

Public Health I

Chairpersons: P Adams, K Polson-Edwards

O – 7

Trends in mortality from cardiovascular disease and diabetes and the association with healthcare expenditure in the Caribbean countries*A Razavi, I Hambleton, TA Samuels, N Sobers-Grannum, N Unwin**Chronic Disease Research Centre, The University of the West Indies; MRC Epidemiology Unit, University of Cambridge; Faculty of Medical Sciences, Cave Hill, The University of the West Indies
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Objective: Cardiovascular disease and diabetes (CVD-DM) is responsible for 30 to 40% of premature (≤ 74 years) mortality in the Caribbean. Much of this mortality is known to be preventable through health system interventions. Our objective was to examine between country variation in premature CVD-DM mortality from 2000 to 2010, and to explore the relationship with healthcare expenditure.

Design and Methods: Deaths by age, gender and cause were obtained from The World Health Organization (WHO) mortality data base, and population numbers from the United Nations population division. Age standardised mortality rates for combined CVD-DM in those aged ≤ 74 years were calculated for: 1999/2001 and 2009/2011. Changes in per capita healthcare financing were obtained from WHO sources. Stata software was used for analysis.

Results: Complete data on trends in mortality and healthcare expenditure were available for eight countries. The change in CVD-DM mortality varied greatly: in women, from -8% (Antigua and Barbuda) to -44% (St Lucia); and in men from +6% (Barbados) to -31% (Trinidad and Tobago). Increases in healthcare expenditure were associated with falls in CVD-DM mortality: Spearman $r = -0.76$ (95% CIs -0.95, -0.11), -0.76 (-0.95, -0.12), in women and men, respectively. Contrastingly, non-CVD-DM mortality trends were not associated with changes in healthcare expenditure.

Conclusions: The inverse ecological association between changes in healthcare expenditure and trends in CVD-DM mortality support the hypothesis that differences in health system performance between countries partly account for their different CVD-DM mortality trends. This hypothesis requires careful further evaluation including adjustment for

potential confounders.

O – 8

Trends in inpatient hospital deaths in a tertiary care hospital in Georgetown, Guyana: An eleven-year retrospective study*P Edwards**PAHO/WHO Guyana Country Office, Georgetown, Guyana
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Objective: To study the trends of inpatient hospital deaths in the Georgetown Public Hospital Corporation, Guyana, during 2005–2015.

Design and Methods: This was retrospective study with analysis of 14 372 inpatient hospital deaths collected from the Medical Records Department, Georgetown Public Hospital Corporation, Guyana. Templates were generated in MS Excel sheet with univariate and bivariate analyses conducted.

Results: Data analysis of 14 372 subjects showed that inpatient hospital deaths increased 14.4%, from 1197 in 2005 to 1369 in 2015, whilst admissions increased 5.0% from 29 538 in 2005 to 31 011 in 2015. The hospital mortality rate declined from 5.01% in 2005 to 4.43% in 2015. The death ratio for male-to-female was 1.27:1, with a predominance of Afro-Guyanese (43.6%) and Indo-Guyanese (39.5%) deaths, the majority of inpatients originated from Region 4 (67.6%) and the age group most affected was 44–64 years (32.7%). The human immunodeficiency virus (HIV) was ranked as the number one cause of death for 2005 (158 deaths, 12.9%), 2010 (118 deaths, 7.9%) and 2015 (107 deaths, 7.8%), respectively. For HIV, the age group most affected was 25–64 years, more males died, Afro-Guyanese were most impacted and the largest number of deaths was from Region 4.

Conclusion: Inpatient hospital deaths is increasing, higher in males, primarily affecting those in the age group 44–64 years, from Region 4 and Afro-Guyanese. The hospital mortality rate has declined. The leading cause of death was HIV for 2005, 2010 and 2015 with males, Afro-Guyanese and persons who lived in Region 4 most affected.

O – 9

Service availability and readiness for selected non-communicable diseases prevention and control: Assessment of diabetes and hypertension at seven health centres in Guyana 2014

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Objective: To ascertain the availability and readiness of seven health centres to provide primary healthcare services for the prevention and control of chronic non-communicable diseases with emphasis on hypertension and diabetes in Guyana.

Design and Methods: This was a cross-sectional survey of seven health centres (4 urban) and (3 rural) in Guyana. The data was collected using a structured questionnaire which was developed based on the World Health Organization

(WHO), service availability and readiness assessment (SARA) Tool, adapted for Guyana's context.

Results: The survey revealed that infrastructure and basic amenities were available at all of the health centres. With regards to staff, the data revealed that there was more staff at urban health centres than rural. Two of the health centres had doctors. There was no doctor present at the rural health centres. Fixed equipment average availability ($n = 7$) was 84.5%. Consumable equipment (test strips) were available at all the health centres. Essential medicines average availability ($n = 10$) was 77.5%. While all the health centres did blood pressure, blood glucose and body mass index measurement, only 57% did diabetic foot testing. Only four of the seven health centres had information, education and communication (IEC) material for hypertension and five had for diabetes.

Conclusion: There were significant gaps in service provision at health centres for diabetes and hypertension as it fell short of the bare minimum essentials required for the prevention and control of these two conditions. As a result, there is an urgent need to scale-up services to improve the health and well-being of the Guyanese population.