

Hong Kong Chinese population experienced abrupt macro-environmental change generated by mass migration in the late 1940s from pre-industrial China to economically developing Hong Kong. We took advantage of this natural experiment to test whether a “step-change” in living conditions in early life had sex-specific cohort effects on IHD mortality.

Methods We used sex-specific age-period-cohort models to identify cohort effects in adult IHD mortality from 1976 to 2005 overall and by migrant status. To check for specificity, we examined mortality from lung cancer and renal diseases.

Results Birth cohort effects varied with sex, with a marked upturn in IHD mortality for the first generation of men born into the comparatively developed environment of Hong Kong. The upturn occurred first in non-migrants and later in migrants. There were no such upturns in women or such sex-specific changes for lung cancer or renal diseases.

Conclusion Men’s vulnerability to premature IHD may be actuated in early life, perhaps mediated by inter-generationally and nutritionally driven levels of pubertal sex-steroids. This has considerable public health implications for the large population of young males in countries undergoing rapid economic transition.

P2-272 WITHDRAWN

P2-273 TRENDS IN CARDIOVASCULAR MORTALITY AMONG ADULT POPULATION IN RUSSIA

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Changes in cardiovascular mortality (CVM) among adult population of Russia in 2005–2009 were analysed in order to evaluate the efficiency of government program to reduce CVM adopted in 2008. During the period of 2005–2009, CVM of Russian population decreased by more than 25% in adult age group (20–59 years) and by more than 15% in old age group (60+ years). The highest decline was observed at the beginning of the studied period. For males, CVM declined by 11.5% from 2005 to 2006 and by 0.7% from 2007 to 2008 among adult age group and by 6.5 and 1.5% among old age group respectively. For adult females, CVM declined by 12.5% from 2005 to 2006 and increased by 0.4% from 2007 to 2008; for older females, CVM declined by 4.2 and 2.5% respectively. During the period of 2008–2009, mortality decline significantly accelerated: by 8.2 and 9.0% for adult and by 4.2 and 5.6% for old men and women respectively. For population of working age, these trends are related to mortality decline from three major causes of death: cerebrovascular diseases, ischaemic heart disease, “other heart diseases” according to the Russian abridged classification. For older population, the highest decline is observed for cerebrovascular mortality; mortality from ischaemic heart disease slightly decreased and mortality from “other heart diseases” (determined predominantly by cardiomyopathies of alcohol origin) increased. The efficiency of this program can be substantially increased by introducing specific measures to reduce risks of ischaemic heart disease and behavioural risks related to alcoholism in particular.

P2-274 TREND OF MATERNAL MORTALITY RATE IN IRAN FROM 1970 TO 2007; A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction Recently, Iran has experienced a rapid improvement in socio economical status and improved to upper-low economic countries. The trend of maternal mortality rate (MMR) as one of the main indicators for development and health has been reviewed systematically from 1970 to 2007.

Methods A systematic search was performed in PubMed, Embase database, Cochrane library, WHO-EMR Library and local medical databases to identify all articles and reports on the MMR in Iran. Well qualified documents were selected for data extraction and Meta analysis. Weighted linear regression was applied for exploring the trends.

Results For the 5-year intervals between 1970 and 2007, MMR was estimated as 237, 140, 100.3 (95% CI 83.65 to 117.00), 54, 56.2 (95% CI 39.72 to 72.70), 40.6 (95% CI 21.70 to 59.65), 24.1 (95% CI 20.66 to 27.67) per 100 000 live births. MMR has been decreased by 40 per decade. The most heterogeneous factors were the year of the study/report and the type of the report (from inside or outside of the country).

Conclusion It’s obvious that the MMR trend was significantly downward in recent decades. And it’s expected with such trend, Iran will achieved the millennium development target at 2015. Although the decreasing rate is considerable among the developing countries; however, it is comparable to the increasing rate of developed countries in 1920s–30s. More reduction in MMR is achievable only other related factors such as health social determinants are considered.

P2-275 CHOLESTEROL AND THE RISK OF GRADE-SPECIFIC PROSTATE CANCER INCIDENCE: EVIDENCE FROM A LARGE PROSPECTIVE COHORT WITH 37 YEARS FOLLOW-UP

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Introduction Associations between cholesterol and prostate cancer have been inconsistent and limited to a small number of studies with significant methodological limitations.

Methods We conducted a prospective cohort study of 12 933 men who were enrolled in two of the Midspan studies (took place in Scotland) between 1970 and 1976 with follow-up to 31 December 2007. We used Cox-Proportional Hazards Models to evaluate the association between baseline plasma cholesterol and Gleason grade-specific prostate cancer incidence.

Results 676 men developed prostate cancer in up to 37 years follow-up. We found no association between cholesterol level and overall risk of prostate cancer incidence. However, cholesterol was positively associated with hazard of high grade (Gleason score ≥ 8) prostate cancer incidence ($p < 0.05$). The association was greatest among men in the 4th highest quintile for cholesterol, 6.1–<6.69 mmol/l (HR 2.30, 95% CI 1.27 to 4.10) compared with the baseline of <5.05 mmol/l. Exclusion of incident cancers up to 5 years after baseline cholesterol assay did not significantly affect the observed associations.

Conclusions Men with higher cholesterol are at greater risk of developing high-grade prostate cancer but no overall association between cholesterol and prostate cancer risk was found. Further research is needed to determine the underlying biological mechanisms for the association.