and cope with fatigue (Oron-Gilad, & Shinar, 2000). There is a need to highlight these individual differences on a person's reaction to fatigue and therefore arrived at a better way of solving the continuous road accidents on Cape Coast roads ,Ghana because fatigue has however been discovered to be a silent factor that causes accidents throughout the world and specifically Ghana. The effect of fatigue on driving in the Cape Coast Metropolis Cape Coast a metropolis is being under studied not only because it is the capital of Ghana's Central region, but it is strategically located between Accra and Takoradi (an important port city and petroleum producing area). This situation makes for heavy human and vehicular traffic through and within Cape Coast. 50 copies of questionnaires were used randomly to obtain information from drivers and road users in the Cape Coast Metropolis. Inadequate quality sleep, driving for more than 8hours a day was identified by respondents to be one of many factors that causes effects of fatigue and consequently on driving. It was recommended to various stake holders like car owners, the Road Safety Commissioner and the M.T.T.U. should help/ facilitate the education of drivers especially the commercial drivers on the effects of fatigue on driving.

Healthcare Utilization as a Predictor of In-Pharmacy HIV Testing

Authors

1. Rafael Pérez-Figueroa (Columbia University)
2. Dr. Silvia Amesty (Columbia University)
3. Dr. Crystal Fuller Lewis (New York University)

Abstract

Background: Patterns of healthcare utilization among Black and Latinos differ when compared to whites. Financial reasons partially explain these differences. Latinos tend to have lower utilization rates regardless of insurance status. Blacks tend to be insured, but face other barriers to care and utilization of health services. The Expanded Syringe Access Program (ESAP) in pharmacies may provide an alternative way to access healthcare in Black/Latino communities at risk for HIV. Pharmacies may be positioned to provide in-pharmacy HIV testing and linkage to healthcare services in at-risk communities.

Objective: To examine the role of healthcare utilization as a predictor of in-pharmacy HIV testing in neighborhoods with high HIV prevalence.

Methods: We examined the associations between healthcare utilization and in-pharmacy HIV testing among a racially/ethnically diverse sample of participants (n=233). Data for this analysis come from a cross-sectional study among customers in ESAP pharmacies in Harlem, NYC (2010-2011). Binary logistic regression models were constructed to examine the role of healthcare utilization as a predictor of the likelihood of undergoing in-pharmacy HIV testing. A composite healthcare utilization score was computed to further explore this relationship.

Results: Most participants were male (55%), black (80%), and had used hard drugs (88%); 39.5% received in-pharmacy HIV testing. The majority had health insurance (93%), access to a healthcare provider (79%), and continuity of care (77%). Bivariable analysis indicated that lacking access to a healthcare provider and lower levels of continuity of care were associated with an increased likelihood of accepting in-pharmacy HIV testing. Lower levels of healthcare utilization increased the likelihood of undergoing in-pharmacy HIV testing by 70%.

Conclusions: Findings suggest that pharmacies could reach those who are not accessing traditional healthcare for HIV testing. In-pharmacy HIV testing may be a useful complement to healthcare-based testing. Further research must explore the implementation of this HIV prevention strategy.

Feminization of Disease and Disability Association in Six Low and Middle Income Countries: Evidence from the Study of Global Ageing and Health

Authors

1. Mr. MOHAMMAD HIFZ UR RAHMAN (International Institute for Population Sciences)

Abstract

Context: Women represent a growing proportion of all older people, but added survival means increasing disability associated with chronic conditions that impact on daily

living. Extant literature is full of studies suggesting sex differential in the prevalence disability, but limited studies discussing sex differential in the prevalence of disability among morbid persons.

Objective: To examine the sex differential in the in the prevalence of disability among morbid persons in selected low and middle income countries.

Methods: Disability score by using An Item Response Theory (IRT) partial credit is constructed based on eight health and functioning domains by utilising Study on Global Ageing and Adult Health (SAGE) survey. Bivariate analysis and multinomial logistic regression have been used.

Results: Among morbid persons prevalence of disability is very high in the female population. For example, among heart disease patient, the prevalence of disability in the male population is 58% while, among female, it is 83% in India.

Conclusion: Association of disease and disability is fully feminized, moreover; huge differences are found in the prevalence of disability among morbid persons across countries. For disability prevention, individuals with high-risk chronic disease should be carefully treated in general and particularly for women.

Challenges in the Measurement of the Food Environment

Authors

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5. Ms. Luana Ferreira (Federal University of Minas Gerais (UFMG))
6. Ms. Mariana Alves (Federal University of Minas Gerais (UFMG))
7. Dr. Aline Cristine Lopes (Federal University of Minas Gerais (UFMG))

Abstract

Background: To discuss the quality of secondary data and the methodological aspects involved in primary measurement of the food environment.

Methods: This article deals with the methodological description of an ecological study to assess the food environment, defined by food stores selling fruit and vegetables, situated in the public service territories under the Health Academy Program promoted by the Brazilian Primary Care program. Secondary data about stores were provided by the municipal administration. In addition, identified sites were investigated through observations on site. Macro and micro-level variables were investigated, including type and location of the store, as well as availability, variety, and advertising of fruit and vegetables and ultra-processed foods. The kappa coefficient was utilized to verify the adequacy of, and agreement between, the classifications in the analysis.

Results: There was poor agreement between the primary and secondary data: kappa 0.30 ($p < 0.001$). The following were identified as important methodological aspects for

proper study design: conducting a pilot study to ensure adequacy of the staff, time and tools, use of a validated direct observation tool, and staff training. Regarding analysis of the food environment, there was a need for the combination of macro and micro-level variables by using indices such as the Healthy Food Store Index-HFSI in stores that sold food for consumption at home.

Conclusion: The quality of publicly available secondary data was low, requiring the validation of the bases used, as well as changes in flow monitoring for quality improvement. Valid databases and their proper analysis by combining macro and micro-variables are fundamental to the understanding and monitoring of the food environment, as well as in carrying out scientific research to foster the development of public policies.

CS 9.12: EVIDENCE FOR ACTION IN POLICY AND PROGRAMS-12

Self Reported Asthma among Textile Production Workers in Nairobi, Kenya Jairus Musumba, Bsc, MPH, PhD candidate, Acting Director Public Health Department Nairobi City County Government Nairobi, Kenya

Authors

1. Mr. Jairus Musumba (Jomo Kenyatta University College of Agriculture and Technology)

Abstract

Few studies have been done to document occupational hazards in the textile manufacturing sector of Kenya's economy. The objective of this cross sectional study was to determine prevalence of self reported asthma among textile production workers in Nairobi. A multistage simple random sampling procedure was used to select both the factories and the persons who participated in the study. A questionnaire was administered to consenting workers to collect data that was analyzed using the SPSS software. Chi -square test, correlation test and independent T- tests were used to analyze the data. Three hundred and twenty participants from five factories were randomly selected for the study. Overall prevalence of self reported asthma was found to be 15.6%. A significant association between age and self reported asthma ($p < 0.025$, Odds ratio 2.54 (95 % CI 1.10 – 5.89) was noted. There was no significant association between level of education and self reported asthma ($p > 0.394$, Odds ratio 1.36 (95 % CI 0.72 – 2.60). There was a significant association between coughing with wheezing and self reported asthma ($p < 0.001$, Odds ratio 15.67 (95 % CI 4.76 – 51.56). Attack of shortness of breath was the strongest symptoms associated with self reported asthma. The high prevalence of self reported asthma suggested that there is exposure to asthmagenic agents at the textile factory production line that was injurious to the workers. Therefore, the study suggests that, there is need to put in place appropriate interventional measures to minimize the risk of exposure to asthmagenic agents among textile production workers in Nairobi, Kenya

Research Translation into Food Policy Recommendations Using Photovoice: A Novel Experience of Citizen Science in Madrid.

Authors

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5. Dr. Manuel Franco (Social and Cardiovascular Epidemiology Research Group, School of Medicine, University of Alcalá, Alcalá de Henares, Madrid, Spain.)

Abstract

Food environment has been related with overweight and obesity, especially in deprived or underserved neighborhoods. Designing and implementing public policies to improve the food environment is a complex issue where the involvement of different actors as researchers, decision makers, and citizens is warranted. This approach to public policy development is strongly encouraged by research agencies and is named “Citizen Science”. Our aim was to develop recommendations based on residents’ priorities to improve the food environment of a low-income area in Madrid (Spain).

We conducted this project throughout 2015, as part of the Heart Healthy Hoods project (hhhproject.eu). 24 residents, between 40 and 75 years of age, living in the study area were asked to photograph all the features related to the food environment in their neighborhoods. During group meetings, they analyzed their photographs identifying barriers and opportunities for healthy eating. Participants identified 32 emergent categories related to the local food environment.

After coding and analysis, participants and researchers met twice to translate all these results into policy recommendations aiming to improve the local food environment. We conducted a problems and objectives analysis, using an adapted logical framework approach. Through a prioritization process taking into account time, impact, feasibility and cost, participants and researchers selected a total of 16 recommendations for both neighborhoods.

In a well attended citizen science meeting, participants presented and discussed 6 of the 16 recommendations with residents, high-rank local politicians and researchers. 6 recommendations: 1) Improving local leisure facilities; 2) Improving food banks management; 3) Reactivating traditional market and small retailers; 4) Improving food hygiene conditions; 5) Improving the availability of organic and special needs foods and 6) Reducing food waste.

Residents involved in this participatory action research project acknowledged it as highly rewarding and fruitful experience to improve their own views and actions over their neighborhoods.

Urban Health Program of India: Progress, Issues and Challenges

Authors

1. Dr. Sainath Banerjee (IPE Global)
2. Mr. Gautam Chakraborty (Population Foundation of India)
3. Dr. Jatin Dhingra (Pricewaterhouse Coopers India)

Abstract

The urban population of Indian sub-continent will reach to 880 million by 2025, of which India will experience a phenomenal growth. Indian slum population has already touched 17.4% of total urban population. The inadequacy of basic services including health, is a major public health challenge for its city population, particularly the disadvantaged sections who live in slums and other vulnerable pockets. Keeping in mind the current need and future demand, the government of India has introduced the National Urban Health Mission (NUHM-2013). This path-breaking system strengthening program focuses on reaching out to the urban poor and marginalized by facilitating uniform and equitable access to quality healthcare services with the active involvement of the Urban Local Bodies (ULBs).

The components of NUHM are community engagement, capacity building, addressing health and health determinants, innovations, information technology (IT) enabled surveillance, behavior change communication and convergence. The program is intending to cover all cities of India with 50 thousand and above population.

On 1st May 2016, the NUHM program will be completing 3rd year of program implementation with a very mixed response and a varied pace. The program is still facing initial roll out issues such as slow progress of planning, delay in recruitment of all kind of cadres specially front line workers. The institutional arrangements are not fully functional across the states so as different program management units placed at state, districts or the city level to oversee the implementation activities. Till date the total expenditure of NUHM budget is just 32% of the total budget.

The current paper critically examines various aspects of the NUHM components, its progress and factors, both proximal and distal which are slowing down the pace of the implementation against the backdrop of system, process, and policy and planning.

Street Families and Family Planning: A Neglected and yet a Vital Aspect for Urban Programming

Authors

1. Ms. Mercy Kamau (Jhpiego (an affiliate of John Hopkins University))

Abstract

Background

In Kenya, Street families are usually associated with community crimes hence they are often discriminated. Despite their dire need for health services, street families do not access mostly due to the fear of harassment by police and members of the public. A key component of the Kenya Urban Reproductive Health Initiative “Tupange” – a 5-year project funded by the Bill and Melinda Gates Foundation – was to improve access to family planning (FP) for the urban poor such as street families.

Methodology

Tupange trained and worked with community health volunteers (CHVs) who then identified street families living around the Majengo area of Nairobi. The CHVs mapped the street family “bases” and identified their base commanders, who made decisions and provided security for the base. Despite early suspicion, the CHVs persisted and created a good rapport with base commanders. The CHVs then provided general health information and eventually FP method information. Three integrated outreaches targeting the street families were conducted by two local health facilities between April 2014 and June 2014: the base commanders assisting in the mobilization. The street families received quality health services without any stigmatization. Data was collected through an integrated outreach report, CHV referral booklets and testimonies from the street girls and women.

Results

One of the base commanders volunteered to serve as a CHV for street families; providing health messages and condoms. During the outreaches, 71 street women received long acting and reversible methods and 146 children received health services (immunization, deworming, treatment of skin infections, food supplementation). The street families started seeking health services from the two health facilities.

Conclusion

Street families, usually ignored when designing interventions for health services, can be reached and will accept the services. This experience by Tupange project can be modeled to provide street families with other services.