

options. The cost-effectiveness of each chosen option will then be assessed.

**Conclusions** We have developed a provisional framework for developing policy options, initially for the prevention of CVD and diabetes. This is based on local epidemiological data, an assessment of the socio-political-cultural context and cost effectiveness. Policy makers are involved throughout, and will be presented with costed policy options along with their potential consequences. Implemented options will then be evaluated. The framework represents a “policy effectiveness-feasibility loop”, analogous to Tugwell’s clinical effectiveness loop. The impact of this approach, and its potential generalisability, will be rigorously evaluated.

## 052 SYSTEMATIC REVIEW: THE USE OF RESEARCH EVIDENCE BY PUBLIC HEALTH POLICY-MAKERS

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**Objective** To review: the process of public health policy-making; variations in the extent of research evidence used; other influencing factors; and barriers to and facilitators of the use of research evidence.

**Design** Systematic review of empirical studies reporting data on policy-making in public health.

**Data Sources** Databases searched: MEDLINE, SCOPUS, PsychInfo, CINAHL, The Social Science Citation Index, The Science Citation Index, The Arts and Humanities Citation Index, Applied Social Sciences Index and Abstracts, Database of Reviews of Effects, Cochrane Database of Systematic Reviews, DoPHER, the Campbell Library, and the Cochrane Register of Controlled trials. Other sources: screening of organisational websites, contacting key informants and scrutinising the bibliographies of included studies.

**Review methods** Two reviewers independently assessed studies for inclusion; extracted data and assessed methodological quality using predesigned forms. Disagreements were resolved by consensus or by recourse to a third reviewer. Data were synthesised as a narrative review.

**Results** 1216 articles were retrieved. Following screening 18 studies were included: 13 qualitative studies, four surveys and one literature review. Participants included 1200 policy-makers, 72 researchers, and 174 people involved in both activities. Studies were set in a range of country and policy-making settings. Methodological quality was mixed. The process of policy-making varies widely between settings, and is viewed differently by key players. An extensive range of types of research evidence are used in policy-making. However, it has only an indirect impact and competes with many other influences. Barriers to the use of research evidence are well-described and include: policy-makers’ perceptions of research evidence; the gulf between researchers and policy-makers; the culture in which policy-makers work; competing influences on policy-making; and practical constraints. Ways of overcoming these barriers are less well known, and include: research targeted at the needs of policy-makers; research clearly highlighting key messages; and capacity building. There is almost no evidence on the role of research evidence in addressing health inequalities, a key aim of public health policy.

**Conclusions** Action is required by both policy-makers and researchers to address the barriers identified in this systematic review. There is an urgent need for evidence on the best approaches to incorporating research evidence in public health policy, particularly that considering the complex effects on health inequalities.

## 053 PROTECTION AND PUBLIC HEALTH: POPULATION EVIDENCE FROM THE EU, 1980–2003

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**Objectives** To assess the effect of social spending on population health.

**Design** Multivariate regression analysis was performed to investigate the relationship between age-standardised cause-specific mortality rates and social spending. Mortality data were collected from the European Health for All Database 2009 edition. Social spending per capita in purchasing-power-parity were taken from the OECD Social Expenditure Database (including family support, old-age pensions, healthcare, unemployment benefits, active labour market programmes, and support for people with disabilities). These relationships were compared with gross domestic product per capita (GDP), general government spending per capita (including prisons, education and defence), and healthcare spending per capita. Models also included controls for country- and period-fixed effects and expenditure was adjusted for inflation and purchasing power parity.

**Setting** 13 EU countries, 1980–2003: Belgium (only to 1998), Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Spain, Sweden and the UK.

**Participants** n/a.

**Main outcome measure** Age-standardised all-cause and cause-specific mortality rates.

**Results** Each additional US\$100 increase in social spending per capita is significantly associated with a 0.99% reduction in all-cause, age-standardised mortality rates ( $p < 0.001$ ). Healthcare spending per capita had no effect on all-cause mortality rates. Consistent with previous findings, we observed each US\$100 increase in GDP was associated with a 0.28% fall in all-cause mortality rates ( $p < 0.001$ ), about one-fourth of the magnitude of the association of social welfare with mortality. After adjusting for social welfare spending, the association of GDP with all-cause mortality was reduced by over half ( $\beta = -0.11\%$ ,  $p = 0.004$ ). Healthcare spending was not associated with mortality. However, higher social welfare spending was significantly associated with reductions in alcohol-related deaths, cardiovascular disease and tuberculosis; findings which are biologically plausible.

**Conclusion** Reducing social spending could increase mortality rates. The majority of the benefits of wealth to health appears to be determined by the extent to which resources are invested in social welfare and healthcare systems. Investments in social protection seem to have greater protective effects on health than investments in health care. Stronger links between health and labour ministries offer an opportunity to take advantage of such positive synergies, especially important to protecting health during times of austerity.

## Ethnicity

### 054 ANOTHER HISPANIC PARADOX? THE HEALTH BENEFITS OF HISPANIC COMMUNITIES FOR NON-HISPANIC MOTHERS AND INFANT

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**Background and Objectives** In the US, Hispanic mothers have rates of infant mortality and low birthweight that are comparable to non-Hispanic White mothers despite being more likely to live in socio-economically deprived areas. This well known phenomenon is