Informing Investment to reduce health inequalities (III) in Scotland

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Outline

- Background
- Aims
- Methods
- Results
  - 10 / 20 year
- Discussion
  - Strengths
  - Weaknesses
- Conclusions

Background

- Health inequalities:
  - “…the systematic differences in the health of people occupying unequal positions in society” (Graham, 2009)

- Occur across a range of social dimensions including income, social class, deprivation, caste, ethnicity and geography.

- Health inequalities in Scotland are wider than in the rest of West and Central Europe and increasing on many measures
Reducing health inequalities

• Policy priority...
  “reducing inequalities in health is critical to achieving the Scottish Government’s aim of making Scotland a better, healthier place for everyone” (Scottish Government, 2008)

• Demand re ‘what works’?

• Broad principles of inequalities reduction are understood, but...
  – there is a lack of quantitative evidence about the relative impact of specific interventions.

Aims

1. To quantify and model the capacity for a range of public health interventions to reduce health inequalities in Scotland, based on realistic scenarios for the delivery of downstream interventions to individuals in deprived groups.
2. To compare such downstream interventions with universal, population-level approaches in terms of their potential impact on population health & health inequalities.
3. To augment an existing suite of practical tools for informing decisions about how to reduce health inequalities in Scotland through the addition of further interventions and outcomes.
4. To provide decision-makers with comparisons of the effectiveness of differing strategies to tackle health inequalities.
Methods

- Literature reviews
  - Interventions >>> changes in all-cause mortality / hospitalisations
- Parametric models
  - Cumulative mortality (YLL) / hospitalisations (CIS)
  - Changes in inequality (RII)
- User tools
  - Excel-based
  - Allows variation of assumptions over short (2 year), medium (10 year) and long-term (20 year)
Interventions

1. Changes to taxation (1p on the Scottish rate of income tax, a 10% rise council tax)
2. Changes to benefits (a 10% increase in the value of job seekers’ allowance and income support, a 10% increase in basic and 30-hour working tax credits)
3. Introduction of a ‘living wage’;
4. An increase in the level of tobacco tax;
5. Greater provision of smoking cessation services;
6. Greater provision of alcohol brief interventions (ABIs);
7. Greater provision of a ‘Counterweight’ weight management service;
8. Changes in levels of employment; and
9. Changes in the extent of active commuting (walking and cycling to work).

Impact of interventions on health and health inequalities
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Health Inequalities

- Increase
- Decrease

No change

Better Population Health, Decreased Health Inequalities

Population health – years of life gained

Better Population Health, Decreased Health Inequalities

Impact of interventions on health and health inequalities

Health Inequalities

- Increase
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No change

Better Population Health, Decreased Health Inequalities

Population health – years of life gained

Better Population Health, Decreased Health Inequalities
Modelled changes on mortality and inequalities after 10 years

Modelled changes on mortality and inequalities after 20 years
Modelled changes on hospitalisations and inequalities after 10 years

Modelled changes on hospitalisations and inequalities after 20 years
Discussion (1)

• Strengths
  – Uniquely compares impacts of a range of interventions across the determinants of health;
  – Utilises the best available evidence relevant to the Scottish context;
  – Assumptions can be varied as better evidence becomes available or as local contexts require;
  – Sensitivity analyses allow uncertainty around the estimates to be made explicit;
  – Significantly enhances the support available to decision-makers when allocating resources and when planning interventions and policies to improve health and reduce health inequalities.

Discussion (2)

• Weaknesses
  – Limited number of modelled interventions;
  – Limited number of outcomes;
  – Impacts confined to the ‘fixed cohort’;
  – Limited evidence of differential impacts across population strata;
  – Reliance on observational and self report data
Conclusions

• III models provide a means for decision makers to understand the likely impacts of a variety of interventions on health and health inequalities.
• Interventions have markedly different effects on mortality, hospitalisations and inequalities.
• The most effective (and cost effective) interventions for reducing inequalities were regulatory and tax options.
• Interventions focussed on individual agency were much less likely to impact on inequalities.

Thank you

*Informing Investment to reduce health Inequalities (III) in Scotland, main report and intervention tools published at: [www.scotpho.org.uk](http://www.scotpho.org.uk)*