‘Health of the public in 2040’ working group project

Professor Dame Anne Johnson DBE FMedSci

Chair of the Population and Lifelong Health domain, and Vice Dean of External Relations, Faculty of Population Health Sciences, UCL

Project aims

• To identify the main health challenges the UK population will face by 2040, and the opportunities to address them.

• To develop a vision for the health of the UK population in 2040.

• To ensure that by 2040:
  • Multi-disciplinary research underpins interventions to improve the health of the public.
  • There is a highly skilled research workforce.
  • Strong links exist between evidence, policy development and service delivery.

Thanks to our funders: [Wellcome Trust logo] [MRC logo]
Working Group members

- Professor Dame Anne Johnson DBE FMedSci (Chair)
- Professor Carol Brayne FMedSci, Director of the Cambridge Institute of Public Health, University of Cambridge
- Professor Rachel Cooper OBE, Professor of Design Management, University of Lancaster
- Dr Yvonne Doyle, Regional Director for London, Public Health England
- Professor David Ford, Professor of Health Informatics and Chair of the College of Medicine, Swansea University
- Professor Sarah Harper, Director, Institute of Population Ageing, University of Oxford
- Dr Vittal Katikireddi, Clinical Lecturer in Public Health, MRC/CSO Social and Public Health Sciences Unit, University of Glasgow
- Professor Catherine Law CBE, Professor of Public Health and Epidemiology, UCL Institute of Child Health
- Professor Paul Little FMedSci, Professor of Primary Care Research, University of Southampton
- Professor Dame Sally Macintyre DBE FMedSci, Director of the Institute of Health and Wellbeing, University of Glasgow
- Professor Johan Mackenbach, Chair of the Department of Public Health at Erasmus MC, University Medical Centre, Rotterdam
- Professor Theresa Marteau FMedSci, Director of the Behaviour and Health Research Unit, University of Cambridge
- Councillor Jonathan McShane, Cabinet Member for Health, Social Care and Culture, London Borough of Hackney
- Dr Geoff Mulgan CBE, Chief Executive of the National Endowment for Science Technology and the Arts (Nesta)
- Baron Peter Piot CMG FMedSci, Director of the London School of Hygiene and Tropical Medicine
- Professor Jules Pretty OBE, Deputy Vice-Chancellor and Professor of Environment & Society, University of Sussex
- Professor David Stuckler, Professor of Political Economy and Sociology, University of Oxford

The Challenge

‘Public health needs a renaissance. As the world moves into an era of sustainable development, UK public health should not miss this opportunity to rewrite the contract between health and society.’

Richard Horton FMedSci

Comments in the Lancet, November 2014
http://www.thelancet.com/health-challenges-2040
4 waves of public health

1st Wave (1830-90)
- Classical public health interventions

2nd Wave (1890-1950)
- Scientific rationalism, medicine, engineering etc

3rd Wave (1940-80)
- Welfare State, NHS, Education etc

4th Wave (1960-2000)
- Health care interventions, risk factors, lifestyle, concern re health inequalities

Source: Hanlon et al Public Health 2011
Impact of public health measures

Decrease in cardiovascular disease incidence from 1961-2011

Reduction in measles after MMR campaign

British Heart Foundation (2011) "Trends in Coronary Heart Disease 1961-2011"

Public Health England (2014) "From evidence into action: opportunities to protect and improve the nation’s health"

Emerging context for a ‘5th wave’ for public health: Global Context

- UN Sustainable Development Goals
- Lancet Commission on Climate Change and Health
- Lancet Commission on Planetary Health
- Global Health Security
What might the next ‘wave’ look like?: Some themes

- Reducing health inequalities: How?
- A health promoting societal context
- A collaborative effort involving a wide range of stakeholders
- Maximising the value of health
- ‘Health in all policies’ Health as a common good
- ‘Anti’ to ‘pro’, dominion to cooperation/interdependence

Terms of Reference
1. The project will consider how to:
   a. Capitalise on advances in all areas of science and technology.
   b. Bring together full range of disciplines required to address future challenges.
   c. Ensure an appropriate interface between researchers, policy makers and practitioners.
2. In the context of the future health of the UK population, ask:
   a. What will be the main challenges by 2040, and what are the opportunities to address them?
   b. What are the research and research infrastructure requirements to meet challenges and opportunities?
   c. How can we train and link researchers and practitioners?
   d. How can we ensure that the development of public policy and practice is informed by evidence?
What’s in and what’s out

✓ A chance to develop new thinking in the area of public health research, practice and translation
✓ UK focus, but drawing on international experience considering global interactions and knowledge.
✓ Type of research, disciplines, methods and mechanisms needed to support decisions about interventions.
✓ Horizon scanning techniques and public engagement activities.

✗ Recommendations about specific interventions.
✗ Assessment of the strengths and weaknesses of the current UK public health system.

Our approach

The present  Drivers of change  Possible futures

Health of the public in 2015  Technological change  Aspirations for the health of the public in 2040

Focus of our recommendations
Some drivers of change

Climate and Environmental Change
Future challenges for the health of the public
...in a changing world:

Most people will live in cities

Energy consumption will increase by 150%

Source: UN World Urbanization Prospects, 2014 revision

Source: BP Energy Outlook 2035

Future challenges for the health of the public: A growing and ageing population

http://www.futuretimeline.net

Future challenges for the health of the public

Projected rise in risk factors (e.g. BMI) and diseases (e.g. dementia)...

Public Health England (2014) "From evidence into action: opportunities to protect and improve the nation’s health"

Global Health Security
Future Challenges: Antimicrobial Resistance

- $10,000,000,000,000 projected loss to global GDP from AMR by 2050
- 10,000,000 deaths per year by 2050

*Source: O’Neill review 2014*

Future challenges for the health of the public:

Technology: Increased supercomputer power

- Opportunities for digital health and social care
- Governance (threats and opportunities)
- Skill set for translation
- Global health security, surveillance and response
- Application to health of public cf personalised medicine: How do we align practice?

http://www.futuristimeline.net
Programme

• The project was formally launched in November 2014, with a multidisciplinary workshop that brought together key stakeholders to explore their vision for and the drivers of change that will affect the health of the public by 2040. A formal report of this workshop was published in March 2015.

• Over the course of this year, the working group will develop practical recommendations for the future, drawing from:
  • Written submissions to the ‘call for input’ (Mar-May);
  • Verbal input from roundtable discussions (May-July);
  • Public dialogue from engagement activities (year-round);
  • Ongoing stakeholder engagement, including a second multidisciplinary workshop in July.

• Full report to be published in Summer 2016.

Project output

• The final report will be aimed at:
  • Policymakers
  • Funders
  • Researchers (including trainees)
  • Professional and regulatory bodies
  • Public health service providers
  • The public
Some thoughts from initial public engagement events

Imagining the future...

Comments in the Lancet, November 2014
http://www.thelancet.com/health-challenges-2040

- Generation 1960 did not endure the post-war austerity of the precedent “baby boomers”..... The health needs of this octogenarian population will be great; an ethnically, economically and socially diverse group with an evolving spectrum of physical, psychological and cultural needs, met less and less by a young population of hedonistic and geographically distant children

  Fiona Hares University of Southampton.
Check if this is still valid?
Where from exactly? - Visual report from 'Health, Lies and Videotape' from last time
Re-order?
Intern, 20/05/2015
Imagining the future...

- ‘Antibiotics are undeniably our most valuable resource, however decades of abuse and mismanagement have exhausted their potential... By 2040 we will be thrust back in to the middle ages, with childbirth and basic procedures becoming deadly and immunosuppression therapy simply becoming suicidal.’
  Sumir Chawla, Medical Student, University of Southampton

- ‘I like to believe that necessity will once again drive invention, as it always has done, and we will find a way out of the problem of antibiotic resistance. I see our future selves as being healthy, simply because therapy will out-pace pathology. I see innovation, and I see scientific temper. I see life finding a way.’
  Tanuj Moses Lamech, MBBS, India

Imagining the future...

- ‘...those wealthy enough have access to an exquisite range of regenerative and robotic health technologies for monitoring health and treating disease. The programme is so successful that it is tantamount to halting the aging process... This has opened a chasm between the haves and have nots. The ethical and economic implications are disturbing.’
  James A. Docherty BA, Medical student, University of Southampton

- ‘...the future will be dominated by self-care. Supported by technology and related skills, patients will be in almost full control, will primarily be self-diagnosing their health issues and carrying out self-treatment.’
  Pieter van de Graaf PhD, eHealth Division, Scottish Government.
Our (provisional) vision

The primary aspiration is as follows:

*The UK trend is towards improved physical and mental health and wellbeing for all, with a narrowing of the gap between those groups with the best, and worst, outcomes.*

This is supported by ten ‘statements of ambition’:

1. The health and wellbeing of the population is consistently measured and monitored, and is treated as a key indicator of societal success.
2. The natural and built environment supports healthy living for all.
3. The social and political environment supports healthy living for all.

Our (provisional) vision

Ten ‘statements of ambition’ (continued)

4. The economic and commercial environment supports healthy living for all.
5. The knowledge, educational and digital environment supports healthy living for all.
6. Every child experiences a start to life that enables them to realise their full potential over the life course.
7. Every person experiences an end to life shaped by shared decision-making, in which their views and values have been discussed and used to inform interventions.
Our (provisional) vision

Ten 'statements of ambition' (continued)

8. Resources are allocated more proportionally to interventions with the best prospect of beneficially affecting the health of the public.

9. National resilience has been increased and the health of the public is better able to withstand the effects of uncertainties, shocks and disruptive events.

10. The UK has a health workforce and an interdisciplinary research capability equipped to understand and address the health needs of the population and the evidence to improve the health of the public.

Next stage: recommendations

Likely to cover:

- Research evidence
  - E.g. new approaches to evaluating interventions /translation at population level, reducing inequalities; interactions between environmental sustainability and health;

- Research capacity
  - E.g. Workforce and training. Engaging with new disciplines for health of public: environment, law and ethics, computer science, digital health etc. Building career pathways (inc. undergraduate). Funding landscape.

- Research infrastructure
  - E.g Physical, virtual, social, institutional

- Translation into policy and practice
  - E.g Big data and its practical applications. Population Health/Clinical practice interface. Links with government, NGOs, industry and civil society.
Contact us

• We will continue to welcome formal responses to our call for input until end of July.
• Please contact:
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