Case study: Life expectancy data to drive change locally and nationally.

Prof Paul Johnstone. Regional Director, PHE North of England
CDC Workshop March 2018
UK population; 66.5m, England Scotland, Wales and N Ireland.

England has 152 ‘upper tier’ Local Authorities (pop range 100K to 500K)

NHS runs most hospitals, primary care, screening, immunisation services


PHE is the nation’s PH Agency. (5500 staff), Executive agency of the Department of Health and Social Care

Staff include, scientists, laboratory, infection service, global health

Locally- centre and regional teams (including health protection, health improvements and supporting the NHS in planning and provision of PH services.)
The public health system

National government
- Responsible for national strategy, legislation and policy on the public’s health and other decisions that influence the wider determinants of health.

Local government
- Responsible for improving the health of people in their area, addressing the full range of factors determining good health and developing healthy and sustainable communities.

The NHS
- Responsible for supporting patients to live more healthily as well as delivering health improvement interventions such as NHS Health Checks and support to stop smoking. The NHS also delivers specific public health services such as vaccinations and screening. A radical upgrade in prevention is to be reflected in the new place-based plans.

Public Health England
- Protects the country from threats to health, including outbreaks of infectious diseases and environmental hazards, in the UK and abroad.
- Improves the public’s health and wellbeing.
- Improves population health through sustainable health and care services.
- Builds capacity and capability of the public health system.

Voluntary and community sector
- Influences the public’s health by providing people with volunteering opportunities, employment, goods, services and information. Provides advocacy for specific public health concerns.

Industry
- Influences the public’s health by providing people with employment, goods, services and information.

Global public health
- Collaborating internationally to identify and address threats to health.

Scientific and academic community
- Apply scientific knowledge, methods and advanced technology to the prevention of disease and protection of the population against threats to health.

Make choices around their lives and health, and are affected, informed and influenced by their physical and social environment. Supported by local and national government, the NHS, businesses, the voluntary and community sector and directly by PHE through its behaviour change and social marketing campaigns.
PHE in numbers

- £300m PHE’s net budget
- £3.1 billion – public health budget
- £165m commercial income
- ± £0.5bn of taxpayer money cumulatively saved since 2013
- 5,500 people
- 74 sites
- 9 centres
- 4 regions
- 1879 scientific and technical staff
- ± 2,750 people will be based at PHE Harlow by 2024
PHE’s global health activity

- Meningococcal serology capacity building in laboratories across the sub-Saharan ‘Meningitis Belt’.
- Part IIA-delivery of IHR training to policy makers in the WHO Euro region.
- The AMRHAI Reference Unit has shared knowledge and experience with Russia in relation to progress made in delivering the UK 5-year AMR strategy.
- China: MoU with national CDC, ongoing collaborations in Non-Communicable Diseases and Health Protection.
- International Health Security: Training, Research and Networks, Emergency Preparedness and Response, India.
- Chief Knowledge Office has shared its work on dementia risk reduction with colleagues from Taiwan.
- Developing programmes of work to support UK Overseas Territories (UKOTs).
- Virology Surveillance Network, UK & South America, Antiviral Drug Resistance in Pandemic Influenza.
- Secondments and exchanges with NICD, Republic of South Africa.
- Supporting Mass Gatherings for FIFA at AFCON.
- PHE’s Antibiotic Guardian awareness scheme has recently been commissioned for use in Turkey.
- ‘Project 54’ in Iraq is a 3-year EU funded project relating preparedness and response to CBRN incidents.
PHE local and regional team

- **PHE Harlow**
  PHE national centre, bringing together work of PHE Colindale and PHE Porton, from 2021/22 onwards.

- **PHE Colindale**
  Includes infectious disease surveillance and control, reference microbiology, other specialist services such as sequencing and high containment microbiology, plus food, water and environmental services.

- **PHE Chilton**
  Includes the headquarters of the Centre for Radiation, Chemical and Environmental Hazards (CRCE). CRCE operates from 11 locations over England, Scotland and Wales.

- **PHE Porton**
  Includes departments for rare and imported pathogens, research, PHE Culture Collections and emergency response, plus food, water and environmental services.

We operate through nine centres in four regions:
- North
- South
- Midlands
- East, and London

Our staff work from 64 locations.

PHE has eight regional public health laboratories based in large NHS hospitals.
Landmarks: life expectancy and inequalities

1979 Douglas Black (Chief Medical Officer for England) report.
1985 The Health Divide by Margaret Whitehead
1980s/90s The Marmot research on civil servants and life expectancy
1990s Beginning to influence politicians- ‘Health variations’
1992 First national Health of the Nation report
1997 New labour Government policies to tackle ‘health inequalities’, PHOs
2000-10 First Health inequalities strategy using geography as a measure. This led to a rise in interest in local area statistics to support plans and actions
2006 Choosing Health White Paper- joint working with councils and NHS
2010 Marmot Report- very influential locally. ‘Marmot councils’ etc
What determines our health?

The Determinants of Health (1992) Dahlgren and Whitehead
An example of influence; Inequality of life expectancy by deprivation. Males

Life expectancy at birth by deprivation decile
England, Males, 2014-2016
Slope index of inequality = 9.3 years (95% confidence interval: 9.2 to 9.4)
Slope index of inequality by deprivation. Females

Life expectancy at birth by deprivation decile
Slope index of inequality = 7.3 years (95% confidence interval: 7.2 to 7.4)
‘…That means fighting against the burning injustice that, if you’re born poor, you will die on average 9 years earlier than others.’

Theresa May,
Prime Minister
13 July 2016
There was a big reaction to PHE’s first publications in 2013 which used premature mortality data by geography.
“What we are seeing is nothing short of a divided nation after the age of 11. Children in the North and Midlands are much less likely to attend a good or outstanding school than those in the rest of the country.”


There is a north-south divide in the proportion of 5-year-olds achieving a good level of development.
Changes in Life Expectancy for males at birth over 4 years of 3 year averages (mid points 2010-2012 to 2013-2015), English regions

- SOUTH EAST (+0.3)
- EAST (+0.3)
- LONDON (+0.7)
- SOUTH WEST (+0.2)
- ENGLAND (+0.4)
- EAST MIDLANDS (+0.3)
- WEST MIDLANDS (+0.1)
- YORKSHIRE AND THE HUMBER (+0.4)
- NORTH WEST (+0.5)
- NORTH EAST (+0.2)
Changes in life expectancy for females at birth over 4 years of 3 year averages (mid points 2010-2012 to 2013-2015), English regions
Inequalities in **healthy life expectancy** between the most and least deprived areas are wider than inequalities in life expectancy, with a difference of around 20 years for both men and women.

Males, England, 2012-14

Females, England, 2012-14

Source: PHE analysis of ONS data
20% higher use of NHS services in North of England
There was a big reaction to PHE’s first publications in 2013 which used premature mortality data by geography.
Chaired by Margaret Whitehead

Supported by Centre for Local Economic Strategies (CLES)

www.cles.org.uk
Due North

The north-south divide appears to be widening

Those who have less influence are less able to affect the use of public resources to improve their health and well-being.

Where people feel they can influence and control their living environment, there are likely to be health and well-being benefits.
Due North recommendations

1. Tackle economic inequality and poverty within the North and between the North and the South

2. Promote healthy development in early childhood

3. Share power over resources and increase the influence that the public has on how resources are used to improve the determinants of health

4. Strengthen the role of the health sector in promoting health equity
Graph showing that health is better in poor areas where people have more control.

Average levels of mortality and mental illness for 4 groups of deprived local Authorities

- <24%
- 25%-29%
- 30%-34%
- >35%

% in area reporting they can influence decisions affecting their local area

- Mortality
- Mental illness

20% most deprived local authorities. Source: 2008 Place Survey
Annual population survey 2007-2009, NHSIC
‘fundamental cause of inequalities in health is the relative lack of control and powerlessness of less privileged groups.’

Amartya Sen
Economist and Nobel prize winner
One example of sharing power: Participatory budgeting Durham County Council; It’s Up 2 U

- Since 2009 35 PB events 24,000 residents have voted on a total grant allocation of £1,445,587.
- Pilots in UK- showed increase election turnout, social cohesion, attracted additional funds improved self confidence in individuals and communities

- **International evidence:** 43% Brazilian pop live in an area where they control local govt spend by participatory budgeting
Evidence to action.. What works

Collection
Health equity

Evidence, resources and guidance from Public Health England and partners to help support national, regional and local areas to reduce health inequalities.

Published 15 January 2018
From: Public Health England

Contents
— Guidance for system wide approaches to reduce health inequalities
— Children and young people
— Work, health and inclusive growth
— Healthy places
— Community engagement and asset based approaches
— Prevention and early treatment
— Economics and health equity
— Inclusion health
— Data and intelligence reports on health inequalities

www.phe.gov.uk
Case Study: LE data Impact:

Supporting devolution deals
Place and Devolution

“A simple proposition lies at the heart of place-based care: that we blur institutional boundaries across a location to provide integrated care for individuals, families and communities.

Energy, money and power shifts from institutions to citizens and communities. Devolution becomes an enabler for a reform programme that starts to deliver on the long-held promise of joining up health and social care for a population in a place, with the ultimate aim to improve the public’s health and reduce health inequalities.”

Duncan Selbie and Henry Kippin, 17 March 2016

PHE (2016) ‘The journey to place based health’.

https://publichealtmatters.blog.gov.uk/2016/03/17/the-journey-to-place-based-health/
Greater Manchester - Elected Mayor and Combined Authority devolution pilot.

Life on the line? Differences in life expectancy across Greater Manchester

Data Sources: Office for National Statistics experimental ward level life expectancy and health life expectancy estimates (ONS 2006) linked to selected Greater Manchester Metrolink tram stops. The selection highlights some of the biggest differences between tram stops. We also include information on socio-economic deprivation at ward level from the Index of Multiple Deprivation.

What makes your area different to other areas? Let us know. Email: life.expectancy@manchester.ac.uk

Tram Network: The Metrolink tram network across Greater Manchester includes nearly 100 kilometres of track and 93 stops. In 2015 there were around 334 million journeys (Metrolink 2016). The average journey time between tram stops is 2 minutes, but some stops are further apart.

The life expectancy data is based on mortality among those living in each particular ward in 1999-2003. The estimates are not the exact number of years a baby born in the ward could actually expect to live, both because the death rates of the area are likely to change in the future, as is health care provision and because many of those people born in the ward will live elsewhere for at least some part of their lives.
Wide variation of healthy life expectancy within Greater Manchester

Lowest
MSOA
Salford 024
(Pendleton / Weate)
46.3 years

Gap = 27.6 years

Highest
MSOA
Stockport 041
(Bramhall)
73.9 years

Lowest
MSOA
Oldham 022
(Glodwick)
49.4 years

Gap = 25.8 years

Highest
MSOA
Stockport 041
(Bramhall)
75.2 years

Males

Females
Greater Manchester Agreement: devolution to the GMCA & transition to a directly elected mayor

Psychosocial pathways and health equity
Ref: PHE publications gateway number: 2017209
PDF, 1.33MB, 69 pages
This file may not be suitable for users of assistive technology. Request an accessible format.
The London Health Inequalities Strategy

MAYOR OF LONDON

London Health and Social Care Devolution
Memorandum of Understanding
November 2017

www.london.gov.uk/what-we-do/health/have-your-say-better-health-all-londoners
Three integrated approaches
(examples in red)

Industrial strategy
Inclusive growth/jobs
Social Value Act
Health in All Policies
Other powers for elected mayors and devolution deals.

Civic/national-level policy and planning

Place, with devolved power and resources

Asset based approaches, Community anchors
Community connectors and leaders

Community resilience and assets

Prevention in Accountable care systems and ‘Population Outcomes Through Services’, Right Care

Service-based interventions for whole populations
Reflections

• Small area statistics brings to life and make causes of inequalities real to local politicians, the media and public.

• Presentation is important, use of interactive media, impact.

• Previously, PH data does not generate so much local interest- tends to lead to a view that is all about national solutions rather than local (whilst that’s important it bypasses local opportunities).

• Due North is one example where MSOA data has help to generate local and regional action, innovation and community led asset based approaches. It has also influences manifestoes for elected mayors in Manchester, Liverpool and elsewhere.

• MSOA data is routinely used in local ‘health and well being strategies’, DPH annual reports, and by the NHS

• It has helped foster ‘place’ and city regions/ mayors – a will to take action locally pooling budgets for locally agreed priorities.
Do we have the knowledge? “Yes”

Do we have the means? “Yes”

Do we have the will? …

Michael Marmot
Help to support you…


The journey to place-based health - https://publichealthmatters.blog.gov.uk/2016/03/17/the-journey-to-place-based-health/


Investigating the impact of the English health inequalities strategy: time trend analysis  Barr B. BMJ2017; 358 doi: https://doi.org/10.1136/bmj.j3310(Published 26 July 2017)


http://www.wellnorth.co.uk/

Locality  www.locality.org.uk