SESSION 3-6

« **Health care system**»

Thursday, September 12th

Room : E 108 à 15h00

Ramasamy Balasubramaniam

Town : COLOMBO, Sri Lanka

Job Title : MPH trainee

Company : Unknown

Title of the presentation : « Impact of urban dynamics in a developing country on its public sector medicines supplies »

Abstract :

Title: Impact of urban dynamics in a developing country on its public sector medicines supplies Balasubramaniam R, Sri Ranganathan S, Jayasinghe K, Fernandopulle R Key words: Intra-urban dynamics, urbanization, public health Background: Developing countries are suffering from double burden of infectious diseases (ID) and non communicable diseases (NCD). These countries are struggling to meet the challenge of IDs and at the same time facing an invisible epidemic of NCDs driven by urbanization, industrialization, development and aging. This double burden of diseases that currently challenges many developing countries will place increased stress on already stretched clinical and prevention resources, with possibly inadequate care for both NCDs and IDs due to re-distribution of resources. This study is designed to examine the changing trend in the distribution of resources for the treatment of IDs and major NCDs in Sri Lanka using medicines supplied to the public sector as proxy indicator. Objective: To analyse the changing trend in the utilization and cost of drug treatment of IDs and major NCDs in the public sector in Sri Lanka from 2007-2011. Methods: Data on quantity and cost of medicines supplied to the entire public sector during the study period was obtained from the Medical Supplies Division. The medicines were classified according to 2012 Anatomical Therapeutic Chemical (ATC) classification system and quantified using Defined Daily Doses/ 1000 population/year. The changing trend in the utilization and expenditure of medicines used in major NCDs namely anti-diabetic medicines, antineoplastic and immunomodualting agents, medicines for obstructive airway diseases, and medicines used in cardiovascular diseases was compared with that of medicines used in IDs namely anti-infective and anti-parasitic agents using descriptive statistics. Results: Mean number of medicines supplied during the study period was 753 (SD= 18.9): Of this, 27% were medicines for major NCDs (mean=204, SD=14.4) and 20% were medicines for IDs (mean=150, SD=6.5). The mean expenditure for entire medicine supplies during the study period was 58.9

(SD = 16) million USD: of this 28% was spent on medicines for NCDs (mean = 16.28, SD = 6.35) and 35% on medicines for IDs (mean = 20.84, SD=5.07). The percentage increase (from 2007 to 2011) in the number and cost of medicines for NCDs was 16 and 150% compared to 9 and 100% for medicines for IDs. The ratio of money spent on IDs and NCDs showed a notable change from 1.3: 1 in 2007 to 1.06:1 in 2011. The money spent on medicines for this double burden of diseases took a major slice in the total medicines budget, 61% in 2007 and 64% in 2011. Conclusion: Utilization and cost of medicines for both NCDs and IDs are on the increase with former showing a greater increase. This burden of NCDs reflects the impact of current challenge of urban dynamics in a developing country which also has the burden of IDs. Implementing joint preventive strategies to combat this impact of urban dynamics on health and economic resources will be cost effective in the long run.

MARIA ISABEL BARROS BELLINI

Town : PORTO ALEGRE/ RIO GRANDE DO SUL, Brazil

Job Title : DRA

Company : PUCRS

Title of the presentation : « Construction methods of planning and regional health in Brazil and social transformation in governance health policy of Brazil»

Abstract :

Maria Isabel Bellini, Ligia Geyer, Cristian Guimaraes, Cristiane Achutti, Ana Mejolaro,Liane Prytoluk,Marta Grecellé,Maria Elisa Freitas,Ana Assis Brasil,GabrielBatista-Le Brésil, ainsi que d'autres pays sud-américains, a souffert ces dernières années les réfractions de questions sociales exprimées dans le manque d'accès aux droits, le chômage, les relations de travail flexibles, l'augmentation de l'inégalité sociale, le manque d'accès aux politiques publiques. La situation actuelle au Brésil nécessite la construction des chemins d'adaptation qui seront adoptés par les gestionnaires de la politique de santé dans la planification et l'organisation des soins de santé. Il est à noter que le paradigme de la politique de la santé brésilienne a eu des changements importants à travers le XXe siècle eu son point culminant dans la création du Système Unifié de Santé en 1990 qui a pour principe universaliser la santé comme un droit du citoyen. Le tollé populaire organisé par des mouvements populaires et la lutte des travailleurs de la santé ont inclue le droit à la santé dans le texte de la Constitution garantissant ainsi sa légitimité. Depuis lors, des normes et des structures ont été proposées par les gestionnaires pour consolider le système de santé, mais toujours en accord avec les mouvements de la société et les exigences de la réalité. Présente l'expérience de la planification et de l'organisation de la politique de santé, qui s'est tenue de 2010/2012, et toujours en cours, afin d'assurer le droit à la santé de la population et d'améliorer la qualité de l'accès.Objectif:encourager la gouvernance et la planification régionale à travers la

reconfiguration des régions sanitaires.Méthodologie:la construction d'une méthodologie ou d'une conception méthodologique collective, afin d'inverser la logique centrée dans les régions administratives et dans les soins médicaux et hospitaliers (soins secondaires et tertiaires.Cette méthode était fondée sur les hypothèses suivantes:la conception des régions sanitaires doit prendre en considération des critères d'autres que les soins, en intégrant à la compréhension de région sanitaire des aspects culturels et géographiques; l'usage des dispositifs de support pour la formation continue, en particulier en ce qui concerne la capacité de gestion de la région sanitaire ; l'encouragement d'un processus de coopération entre les gestionnaires de l'état et municipaux afin de faire avancer la décentralisation des actions et des services de santé.Résultats:Les régions sanitaires, avant l'introduction de la méthodologie proposée, étaient configurées comme un module de soins composé par un groupe de municipalités, y compris un siège du comté, capable d'offrir un ensemble minimal et suffisant de procédures définies comme le premier niveau moyen de complexité pour toute la population du module.Nous avons la configuration suivante: carte de la régionalisation des soins de santé en identifiant les besoins d'investissement, de restructuration et 31 régions sanitaires et enquête sur les besoins de santé pour l'analyse et l'identification des cibles à atteindre, en encourageant la planification régionale. Ce processus a été construit étape par étape, avec la participation des agents de santé, des gestionnaires et des représentants de contrôle social, ce qui garantit le caractère démocratique et la co-responsabilité

Rivaldo Faria

Town : Coimbra, Portugal

Job Title : 1. Pequisador (Unicamp, Brazil); 2. Aluno de Pós-Doutoramento (UC, Pt)

Company : 1. Instituto de Geociências, Universidade Estadual de Campinas, IG/Unicamp, Brazil; 2. Universidade de Coimbra, Pt, Departamento de Geografia

Title of the presentation : « The planning of limits and the limits of planning in primary healthcare in urban areas of Brazil »

Abstract :

INTERNATIONAL CONFERENCE "Intra-urban dynamics and health" Concepts, methods and applications September, 11th - 13th, 2013 University Paris Ouest Nanterre la Défense - France Rivaldo Mauro de Faria IG/Unicamp/Brazil Postdoctoral researcher, University of Coimbra, Portugal Paula Santana Full Professor, University of Coimbra, Portugal "The planning of limits and the limits of planning in primary healthcare in urban areas of Brazil" Primary healthcare (PHC) in Brazil is represented by a cluster of institutions that are highly complex, though technologically low-density, and which operate through team work, oriented towards a territorially delimited community. The PHC facilities constitute the first

level of healthcare, and are thus a point of entry into the Single Healthcare System (SHS). They are responsible for providing a series of healthcare services, systematically integrated with other levels of healthcare (secondary and tertiary, hospitals, and treatment and rehabilitation respectively). It is necessary to assess the geographic limits of the catchment area of each PHC facility, as this will allow us to identify and recognise “points of entry”. In this sense, the primary healthcare units should be organized in order to respond to a geographically defined and limited target public. In Brazil, these limits have been planned through the so-called “territorialisation of health”. This is a planning technique and policy that enables the territories and limits of the PHC units to be defined. The main aims of this study are: (i) to discuss the limits of the planning process based on the territorialization of the PHC facilities; (ii) to propose a new approach to the planning of the limits, grounded in the recognition and adaptation of PHC facilities to the specific reality of the territories in question. The first aim is pursued through a study into the regulatory boundaries of the “territorialization of health”, the ways in which this is expressed in practice, and its inability to apprehend the territory in its complexity. The second aim starts with the construction of a theoretical proposition that basically inverts the proposition underlying territorialisation, namely the creation of limits. It is believed that the limits should not be created but rather acknowledged, as they already exist as a concrete territorial or social given. The methodology involves the study of the political instruments responsible for territorialization of health, particularly the guidelines given in the National Basic Attention Policy (Primary Healthcare). The uses of territory, in Professor Milton Santos' understanding, is as a conceptual base in the discussion of territorial limits for planning. The discussion of territorialization focuses on the bureaucratization of the process and the essentially administrative nature of its limits. Consequently, the limits rarely coincide with the social conditions of the territory, which, in practice, may result in the inadequate allocation of primary healthcare facilities and in inefficiency of its actions. On the other hand, the recognition of territories and adaptation of services to them generates the potential to allocate services and actions in accordance with the specific conditions and needs of each one. Thus, it is possible to optimize prevention and promotion practices, thereby making them better able to respond to the healthcare needs of the society. Key Words planning, territorial limits, primary healthcare facilities, territorialization.

John Gallacher :

Town : Cardiff, United Kingdom

Job Title : Post-doctoral Researcher

Company : Institute of Primary Care & Public Health

Title of the presentation : « spatial Domain Network Analysis for Urban Health (sDNA-UH) - Deciphering the associations between built environment morphometrics and health outcomes. By Chinmoy Sarkar & Prof. Chris Webster »

Abstract :

spatial Design Network Analysis for Urban Health (sDNA-UH) - Deciphering the associations between built environment morphometrics and health outcomes Chinmoy Sarkar1,* John Gallacher2, ** Chris Webster1,3, *** 1School of Planning and Geography, Glamorgan Building, Cardiff University, Cardiff, CF103WA, United Kingdom 2 Department of Primary Care and Public Health, Centre for Health Sciences Research, School of Medicine, Cardiff University, Cardiff, CF14 4XN, United Kingdom 3 Faculty of Architecture, The University of Hong Kong, 4/F Knowles Building, Pokfulam Road, Hong Kong Abstract The relationship between structure of configured urban space in a city and human behaviour and health has long been established. However, few studies have empirically examined the impacts of detailed built environment (BE) configuration upon health outcomes. The study hypothesizes that the configuration of the city, especially the distribution of land uses and design of street networks defines physical connectivity and accessibility to health-promoting-community-resources, influences individual's activity patterns, mental and behavioural responses as well as social interactions and hence determines the socio-spatial distribution of health1,2. With the objective of operationalizing the multiple multilevel spatial determinants of health in a city system, spatial Design Network Analysis for Urban Health (sDNAUH), a high resolution GIS database comprising sophisticated BE morphological metrics (morphometrics) has been developed for the assembly constituency of Caerphilly, Wales (Figure 1). The UK Ordnance Survey MasterMap data layers were employed to construct more than 100 land use and street network accessibility indices. A network model of street-level physical accessibility was developed using spatial Design Network Analysis (sDNA) as shown in Figure 2. Dwelling locations of respondents of the Caerphilly Prospective Study (CaPS), a community sample of older men of Caerphilly, Wales were geocoded so as to form the individual-level health and socio-demographic component of sDNA-UH. The sDNA-UH indices were parameterized within multiple street-network catchments around respondent’s dwelling. The analytical strategy employed involved assessment of health effects of differential accessibility of an individual's dwelling with respect to multiple service and facility catchments at multiple spatial scales of 0.5 mile and 1 mile street-network catchments. The effects upon general health (expressed in terms of perceived health and disability) and psychological health (measured by hospital anxiety and depression scale; HADS) in older adults of Caerphilly were examined. The presence of hierarchically clustered data with individuals nested within census defined lower super output area (LSOA) neighbourhoods enabled the examination of impact of BE configuration upon general and psychological health through a series of multi-level logistic regression models. Two-level logistic mixed effects models with LSOA-level random effects were fitted on the health indicators of perceived general health, long standing disability, anxiety and depression. Statistical analyses were performed with the user-written runmlwin command within Stata 11.2. Specific attributes of BE, especially the dwelling-level density, dwelling type, density of community services, street network movement potential expressed in terms of betweenness index and neighbourhood-level deprivation (measured by Welsh Index of Multiple Deprivation) were reported to be significantly associated with health

outcomes. The study also found that the associations were moderated by varying the spatial scales at which they were measured as well as by including the measure of neighbourhood-level deprivation. The impact of accessibility to health promoting/inhibiting resources at multiple urban scales needs to be assessed in areas with varying degrees of 'urbanness', especially in large cities and high density inner-city areas. Evidence gathered from this and similar studies are potentially of great use in retrofitting and optimizing the configuration, design and management of BE to encourage mobility, physical activity, and social connectivity and thereby fostering health. Correspondence: *Email: SarkarC1@cardiff.ac.uk ** Email: Gallacher@cardiff.ac.uk ***Email: Webster@Cardiff.ac.uk

Viranga Jayasundara

Town : Dehiwala, Sri Lanka

Job Title : veterinary surgeon

Company : Dehiwala Mt. Lavinia Municipal council

Title of the presentation : « The effects of new urban life style on dog rearing interest in community and its impact on cost of rabies related public health issues »

Abstract :

The effect of new urban lifestyle on dog rearing interest in community and its impact on cost of rabies related public health issues. Jayasundara V.K. Dehiwala Mt. Lavinia Municipal Council, Sri Lanka. The dog, also known as "man's best friend" has been portrayed as a household member in Sri Lankan society since ancient times. Likewise health authorities of the country have been able to create general public awareness on prophylactic vaccination of domestic dogs against rabies, as dog is the main reservoir of fatal zoonotic disease, rabies in Sri Lanka. The responsibility of rabies control is vested with the local authority of the area by legislation, Rabies ordinance (1956). Accordingly, the Dehiwala Mt. Lavinia Municipal council allocates financial resources and organizes free prophylactic vaccination clinics against Rabies for domestic dogs at field level every year. Of the 45817 families living within this city area (1343 ha.), some families rear dogs as pets. 75% of dog owners prefer to obtain free service from these field vaccination clinics. The main objective of this study was to find out, how the dog rearing interest of residents in the Municipality area has been affected by rapid urbanization and its impact on overall cost of rabies prophylaxis biologics for domestic dogs borne by the Municipal council during the last decade. The data on total number of domestic dogs vaccinated against rabies at the field level clinics, the total number of clinics carried out and cost borne by the council from 2001 to 2011 were recorded. Data revealed that a significant reduction in the total number of domestic dogs vaccinated against rabies from 6080 in 2001 to 1776 in 2011. The total number of vaccination clinics carried out were 203 and 109 in 2001 and 2011 respectively. Municipal council has spent approximately 12160 US dollars (2 US dollars per dog) in 2001 and 8880 US dollars (5 US Dollars per dog) in 2011 for

rabies prophylaxis biologics. Within Municipality limits, there were 618 (23 fields clinics) and 60 (7 field clinics) for domestics dogs in Mt. Lavinia area and 970 (28 field clinics) and 385 (18 field clinics) for domestic dogs in Aththidiya area in 2001 and 2011 respectively. The main reasons attributed for this decrease in the dog rearing interest were conversion of the living style from large houses with compounds to condominiums, rapid commercialization, rural to urban migration of different ethnic and religious groups and confinement of houses to 10 perches. Aththidiya, which transformed from rural to semi urbanized area, showed a significant decrease in the vaccination figures during this period. However, Athhtidiya has the highest vaccination figures among all areas in 2001 and 2011. Mt. Lavinia also showed a marked reduction in number of clinics with urbanization. Furthermore, rapid change in the human community composition, social and religious taboos are also causes affecting dog rearing interest. Compared to 2001, approximately 1/3 reduction in cost of prophylaxis biologics in 2011 is observed. Key words: urbanization, domestic dogs, Rabies, vaccination, Public health