

D. CHRONIC DISEASES AND THE POTENTIAL FOR PREVENTION IN THE ARAB WORLD: THE JORDANIAN EXPERIENCE

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In this report, we present data summarizing patterns of chronic diseases in Jordan as found through studies conducted by the US Centers for Disease Control and Prevention (CDC). Data indicated that chronic disease was accountable for >50% of deaths in the country during 2003, with cardiovascular diseases at 38.2% and cancer at 14.3%.

Trends in chronic diseases were evaluated based on these CDC surveys conducting during 1996, 2002 (actual household surveys) and 2004. Diabetes mellitus incidence doubled from 6.8% in 1996 to 15.3% in 2004. The increase is attributed to behavioral changes rather than genetic or family history factors (*Source: CDC 2004 Survey*). Among the risk factors cited were: poor diet with 28.3% reporting no daily fruit or vegetable consumption from the day before their survey; physical inactivity at 63.7%; and a smoking rate of 23% for individuals ages ≥ 18 years.

While 26.4% of Jordanian adults have high blood pressure, the surveys indicate that 14.9% suffer from undiagnosed hypertension. High cholesterol levels increased from 9.1% in 1996 to 19.9% in 2004 with undiagnosed hypercholesteremia estimated to be at 6.4%. Of particular concern were the numbers for diabetes: 7.8% of Jordanians knew they had diabetes (were told by physicians) vs an actual 15.3% who were found to be diabetic with blood tests conducted during the survey. The reported obesity rate increased by 50% to a rate of 34.9% in 2004. The problem is further complicated by weight awareness (ie, not perceiving being obese for 19.2% in 2002 and 34.9% in 2004).

Self awareness of chronic disease (*Source: CDC 2004 Survey*) reflects poor screening practices, especially for cancer, including low awareness of mammo-gram and Pap smear procedures.

Of the 26.4% (760,000) adults with hypertension, 67% are uncontrolled (*Source: He J, Whelton PK. Am Heart J, 1999;138:211-219*) and presents a major risk factor for heart disease and stroke. A 12-13 point reduction in blood pressure would help reduce heart attacks by 21%, strokes by nearly 40%, and deaths from cardiovascular disease by 25%.

Nearly 20% (580,000) Jordanians have high blood cholesterol levels (>240 mg/dL) and 26% (~770,000) have borderline high levels (200-239 mg/dL) (*MMWR. 2000;49(33): 750-755*). These facts are important for the Ministry of Health and should assist in guiding programs for people who have borderline hypercholesteremia. Of those with high or borderline high levels of cholesterol, ~65% are uncontrolled, which, again, is a major risk factor for heart disease and stroke. A 10% decrease in total cholesterol levels may result in an estimated 30% reduction in the incidence of coronary heart disease.

Diabetes statistics from Jordan are also alarming, with 440,000 (15.3%) with diabetes and an additional 350,000 (12.3%) having pre-diabetes as indicated by the intolerance glucose test (IGT). High glucose levels are a major risk factor for heart disease and stroke. Clinical trials in the United States have shown that diabetes is also preventable by changing behaviors, increasing physical activity, and eating a balanced healthy diet. These changes are known to be more effective than medications.

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Finally, 23% of the Jordanian population >18 years of age are smokers, which accounts for 720,000 adults with a high morbidity and mortality cost.

In summary, public health programs in place in Jordan are important to the long-term health of the nation; additional plans to address these

leading causes of morbidity and mortality include an emphasis on community involvement and political commitment.