Beyond Reports

A blueprint on how to achieve improved healthy life expectancy for all

Prepared by the Academic and Research Committee on behalf of the Faculty of Public Health

Our question

Can healthy life expectancy be extended with compression of morbidity for all over the next 20 years?

Our vision

That the UK has an internationally unique set of interdisciplinary research platforms to support improvement of healthy life expectancies for all within 20 years

Our aim

To bring together the necessary, bold and ambitious research questions which need answering if healthy life expectancy is to increase for all

Our objective

To unlock radical new funding approaches which enable transformational transdisciplinary research for sustainable population health and wellbeing improvement

The challenges we face We are living longer than ever but increases in life expectancy are stalling. The gap between life expectancy and healthy life expectancy is growing, with particular concern for younger generations. Decades ago, the Wanless Report lamented a lack of public health research evidence to guide national and local policy and activity decisions. This persists despite high quality public health research. In 2017 individual behavioural, metabolic, and measurable environmental risk factors together accounted for an estimated 10,000 years of life lost per 100,000. These risks do not occur in isolation, with rising areas of concern related to childhood and domestic abuse, unsafe sex, binge drinking and drug use (additional estimated 1000 years lost). Given the close relationships between these usually separated risks and outcomes, it is time to suggest a radical new research approach. A bold, cross-sectoral and population-level approach is needed to address inequalities, adverse environments, obesity, poor mental health, multimorbidities, addiction and other threats to health and wellbeing together in a way that is sustainable for future generations. Prevention of poor health and improving health for all is central to this approach, going beyond current major investments focused on early diagnosis, prediction, treatment and management of specific disorders. This is a research agenda that is reflective of the need for incorporating distinct methods of understanding in changing societies, workforces and public health challenges.

Principles for ambitious research We now know that complex, interrelated life experiences determine life course health and wellbeing. Quality of life and healthy life expectancy must be our ultimate goal and achieving this requires tracking progress using meaningful short, medium and long term metrics including profiles of inequalities and the root causes of ill-health. Research must be grounded in complex social and environmental adaptive systems. The new research paradigm must integrate approaches vertically (macro, meso and micro) and horizontally (across settings, disciplines and sectors). New methodologies will be needed for sustained working across and between many disciplines and levels.

Proposition for major investment to enable transformative research approaches to address urgent research questions We propose 5 interlinked fundamental public health research programmes/platforms with sustained investment in multidisciplinary research that can influence society. The five programmes result from synthesis of priorities for public health research drawing on reports, Global Burden of Disease UK analysis and expert opinion. Each aims to improve population health, addressing inequalities and wider determinants of health, through a specific lens each with national, regional and local engagement in order to provide evidence for societal, policy and local decision making. This real world approach will explore WHAT society needs to do and also HOW the research community works with society to maximise generalisability and minimise silo working.

Programme 1: Education and learning to support life course health and wellbeing

An integrated intersectoral research programme to bring together primary, secondary, tertiary and adult education, work, families and communities to support research for a life course learning approach to health, wellbeing and sustainability. Research questions include: how can curriculum development and school engagement with families and communities contribute to how children learn about health, critical approaches to evidence and influence on our behaviours (e.g. commercial and policy environments); what impact do novel educational opportunities, through work-based initiatives, apprenticeships, voluntary sector and use of social media, have to reinforce and maintain positive and reduce adverse behaviours; how can inclusion be part of innovation for beneficial technology, can working across arts, humanities and IT co-create for young people for wellbeing; what models of working between education settings and partners on risk behaviour improve health, cohesion and reduce violence, drug misuse and antisocial behaviour.

Programme 2: Business working for health and wellbeing

Focused on how we can improve the impact that businesses and work have on population health, wellbeing and sustainability through environmental design, commercial determinants, working practices, fiscal and legal frameworks. This requires close working with government and local authorities with a multitude of potentially positive outcomes for the workforce, the excluded, local communities and wider population. Research questions include: how can productivity and health, including brain health, be maintained as the workforce ages through changing work practices and environments; can working across the food system to reduce animal antibiotic usage; can inequalities be reduced through business engagement.

Programme 3: Local environments

A nationally integrated major locality programme looking at how urban design and infrastructure can increase physical activity, improve community cohesion, reducing antisocial behaviours, and improve mental health. Cross sectoral and community-based research would evaluate systematically the natural experiments that exist in our towns, cities and rural areas. Local social environments are predictors of premature mortality and disability adjusted life years with wide gaps between affluent and poor areas. Research questions include: Are these areas modifiable, evaluable and trackable; how can localities work with national level to shift all behaviours in energy consumption, climate adaptation, agricultural and commercial policies with benefits to both population and planetary health.

Programme 4: Optimising health and social care investment in life course health and wellbeing

This focuses on how we can achieve primary, secondary and tertiary prevention across the life course through optimisation of local authority, health, social, police and criminal justice systems and

practice. This integrated approach will require new work at the interface of surveillance and research, modelling population health and systems involved with health using this synthesised evidence to guide decision making. Research questions include: how can our knowledge inform health and social care investment inform decision making for key excluded population groups with the worst outcomes (e.g. health and wellbeing of offenders and their families, those with multi-morbidities, including physical and mental); what are the drivers of excess prescribing of antibiotics in different settings; is reduction of wasteful (economically and environmentally), potentially harmful and unevidenced practice possible starting from policy makers.

Programme 5: Inclusive communities

Here wider policies, such as housing, employment, skills support those on the edges of society (e.g. job insecurity, the oldest old, those in the criminal justice system, addiction, mental ill-health). Urgent questions are: what does community means for successive generations and different cultures (eg virtual online communities, including the usually excluded; what is the meaning of social isolation related to these populations, what solutions are household, community and socially possible; what are assets in resource poor settings; what is the on-the-ground value (or harm) of new technologies including social media); what is the role and potential of intergenerational engagement.

Support needed

There are many challenges to the creation of this type of approach and the support it would need goes well beyond usual grant calls:

- This radical approach to health of the public requires broad multi-disciplinary research to be embedded within an enabled infrastructure to support ongoing and evolving research, evaluation and implementation
- These platforms and their associated linked questions cannot be addressed through traditional epidemiological and public health research approaches, but need to bring both new and existing research endeavours together with new models of working.
- Detailed, well designed, specific work would be a feature within these platforms, contributing to the whole
- National level influence is needed across government, together with determined implementation by public health academics and practitioners to ensure the results of the research are used effectively
- Local and national policy-makers and public health would need to develop action and policy with the co-created evidence base relevant to their populations
- The academic and publishing communities needs to embrace the different research methods that will emerge, including those designed to find new approaches to implementation and evaluation, including complex adaptive systems
- Research output and facilitation allowing re-analysis and synthesis
- Effective ways of disseminating and promoting the results of research to be most useful and implementable
- This approach requires a balance between independence as well as embeddedness in service, co-creation with population and robust and sustainable capacity building.
- Cross-sectoral research will result in cross-sectoral solutions
- The funding models for the proposed platforms cannot be achieved within the current responsive approach, and require strategic long term investment and new approaches to

bringing the required expertise together, including to ensure co-production of research evidence.

A range of examples (not comprehensive or exhaustive) of short, medium and long term metrics from research questions that exist within each of the proposed platform programmes:

1. Education and learning: educational attainment and health behaviours across socio-economic groups in childhood and young adulthood, violence and opioid misuse, reduction in school exclusions; shift in children's diets, physical activity, reduction in poor quality fast food outlets, reduction in obesity across time, increased awareness of appropriate prescribing in children. Long term outcomes would use surveillance and repeat cohort study data to test for any period or cohort effects on measures of ageing such as performance tests and cognition.
2. Business working for health and wellbeing: social connections (novel measures), physical activity, antisocial behaviours, Sustainable Development Goals, air pollution Impact of changes in local environment indices on repeat cross-sectional data on ageing traits across a wide age range.
3. Local environments: equality of employment/income across socio-economic groups, workforce wellbeing, urban centre use, numbers of alcohol or fast food outlets, changes in practice relating to antibiotic use in farming. Audit of positive large employers to see increased provision of positive environment, sickness absence rates of staff, cohort and/or repeat cross-sectional data on age-related metrics appropriate for young and middle aged adults to enable prediction of future trends on ageing population.
4. Optimising health and social care and other systems for life course health and wellbeing: health and social care inequalities, reduced intergenerational adverse outcomes for offenders and their families, use of secondary care services, reduced adverse health outcomes, quality of life, reduced healthcare costs, reduced antibiotic prescribing, lower rates of antimicrobial resistance, improved population acceptance of limited prescribing. Longitudinal data on different birth cohorts over the trajectory of ageing traits and how this relates to monitoring. Improved trajectories with delay in onset of decline in function with similar or slower gradient of decline. Evidence and if positive routine utilization of cheap and feasible data capture techniques that enable NHS monitoring at very limited expense. Increased proportion of older people able to function at home given their desire so to do.
5. Inclusive communities: Reduced reoffending rates, substance misuse, fear of crime, community wellbeing. Social engagement of older adults with community activities, reduced levels of social isolation and depression. Increased cognitive and physical activity in relation to community activities.

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