The English health inequalities intervention toolkit

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Structure of the presentation

- Introduction to Public Health England
- Introduction to the London Knowledge and Intelligence Team
- The Health Inequalities Intervention Toolkit
- Further work on modelling, health inequalities and the social determinants of health
Public Health England - Introduction

- Established on 1st April 2013.
- Brought together public health specialists from 70 organisations into a single public health service.
- Protect and improve the nation’s health and reduce inequalities – fulfil the Secretary of State for Health’s responsibility.
- Support local authorities to improve health. Local authorities have a duty to improve health.
- National office, 4 regions, 15 local centres.

Public Health England - Priorities

1. Helping people to live longer and more healthy lives by reducing preventable deaths and the burden of ill
2. Reducing the burden of disease and disability in life by focusing on preventing and recovering from the conditions with the greatest impact
3. Protecting the country from infectious diseases and environmental hazards
4. Supporting families to give children and young people the best start in life
5. Improving health in the workplace by encouraging employers to support their staff to lead healthier lives

To underpin these outcome-focused priorities we will:

1. Promote the development of place-based public health systems
2. Develop our own capacity and capability to provide professional, scientific and delivery expertise to our partners
Chief Knowledge Officer’s (CKO) directorate responsibilities

- Data & Information
- Research & Evidence
- Networks & Experience

Building Intelligence
- Analysis
- Modelling
- Evidence
- Translation

Developing Knowledge

Improving health and reducing inequalities
- Surveillance
- Outcomes
- Evidence of what works
- Spread and dissemination
- Local support

London Knowledge and Intelligence Team (KIT)

- Former London Health Observatory and analytical staff from the former Thames Cancer Registry
- Four national priority areas:
  - Public Health Outcomes Framework (Clare Griffiths)
  - Health Inequalities (Allan Baker)
  - Tobacco (Vivian Mak)
  - Lung and Upper Gastro-intestinal cancer (Margreet Luchtenborg)
- Local contribution (To be appointed)
The former national health inequalities targets in England

• By 2010 to reduce by at least 10% the gap in infant mortality between “routine and manual groups” and the population as a whole.

• By 2010 to reduce by at least 10% the gap between the fifth of local authorities with the lowest life expectancy at birth (Spearhead local authorities) and the population as a whole.

Health Inequalities Intervention Toolkit

1. Spearhead Tool – Life expectancy gaps
2. Spearhead Tool – Commissioning interventions
3. Infant Mortality Tool
4. Intervention Tool for All Areas – Life expectancy gaps and commissioning interventions for all areas (not just spearheads)
1. Spearhead Tool – Life expectancy gaps

- Provides information on current life expectancy in spearhead local authorities
- Quantifies the current life expectancy gap at birth between spearhead local authorities and England
- Quantifies the diseases and age groups contributing to the life expectancy gap between spearhead local authorities and England
- Models the effect of five high impact interventions on closing the life expectancy gap

Current life expectancy gap - example

Greenwich local authority
Current life expectancy status:
Males Off Track  Females On Track

<table>
<thead>
<tr>
<th>Spearhead local authority</th>
<th>Male life expectancy (years)</th>
<th>Relative gap with England</th>
</tr>
</thead>
<tbody>
<tr>
<td>England</td>
<td>77.9</td>
<td></td>
</tr>
<tr>
<td>Spearhead Group</td>
<td>75.8</td>
<td>2.7%</td>
</tr>
<tr>
<td>Greenwich</td>
<td>75.4</td>
<td>3.2%</td>
</tr>
</tbody>
</table>
Life expectancy gap by cause of death Redcar and Cleveland local authority

Breakdown of the life expectancy gap between Redcar and Cleveland and England, by cause, 2006-08 - Notes

1. Spearhead tool – Commissioning interventions

   - Number of smokers quitting through NHS stop smoking services
   - Number of people treated for high blood sugar
   - Reduce the number of infant deaths
   - Number treated for uncontrolled or undiagnosed hypertension (in those without coronary heart disease or stroke)
   - Number treated for high blood cholesterol among those already being treated for hypertension
Why were these interventions chosen?

- They can be directly influenced by local authorities
- Data and information on these interventions are readily available
- Work at the Department of Health determined the effect of these interventions on health inequalities nationally. LHO applied this work to local data
- Inclusion of infant mortality links the spearhead tool with the infant mortality tool

Commissioning interventions – an example

Redcar and Cleveland, current levels

1,150 smoking quitters
(29,500 smokers)

16,000 males with hypertension

Current male life expectancy 77.2 years
Commissioning interventions – an example
Redcar and Cleveland, interventions

1,150 smoking quitters →→→→ 3,000
16,000 male hypertensives →→→→ 5,000

If planned interventions are achieved:
Male life expectancy 77.2 →→→→ 77.4 years
Percentage narrowing in life expectancy gap with England →→→→ 17%
Achieved
Interpretation of commissioning intervention results

It is a static model
- It assumes no change in life expectancy in England
- It assumes no change in life expectancy in the local area due to anything else

Estimates what life expectancy would be if the interventions had an effect, assuming everything else is constant
- The impact of smoking cessation is approximately 5+ years
- The impact of all other interventions more immediate

The effect of interventions is additive

The former national health inequalities targets in England

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3. Infant mortality tool

- Shows recent trends in infant mortality rates by socio-economic group
- Provides background data on factors that may be associated with deaths in infancy
- Quantifies the gap in infant mortality rates and the contribution of six potentially modifiable factors to the current infant mortality gap
- Allows users to specify modifications to these factors in order to assess the impact of such changes on the infant mortality gap
Infant mortality tool - factors contributing to the infant mortality gap

- Teenage conceptions
- Sudden unexplained death in infancy
- Smoking in pregnancy
- Obesity in women of reproductive age
- Poverty
- Not initiating breastfeeding

Why were these factors chosen?

- They can be directly influenced by local authorities
- Data and information on these factors are readily available
- Work at the Department of Health determined that these factors account for a large proportion of the infant mortality gap in England as a whole. LHO applied this work to local data.
Infant mortality tool – factors contributing to the gap

Infant mortality tool – modify interventions
Yorkshire and Humber

30% women smoking in pregnancy  →  25%

If planned interventions are achieved:
Reduction in infant mortality gap  →  7.3%

Not enough
Feedback

- Tool looks very nice, although now so many different components it is sometimes hard to follow.
- The information on the breakdown of the gaps is more useful than the modelling of interventions.
- Users would prefer more interventions, even if the methodology is not as robust.
- Users would like even more local information and would like to be able to download their own data.
- It is important to keep the tool up to date.

Future plans – health and wellbeing framework

- A narrative of the current state of the public’s health
- A predictive model for the future state of the public’s health
- A menu of effective interventions which can be carried out to improve the public’s health
National indicators proposed by the Strategic Review of Health Inequalities (Marmot)

- Life expectancy (to capture years of life)
- Health expectancy (to capture the quality of those years)
- Readiness for school (to early years development)
- Young people not in education, employment or training (to capture skill development during the school years and the control that school has over lives)
- Household income (to capture the proportion of households that have an income sufficient for healthy living)
- The Review also proposed an indicator of wellbeing, once one is developed that is suitable for large-scale implementation.

Marmot indicators of inequality

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Local Authority Value</th>
<th>Regional Value</th>
<th>England Value</th>
<th>England World</th>
<th>Range</th>
<th>England Best</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Male life expectancy at birth (years)</td>
<td>83.0</td>
<td>73.0</td>
<td>78.8</td>
<td>73.8</td>
<td>10.1</td>
<td></td>
</tr>
<tr>
<td>2. Inequality in male life expectancy at birth (years)</td>
<td>15.9</td>
<td>7.5</td>
<td>9.9</td>
<td>10.9</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>3. Inequality in male disability-free life expectancy at birth (years)</td>
<td>17.0</td>
<td>5.1</td>
<td>15.9</td>
<td>32.0</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>4. Female life expectancy at birth (years)</td>
<td>81.7</td>
<td>73.5</td>
<td>79.2</td>
<td>72.3</td>
<td>6.9</td>
<td></td>
</tr>
<tr>
<td>5. Inequality in female life expectancy at birth (years)</td>
<td>14.4</td>
<td>7.2</td>
<td>9.2</td>
<td>17.1</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td>6. Inequality in female disability-free life expectancy at birth (years)</td>
<td>14.4</td>
<td>7.2</td>
<td>9.2</td>
<td>17.1</td>
<td>1.3</td>
<td></td>
</tr>
<tr>
<td>7. Social determinants</td>
<td>88.0</td>
<td>80.5</td>
<td>83.9</td>
<td>45.0</td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td>8. People in households in receipt of income-tested benefits (as %)</td>
<td>34.5</td>
<td>18.3</td>
<td>14.6</td>
<td>32.0</td>
<td>4.7</td>
<td></td>
</tr>
<tr>
<td>9. Income inequality in percentage receiving income-tested benefits (%)</td>
<td>20.3</td>
<td>27.2</td>
<td>29.5</td>
<td>55.1</td>
<td>4.6</td>
<td></td>
</tr>
</tbody>
</table>
The Public Health Outcomes Framework

- Vision for public health, desired outcomes and the indicators that will help us understand how well public health is being improved and protected.
- Focused on two high level outcomes we want to achieve across the public health system and beyond:
  - Increased healthy life expectancy
  - Reduced differences in life expectancy and healthy life expectancy between communities through greater improvements in more disadvantaged communities

Public Health Outcomes Framework

- 66 supporting public health indicators, split over four domains:
  - Improving the wider determinants of health
  - Health improvement
  - Health protection
  - Healthcare public health and preventing premature mortality
- Will also focus attention on reducing inequalities by breaking down as many indicators as possible by dimensions of inequality
Homelessness acceptances, 2011/12

- 40 fold difference between areas with the highest and lowest rates in 2011/12
- Birmingham has 9.7 homeless acceptances per 1,000 households compared to 0.2 in Redcar and Cleveland
- England = 2.3

Source: PHOF. Wider determinants of health, Indicator 1.15i – Statutory homelessness – homelessness acceptances

Further information

The Health Inequalities Intervention Toolkit

The Public Health Outcomes Framework
www.phoutcomes.info

Marmot Indicators for local authorities
http://www.lho.org.uk/LHO_Topics/National_Lead_Areas/Marmot/MarmotIndicators.aspx

Email: LondonKIT@phe.gov.uk