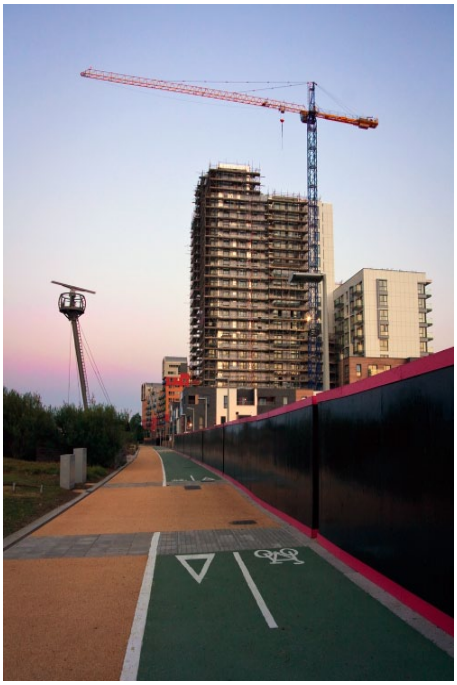
Health, cities and planning: using universities to achieve place innovation

UK cities face a number of diverse issues affecting their future, with high levels of health inequality requiring local action to improve communities. In this article, Mark Tewdwr-Jones from Newcastle University outlines the case for utilising the skills of universities to overcome institutional fragmentation.



Cities in the United Kingdom and overseas are struggling to manage the diverse issues affecting their future. Changing demographics, economic uncertainty, climate change and threats of terrorism are all putting pressure on governments to deal with more immediate concerns, set against a backdrop of political upheaval, and changing governance frames. The challenge of addressing any of these is made particularly acute by a fragmented and volatile institutional restructuring process. This often militates against the need for a synoptic and long-term look at the drivers of change unique to individual places.[1] Increasing appetite for enhanced democracy raises pressures for innovative ways for the state to engage with citizens and businesses. It is often difficult to require institutions and professionals to move beyond their current form of engagement.[2] Public health is not immune from this turmoil.

National, regional and local action to combat health inequalities is widely accepted as critical to creating improved communities. The Marmot Review[3] claimed a strong social justice and compelling economic case for reducing health inequalities. It is estimated that health inequalities cost over £30bn a year in lost productivity, welfare and health costs, leading Government to call for local areas to work together to address population health needs.[4,5]

There is a case for communities in our cities to benefit from more joined up (cross-boundary) planning and investment in health and social care.[6] Cross-sectoral benefits are contextualised by the extent to which local areas are able to make the most of healthcare procurement and employment policies and whether new institutions and agencies (such as devolved Combined Authorities, Local Enterprise Partnerships, and Health and Wellbeing Boards) can work effectively together across traditional boundaries, especially when many of the critical joining-up agencies are under pressure.

This article reflects on the critical relationship between health, cities and planning, and makes the case for utilising the skills and anchoring role of universities in each city to overcome institutional fragmentation. Fiscal restraint has narrowed the debate to one of achieving *healthcare* in cities through innovative joint working with agencies beyond the National Health Service (NHS). This article seeks to rebalance the discourse through consideration of several interrelated issues:

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- What opportunities for holistic action are delivered by the shift in managerial responsibilities for public health within cities?
- What is the role of health care in addressing wider societal and urban problems?
- What is the impact of the shifting governance of cities within which healthcare systems play an integral part?

The new governance and new economic landscape for our largest cities requires more reliable forms of health intelligence, research evidence, and public engagement processes

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addressing the needs of different cities as unique places. It is not easy to coordinate intelligence needs and the potential of joint working across sectors. The critical question is whether universities – as one set of institutions rooted in distinct places – could play a central role by developing collaborative working models between sectors.

THE INTERFACE BETWEEN HEALTH, CITIES AND PLANNING

Interaction and linkages between health and cities are the basis for identifying the potential role of spatial coordination in supporting health and social care outcomes. Good health involves a combination of physical, mental and social wellbeing,[7] commonly referred to as the Health Triangle. Enhanced forms of spatial coordination across institutions, led by place-rooted universities, can help deliver health and social care outcomes, particularly in relation to urban planning, which has a role in delivering health and social care outcomes.[8,9]

The history of UK urban planning is rooted in public health and the need to improve the health and living conditions. The relationship between health outcomes and planning occurs in three broad areas: environmental health, promoting healthy lifestyles, and the provision of health facilities. Planners must take account of existing healthcare provision and future requirements in preparing plans.[10] Planning must also respond to changing models of care, for example, for the transfer of services from acute hospitals to local facilities.

There are important urban externalities to address. For example, traffic caused by new development tends to increase over time with associated noise levels and disturbance. Promotion of public transport can help reduce the need to drive. The impact of traffic on air quality and health led to the introduction of air quality management areas and low emission zones. In 2010, a report recommended exploration of how planning policy can tackle air pollution, which contributes to 50,000 premature deaths per year, costing the NHS at least £20bn per year.[11]

Public spaces and streets encourage people to walk to undertake day-to-day tasks. Greater use of walking or cycling improves individual health, reduces the number of car journeys, noise and air pollution and promotes life expectancy. Despite the established link between physical health and the built environment, proximity of facilities affects perceived safety and willingness to walk or cycle.[12–14] The provision of open space is beneficial also for sun exposure, which would reduce health problems associated with vitamin D insufficiency.[15]

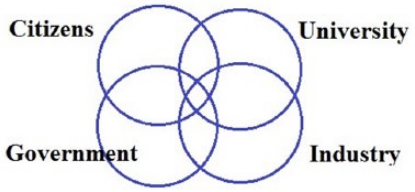
JOINING UP AND WORKING TOGETHER: UNIVERSITIES AS ANCHORS

The health of cities relies on many components. Health inequalities are playing out as a consequence of history and legacy. Many local authorities and local health trusts began to work collaboratively in the 2000s to achieve long-term benefits in parts of England.[16,17] The broader work on urban planning place-contentions and public health intelligence was curtailed by removal of large parts of the planning policy process after 2010.[18]

In the absence of scientific coordinating and integrating mechanisms for cities at the government level, and a diminished urban planning system, public health and non-health organisations need a broker role, which could be provided by universities anchored within their cities. The academic community can assist in urban knowledge creation and sharing to inform future city policy and practice.[19,20] The concept of local 'anchor institutions' originated in US urban policy and has gained a wider currency. This concept lacks a precise definition but generally refers to large locally embedded institutions, typically non-governmental public sector, cultural or other civic organisations, that are of significant importance to the economy and community life of their cities. Such institutions can generate positive externalities and relationships to 'anchor' wider activity within the locality. They have neither a democratic mandate, nor a primary mission for regeneration or local economic development, but their local rootedness and community links allows a key role, 'representing the "sticky capital" around which economic growth strategies can be built'.[21]

Figure 1

Quadruple Helix model



Such activities accord with growing recognition of the civic role of public universities in responding to major long-term societal challenges, such as climate and demographic change. Several universities, prompted by transdisciplinary research funding now requiring greater evidence of local impact, are marshalling their research under a single banner on the future of their cities.[22] More fundamentally, some universities that were established to support 19th-century city-based industrialisation are looking to re-invent themselves as 'civic' institutions within a global economy. Research funding agencies are also seeking to engage local civil society in processes of co-production of knowledge, and its translation into innovation, dubbed by the European Commission (EC) 'Responsible Research and Innovation' (RRI).[23] The EC champions civic engagement by processes of open innovation (OI) with reference to the Quadruple Helix model. In this OI2 model, government, industry, academia and civil participants work together to co-create the future and drive structural changes far beyond the scope of any one organisation alone (see Figure 1).

A new approach could be framed around the Quadruple Helix model with representatives from academia, government, industry and civil participants working collaboratively. This model is still in its infancy with regard to implementation in certain academic fields.[24]

Joining up institutions requires identifying principles of integrated collaboration, co-created shared values, cultivated innovation ecosystems, unleashed exponential technologies, and extraordinarily rapid adoption. To establish OI2 in Europe, policy makers must strengthen the framework supporting OI approaches.

In the long-term Quadruple Helix approach, universities and cities can identify place assets and health opportunities through disseminating existing and new data and intelligence to varied audiences, developing systems thinking across fragmented governance and delivery bodies, promoting new networking relationships between actors and agencies, and undertaking future work that relates more readily to circumstances in each city than thematic exercises relating to health in isolation.

ENACTING A NEW APPROACH: NEWCASTLE CITY FUTURES

Taking evidence from the recently adopted Core Strategy,[25] Newcastle and Gateshead's combined population is 381,100 (2011), within a Tyneside population of 879,996. The average age of a Newcastle resident is 37.8 years, slightly below the national figure of 38.6 years. In 2011, some 16,670 children were living in poverty in Newcastle. Deprivation is higher than the UK average; 25% of people live in the most deprived areas of the city.

The senior population of Newcastle and neighbouring Gateshead (15.6% aged 65 years or over) is projected to rise by almost a third by 2030. Newcastle has a higher proportion of working-age population (16–64 years) at 70.1%, and a lower proportion of older people (14.2%) than the city region (Tyne and Wear) overall (66.5% and 16.5%, respectively), while Gateshead has the reverse (64.6% and 17.8%, respectively).

The health of residents is improving but remains worse than the national average, with lower average life expectancy for Newcastle than England as a whole, with a difference of 14.3 years for males and 11.1 years for females in the most deprived wards when compared to the least deprived wards. Adult obesity was estimated in 2008 as 28% for Gateshead and 24% for Newcastle, compared with a national average of 24%. Some 21.9% of Year 6 children (aged 10–11 years) were classed as obese in 2011, while teenage pregnancy figures are higher than for England. Between 2001 and 2011, mortality rates from heart disease and cancer fell but were still worse than the average for England.

In 2014, Newcastle University and Newcastle City Council came together to establish Newcastle City Futures (NCF). The NCF was established as a collaborative platform for long-term thinking about the city's problems, linking researchers, communities, businesses and policy makers, and creating a space for innovative thinking. Initially funded by the UK Government Office for Science (GOS) Foresight Future of Cities programme, NCF worked towards producing a long-term state of the city report with initial suggestions to think differently about the city's prospects.[26]

The project aimed to work with local partners and national bodies in establishing a review of key city research and a transferable methodology, mobilising expertise in local universities on a sustainable, long-term basis. The intention was to develop long-term thinking capacity around key future urban dynamics. The agenda core related to ageing and to health delivery. Within the Quadruple Helix model, NCF has positioned itself in the middle of the four sectors, liaising with each but also finding ways to engineer trust and discussion across all actors as an enduring process of knowledge and ideas exchange.

Utilising NCF has created the space for creative thinking and innovation for health professionals, city planners, businesses, patient groups, the community sector and the research community. Although joint working processes have been established, the challenges for realising health and wellbeing benefits included identifying boundaries. The project team took the space and flows of the metropolitan area – equivalent to Newcastle, Gateshead and Tyneside – as the analysis basis. This allowed different health trusts not to be overtly concerned about geographical and political boundaries.

The second challenge was scope, devising a method that was cross-sectoral, inclusive and long term, supportable by existing research and intelligence, and also identifying new opportunities for the city. A third, and possibly greatest, issue concerned encouraging professionals and their academic partners to think beyond their institutional and disciplinary parameters; the Quadruple Helix approach requires interaction outside this traditional arena, engaging with other professionals or citizens. Health professionals in Newcastle recognise that they do not have direct responsibility for issues such as housing, transport, green spaces or economic development, but have identified opportunities to engage with relevant professionals. This is a two-way benefit: health professionals inform about the health implications of non-health policy areas; non-health professionals start to understand the wider health and wellbeing contexts and opportunities before they commence intervention. NCF has been established through the universities as both a facilitator and mediator between established interests, seeking alignment rather than integration of disparate organisations and professionals. Innovative opportunities arise from where the separate wheels of the cogs come together.

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The Quadruple Helix approach requires constant brokerage to build trust, common languages of understanding and careful handling of ownership and intellectual property. People are kept at the table by a desire

to address long-term challenges, linking research to practice. Innovative collaboration can also achieve results for multiple partners at a time of austerity and pressures of time and workload within organisations.

People are kept at the table by a desire to address long-term challenges, linking research to practice

CONCLUSION

NCF is at an early stage as a collaborative arena to think through long-term health provision on the long-term urban agenda. This approach has developed new approaches and methodologies for universities to act as anchor institutions for cities by mobilising engagement around the future health and wellbeing. Over the last 15 months, Newcastle has led the way in capitalising on the goodwill and consensus achieved by the initial Foresight project. Newcastle City Council has established two special purpose governance vehicles: the City Futures Development Group with representatives of all universities, government and major businesses in the city region; and the Newcastle 2020 Group, representing all public and voluntary sectors. These two groups do not duplicate existing agencies but, rather, allow thinking of new routes through institutional fragmentation. This translates new ideas into innovative service delivery, new policy engagement and research platforms between local government and higher education. It has led to new partnership for knowledge exchange between the university and a host of different organisations, all of whom are passionate about the future of Newcastle.

NCF has initiated a commitment to think of the long-term housing needs of an ageing society, with plans for digitally enabled homes for the lifecourse; another project looks at creating more cycle routes around the city centre, linking open spaces and play areas with healthy food options. It has started to address impairments with urban transport systems using schools and community groups; and an initiative on access to housing and community services for people suffering with mental health. The Newcastle model has had to step into the unknown, and generate trust and goodwill in order to progress the work, by developing partnerships across city sectors and overcoming silo thinking. NCF, led by the academic sector, is also well placed to assist the North East Combined Authority and elected mayor to address strategic issues. The challenge is to meet the rising expectations in cities like Newcastle, and to deliver a wider range of sustainable health benefits based on the unique place assets evident in cities. At a time when citizens in cities often feel remote from policy-making, there is a particular need for more coherent and consistent approaches to engagement and participation across entire urban areas. Acceptance of change involves remembering the past, being confident about the present and looking forward to the future.

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