

Health Systems

Chairpersons: G Avery, J Hospedales

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Medication adherence and health insurance/health benefit in adult diabetics in Kingston, Jamaica

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Objectives: To determine the association between health insurance/health benefit and medication adherence amongst adult patients with diabetes in Kingston, Jamaica.
Design and Methods: This was a cross-sectional study. Target population was patients with diabetes who attended the diabetic outpatient clinics at two selectively chosen health centres in Kingston. All patients with diabetes attending the diabetic clinics and over the age of 18 years were conveniently sampled. The sample size was 260. An interviewer-administered questionnaire was utilized which assessed health insurance/health benefit. Adherence was measured by patients' self-reports of medication usage in the previous week. The Chi-squared test was used to determine significance of associations.

Results: The sample population was 76% female and 24% male. Type 2 diabetics comprised 93.8%. More than 95% of patients were over the age of 40 years. Approximately 32% of participants were employed. Approximately 75% of patients had health insurance/health benefit. Of the adherent patients, 79.6% had health insurance/health benefits, compared with 64.6% of the non-adherent patients. This difference was statistically significant ($\chi^2 = 6.553, p = 0.01$). Prevalence of medication non-adherence was 33%.

Conclusion: In Kingston, patients with diabetes who are adherent are more likely to have health insurance/health benefit.

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Exploring the attitudes that influence the non-urgent patient utilization of the Accident and Emergency Department in St Vincent and the Grenadines: A qualitative interview study

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Objective: To explore the attitudes that influence the non-urgent patient utilization of the Accident and Emergency Department (AED) of the Milton Cato Memorial Hospital (MCMH) in Kingstown, St Vincent and the Grenadines (SVG).

Design and Methods: A qualitative study was conducted between May and August 2013 in the AED of the MCMH in SVG. Semi-structured interviews of twelve non-urgent AED patients were conducted to elicit a deeper understanding of how and why persons with non-urgent medical complaints decide to seek emergency care. Verbatim transcribed transcripts were analysed with a grounded theory approach. This data-driven, iterative approach led to re-consideration of common rational choice behavioural theories used in this area toward those of habit formation.

Results: The study found, first, that Vincentians automatically choose to visit the AED because it is a custom. Second, the healthcare system in SVG operates in a manner that reinforces this habitual non-urgent use of the AED, for example, by routinely referring to the AED and failing to triage patients appropriately as non-urgent. Third, there was also some deliberate use, as patients took convenience and the systematic encouragement into account to determine that the AED was the most appropriate choice for health care.

Conclusion: The attitudes and perceptions of the Vincentian non-urgent patient are major determinants of the AED utilization in SVG, and are intricately linked to local habit and custom. Measures to reduce the non-urgent use of the AED must include consideration of the Vincentian habit of 'going casualty'.

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User satisfaction survey in the Accident and Emergency Department at a major hospital in Trinidad

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Objectives: To assess patients' experiences in an Accident and Emergency (A&E) department using quality criteria.

Design and Methods: A cross-sectional study was carried out to assess the A&E service using Maxwell's quality criteria (acceptability, accessibility and efficiency). Previously validated questionnaires were modified, pilot tested and used. Data were collected on 200 patients on all days of the week during the study period and throughout the three daily shifts. Waiting times were related to triage categories.

Results: Eighty-four per cent of patients (n = 166) reported being at least adequately attended by the receptionist, while 20% (n = 39) spent more than three hours waiting to be seen. Patients in the blue/asthma triage category spent on average approximately three minutes waiting to be seen by a doctor; the red category – 36 minutes; the yellow category - 84 minutes and green – 67 minutes. Sixty-four patients were able to state how long they waited for a bed; of these 53% (34 patients) waited more than three hours. Ninety-six per cent (n = 189) rated the overall nursing care between fair and excellent; 94% (n = 182) rated the overall care at the A&E Department between fair and excellent; with at least 96% (n = 192) stating that the doctors treated them with professionalism and respect.

Conclusion: Most (79%) patients reported being satisfied with the healthcare provided. Dissatisfaction expressed was due to the state of restrooms, cleanliness and seating arrangements in the waiting area. The three-hour wait for a bed for more than 50% of patients requires review.

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A needs assessment of disabled people living in Nevis

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Objective: What are the needs of disabled people in Nevis and how can they best be addressed?

Design and Methods: A cross-sectional study was conducted to determine the needs of persons with a disability (PWD) in Nevis. Structured interviews were conducted with 40 PWD and 30 persons without a disability. These interviews consisted of questions from the United Nations (UN) Washington group questionnaire, the World Health Organization (WHO) Disability Schedule 2.0, the Participation scale and the Craig Hospital Inventory of Environmental Factors (CHIEF) short form. Focus groups were organized with blind and visually impaired persons, healthcare providers and policy-makers.

Results: Disability on Nevis was caused primarily due to chronic health conditions (40.0%). Persons with a disability had functional limitations and participation restriction. There was a lack of accommodating transportation services, there were inaccessible building structures, negative social attitudes, difficulty in finding employment, a lack of policies directed to the needs of PWD and a lack of services available for PWD. The current rehabilitation services and specialists cannot meet the needs of all PWD on the island; therefore, a rehabilitation centre combined with community based rehabilitation is necessary.

Conclusions: Persons with a disability in Nevis are underserved. There is need for more services and adaptation of policies to meet the needs of PWD. These changes must be done to ensure the independence and full participation of PWD in society.

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The proper use of pharmaceuticals amongst elderly persons suffering from Metabolic Syndrome X

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Objective: To determine the proper use of pharmaceuticals amongst elderly persons (65 years and older) suffering from Metabolic Syndrome X.

Design and Methods: Three hundred persons suffering from Metabolic Syndrome X, ages 65 years and over were selected *via* purposeful sampling at two hospitals in Trinidad: Eric Williams Medical Sciences Complex and San Fernando General Hospital. Interviewer administered questionnaires were used to collect data and determine the knowledge of patients concerning their condition, current medication and barriers to proper use of medications.

Results: Data from 283 patients was analysed. Highest level of education was primary school for 51% and 12% had no education. For 49.7%, religious and cultural beliefs restricted use of some medications and 64.7% accessed medication free through the Chronic Disease Assistance Programme. For those purchasing medication, 51% had

financial difficulties and 14% lacked transportation. Overall, 34.7% were unaware of the function of their medication and 72.3% were unaware of possible side effects; 25% felt they were taking too many medications; 17% were less inclined to comply due to large quantity; 23% said that their mood affected compliance, while 13.7% said their medication disrupted their daily activities. **Conclusion:** Culture, education, knowledge, finance and transportation were identified as key determinants of compliance. Programmes fostering education and accessibility of pharmaceuticals should be implemented to assist elderly patients suffering from Metabolic Syndrome X.

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A Geographic Information System-based analysis of syphilis in Trinidad: Applying new technologies to an old disease

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Objective: To describe the current epidemiological features of syphilis and congenital syphilis in Trinidad, 2003–2012.

Design and Methods: All laboratory confirmed syphilis cases diagnosed at the Queen's Park Counselling Centre (QPCC) between January 1, 2009 and December 31, 2012 were identified. All relevant data were collected including addresses which were geocoded and mapped using ArcMap 10.0 Geographic Information System. Both spatial techniques and standardized incidence rates were used to access hot spots.

Results: The annual cumulative incidence rate for syphilis remains high, varying from 39 per 100 000 population in 2009, to 29 per 100 000 in 2012. We identified three "hot spots": Port-of-Spain, San Juan and Arima. Young men and particularly young women of childbearing age 15–35 years living in urban high density populations were commonly infected.

Conclusion: The incidence of syphilis continues to be very high in Trinidad. New initiatives will have to be formulated in order to achieve the global initiative to eradicate syphilis by 2015.

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A review of health information systems at selected health institutions in Trinidad and Tobago

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Objectives: To evaluate the health information systems (HIS) at selected health institutions in Trinidad and Tobago to determine their effectiveness.

Design and Methods: An evaluation using Donabedian's structure, process and outcome parameters was undertaken. Information was collected (March to June 2013) from two hospitals and two randomly selected health centres. Admission Discharge Transfer (ADT) forms, birth and death records, Accident & Emergency Department (A&E) register *etc* were reviewed. Semi-structured face-to-face or telephone interviews were conducted with medical records staff to ascertain information on data flows and their views about the current HIS.

Results: Fifteen thousand two hundred and eighty forms were reviewed. Three institutions employ a manual HIS; the fourth, a partial electronic system. International Classification of Diseases (ICD-10) coding occurs in hospitals, but not at health centres; at Hospital 1, medical ward ADT forms revealed 91.5% completion for 'diagnosis' field and a 0.8% 'coding' field completion. At Hospital 2, the coders look through the notes to find the 'diagnosis' which was reflected in a 73.2% completion for 'diagnosis' and a 92.3% completion for 'coding.' Interviews revealed a three-year backlog for entering codes in hospital 1 and highlighted that some staff have coding duties added to their roles and responsibilities. In the health centres, the completion rates for chronic disease clinic forms were no more than 55.7%.

Conclusions: Health information systems need strengthening, starting at the frontline. Issues regarding staffing and delays in completing forms need addressing to ensure effective surveillance for health service planning, monitoring, evaluation and early detection of acute public health events.

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National cause-of-death data in the English- and Dutch-speaking Caribbean, 2000–2010: A quality assessment

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Objective: To review the quality of national cause-of-death data reported by the English- and Dutch-speaking Caribbean for the period 2000–2010.

Design and Methods: Data were extracted from the Caribbean Public Health Agency (CARPHA) regional cause-of-death database and analysed using the four types of "garbage codes" developed by Naghavi in 2010. An analysis of the total proportion of garbage codes reported annually was conducted and compared to a review of CARPHA initiatives to improve quality of cause-of-death

data. Additionally, the four types of garbage codes were analysed by country, year and age group.

Results: The proportion of deaths attributed to garbage codes varied widely by country, age and over time. Notably, there was a general reduction in the proportion of deaths attributed to garbage codes over the period; this reduction coincided with CARPHA training initiatives beginning in 2005. Among all deaths attributed to garbage codes, the reporting of intermediate causes of death were

most frequent for 18 of the 21 countries. For three of the garbage code types, higher proportions of garbage codes were found for persons under 14 years and older than 70 years.

Conclusions: The proportion of garbage codes varied substantially over time, between countries and by age. There is evidence to suggest that training initiatives have led to an improvement in the quality of cause-of-death data.