Hong Kong Chinese population experienced abrupt macro-environ-
mental 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 nutrition-
ally 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P2-272 WITHDRAWN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 popu-
lation 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 2009 among adult age group and by 6.5 and 1.8% 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 2009, 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: cere-
brovascular diseases, ischaemic heart disease, “other heart diseases”
according to the Russian abridged classification. For older popula-
tion, 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

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
59.72 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 12 938 men
who were enrolled in two of the Midsland 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 posi-
tively associated with hazard of high grade (Gleason score $\geq 8$)
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 mecha-
nisms for the association.

P2-276 WITHDRAWN