The economics of population health

Integrated care systems (ICSs) are required to take a more proactive role in population health and prevention. A key priority of the NHS Long Term Plan (2019) is for ICSs to embed and use population health management approaches. The ICS is expected to prioritise this at the level of the neighbourhood (c. 30,000-50,000 population) and the place (c. 250,000 to 500,000 population).[1]

The King's Fund defines population health as:

"An approach aimed at improving the health of an entire population. It is about improving the physical and mental health outcomes and wellbeing of people within and across a defined local, regional or national population, while reducing health inequalities. It includes action to reduce the occurrence of ill health, action to deliver appropriate health and care services and action on the wider determinants of health. It requires working with communities and partner agencies."[2]

This is not to be confused with **population health management**, which is a narrower reference to approaches to the use of data to identify population segments for specific strategies to improve health outcomes.

ICSs are expected to enable both.

What is meant by the economics of population health?

It has long been recognised that effective public health interventions rank very high in terms of value for money, even when seen through the narrow lens of the health and social care economy. A recent review of the international literature found a return on investment of 14:1 when considering benefits to the wider health and social care economy.[3]

Recent estimates from the Centre for Health Economics at York supported these findings (they found a return of 15:1); they went on to conclude that expenditure on public health interventions is between three and four times more productive than health treatment expenditure.[4]

It has also long been accepted that population health is influenced by wider social determinants, often way beyond the traditional influence of public health. Differences in social and environmental factors such as employment, housing or transport account for 40-50% of variation in health outcomes; a greater influence than genetics, individual behaviour or health treatment.[5]

In this context, the importance of **place** has become a cornerstone of population health, extending beyond the behaviours of individuals to the area and characteristics of the local community[6]. The concept of '**health in all**' policies, which looks at the health effects of wider policies affecting place and community is an important complement to 'health for all', which underpins public health programmes.

The emerging role of the **anchor institutions** in driving place-based interventions is an acknowledgement of the role played by local large employers geographically sited within a community, normally non-profit organisations[7]. ICS partners and particularly local NHS institutions are potential candidates as anchor institutions[8].

1. NHS England: Designing integrated care systems (ICSs) in England: An overview on the arrangements needed to build strong health and care systems across the country; (June 2019)
2. Kings Fund: A vision for population health Towards a healthier future (November 2018)
3. Masters R, Anwar E, Collins B, et al. Return on investment of public health interventions: a systematic review. J Epidemiol Comm Health Mar 2017. doi:10.1136/jech-2016-208141.
4. Stephen Martin, James Lomas, Karl Claxton: Is an Ounce of Prevention Worth a Pound of Cure? Estimates of the Impact of English Public Health Grant on Mortality and Morbidity CHE Research Paper 166
5. Prof. Sir Michael Marmot, Dr Angela Donkin, Prof. Peter Goldblatt: Inequalities Update (2017)
6. Yvette C. Cozier: Invited Commentary: The Enduring Role of "Place" in Health—A Historic Perspective
American Journal of Epidemiology, Volume 185, Issue 11, 1 June 2017, Pages 1203–1205, https://doi.org/10.1093/aje/kwx085
7. https://ukces.blog.gov.uk/2015/03/19/ukces-explains-what-is-an-anchor-institution/
8. The Health Foundation: Building healthier communities: the role of the NHS as an anchor institution - August 209.

This is only a one-directional perspective however, namely the impact of a range of policies on population health. In fact, there has been growing evidence over recent decades of a strong causal relationship the other way. Namely that **a healthier population drives wider downstream economic benefits,** which themselves enable greater levels of investment in population health programmes: a virtuous circle.[9]

There are likely to be many studies of this phenomenon as we examine the consequences of the COVID-19 pandemic and its economic aftermath.

What factors are likely to influence the level of investment in population health?

There are some serious challenges with population health economics. The nature of the evidence itselfmeans that it is actually much harder to demonstrate effectiveness than health professionals would typically expect in relation to health treatments. It is very hard to do random assignment trials of the effectiveness of interventions targeted on the wider determinants of health and those targeted on improving healthy behaviours. It's also the case that for these interventions, context matters enormously; the impact of different programmes will be different in different contexts. It is difficult therefore to recommend a national approach to these problems that's going to work everywhere and should be adopted at scale.

Another challenge with population health economics is simply the timing of benefits. Health treatments have an effect on the day of treatment, the week after treatment and a few months after treatment. Public health programmes and programmes targeted at the wider determinants of health can take months, years, sometimes decades to have an effect.

In practice, the health and social care system has what economists call a very high rate of time preference; it is very difficult to take decisions about spending that are going to have very long-term impacts as compared with prioritising interventions and funding on programmes are going to deliver today.

To confound this issue, different stakeholders have different perspectives of the costs and benefits within the system and often these programmes straddle different stakeholders. While they might appear to be beneficial as a whole the stakeholder who pays for them doesn't necessarily reap the benefit and that can create prioritisation tensions.

Finally, there is also the disconnect between economic value and affordability. Although many of the interventions in the PHE database are cost effective, it is only a subset of them that are actually cost saving in terms of health system costs (dominant) and even these often don't materialise within the year. If the system is looking only to use public health programmes to save money in the short term it will only be utilising a fraction of the programmes. It is also not a bar that is similarly set for prioritising health treatment.

The general message here is that it is complex and one size doesn't fit all.

How might priorities be set across the different partner agencies?

The goals of ICS partners are broadly complementary and it is really important that partners develop a shared common vision for the place and analysis of problems that need to be addressed within and across the place. It is also important to respect the role of each partner within that vision.

The ICS will need to develop aligned strategies across the partners, dependent on role, and agree what actually requires collaborative action rather than simply an aligned approach. Partners should really only act together on those issues that need joint action.

It's also important to recognise that all partners are living with the reality of limited funds. Funding sources are different for a reason. The ICS approach should not be seen as being about how we move funds to compensate for chronic underfunding of population health, notwithstanding the negative long-term impact this underfunding has on health treatment budgets.

9. David E. Bloom Michael Kuhn Klaus Prettner Health and Economic Growth, IZA DP No. 11939, Harvard University and IZA November 2018

What it should be about is leveraging mutual value from budgets to promote population health. That said, for areas of joint action the funding label doesn't have to constrain imaginative innovative solutions – it is how it's used that matters.

Finally, in setting priorities across the partner agencies it's really important to use data and evidence to build trust. Value-based care approaches really help to focus the NHS on doing only what is safe, effective, efficient and necessary while promoting population health. Population health management tools can also provide a really important analytical decision support for all partners. There are many tools to help develop priorities for interventions that improve population health.

What is going to be different this time?

As we've seen, there is a lot more evidence now than was available when the internal market was born 30 years ago. Spending on effective public health programmes represents really great value for money, and health outcomes and health inequality can be improved by reducing variation in those wider determinants of health.

Taking concerted action at the level of place will make a difference and the benefits won't take a lifetime to materialise. Healthy populations drive healthy economies – something that is vital to the post-COVID-19 recovery.

To succeed, the ICS model must be designed right and given governance teeth. That means having a strategic focus on health improvement and reducing inequalities, developing mature and trusting relationships and a sense of common purpose, using robust governance mechanisms to produce joined-up and binding decisions, engaging with citizens in a meaningful way, and embracing agencies responsible for the wider determinants of population health such as housing, education and employment.

Nearly three years ago, in its paper *How population management will deliver a sustainable NHS*, GGI said "…the boards of individual organisations face a window of opportunity like never before to address key issues and move towards greater collaboration and integration of health and social care services."

That opportunity now seems closer and more tangible than ever. When all of the building blocks are in place, the integrated care system model really does offer the opportunity for local partners to work much more strategically to drive value from improving population health.

Full details about each event in our webinar series is available on the GGI events page:

www.good-governance.org.uk/events