Determiants of high folate concentrations should be

Conclusion

regression results will be presented at the conference.

smokers (39.5%) and former smokers (49.1%) had a greater preva-

(46.8%) and grain products (62.8%) than non-users (37.2%). Prevalence of high concentrations

supplement users had a greater prevalence of high concentrations

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Introduction Canadians’ red blood cell (RBC) folate has shifted
towards high concentrations (>1500 nmol/L based on the 97th
percentile of Americans post-fortification (NHANES)). Determin-
nants of these high concentrations are poorly understood, though an
association has been posited between high intakes of folic acid and
adverse health outcomes. This research investigate determinants of
high folate concentrations in Canadians.

Methods RBC folate concentrations from the nationally represen-
tative Canadian Health Measures Survey were examined in
participants aged 6–79 years (N=5248). The population was
described using frequencies and percentages. Sociodemographic,
behavioural and clinical determinants of high RBC folate concen-
trations were examined using univariate and separate multiple
logistic regression models controlling for age and household income.

Results The greatest proportion of high concentrations occurred in
females (42.5%), higher age groups (6–11 years (36.4%),
12–19 years (25.6%), 20–59 years (32.9%), 40–59 years (44.5%),
60–79 years (53.6%) and higher income quartiles (33.5% (Q1),
37.6% (Q2), 41.6% (Q3), 46.6% (Q4)). Folic acid containing
supplement users had a greater prevalence of high concentrations
(62.8%) than non-users (57.2%). Prevalence of high concentrations
climbed with increasing intake of fruit/vegetables (>3 times per day
(46.8%)) and grain products (>3 times per day (45.5%)). Never
smokers (39.5%) and former smokers (49.1%) had a greater preva-

cence of high concentrations than daily smokers (28.4%). Detailed
regression results will be presented at the conference.

Conclusion Determinants of high folate concentrations should be
considered when refining folic acid supplementation and fortifica-
tion policies. Future research on the relationship between high folate
concentrations and health outcomes is warranted.

FORECASTING DIABETES PREVALENCE: VALIDATION
OF A SIMPLE MODEL WITH FEW DATA REQUIREMENTS

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Introduction Current projections of diabetes prevalence are mostly
based on demographic change. Explicitly including trends in obesity
and other risk factors could improve the accuracy of the projections
and assist in evaluating policy options for prevention.

Methods The model integrates population, obesity and smoking
trends to estimate future diabetes prevalence using a Markov
approach. Model parameters were derived from the literature, except
for diabetes incidence which was estimated using DISMOD from
the baseline estimation of diabetes prevalence. We developed a model
for the US population (2000–2006), and validated the model outputs
(NHANES prevalence and projections using a different model).

Results US diabetes mellitus prevalence estimated by the model
(aged 25+) was 9.7% in 2000–2002 (7.8%–11.6%), increasing to
10.7% (9.6%–12.7%) by 2005–2006. Comparisons of the model
results with the observed prevalence in the NHANES survey showed
a close fit to the observed estimates (NHANES prevalence 2003–2006
10.3%, 9.3%–11.3). The forecasts for 2030 was 19 19.3% (15.3%–
23.0%). A different model (Narayan et al) for the same period and
age group were 20.2%, 18.8%–21.6%. We tested the model for the
England and Wales population obtaining a similar performance.

Conclusions This model provides a reasonably close estimate of
diabetes prevalence for the USA over the 2000–2006 period, compared
with contemporary independent prevalence surveys in the same
population and with a different model. Because of its few data
requirements, the approach is now being tested in different middle
income countries as a potential global diabetes prevalence forecast tool.

1.6 COHORT STUDIES AROUND THE WORLD:
METHODOLOGIES, RESEARCH QUESTIONS AND
INTEGRATION TO ADDRESS THE EMERGING
GLOBAL EPIDEMIC OF CHRONIC DISEASES

Chair: Prof Donna Spiegelman, USA
Discussant: Prof. David Hunter, USA

THE SHANGHAI WOMEN’S AND MEN’S HEALTH
STUDIES

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Rapid economic developments accompanied by environmental
and lifestyle changes over the last 3 decades in China have resulted in
dramatic increases in the incidence of chronic diseases such as cancer
and cardiovascular disease. As a result, cancer and cardiovascular disease
are two of the leading causes of death in China. This change in disease
spectrum presents an enormous challenge to public health practitioners
and policy makers in designing cost-efficient strategies for disease
prevention. To identify reasons for the increased risk of chronic disease
in China and investigate etiologic hypotheses that cannot be adequately
evaluated in other populations, we launched the Shanghai Women’s
Health Study in 1996 and the Shanghai Men’s Health Study in 2001. In

THE ESMAESTRAS STUDY: A LARGE COHORT STUDY
AMONG MEXICAN TEACHERS

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The EsMaestras study is a prospective cohort study which enrolled
female teachers 25-years and older from 12 states of Mexico
including urban and rural schools. The main objective of the cohort
is to evaluate life styles and environmental risk factors related to
chronic diseases with major focus on breast and reproductive