

New tool to value health of urban developments

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Bristol harbourside development. Credit: University of Bristol

A new tool to value the health effects of urban development proposals has been revealed by researchers at the Universities of Bristol and Bath and published in *Frontiers in Public Health*.

The valuation tool evaluates a range of factors including how buildings, transport, natural environment (including air pollution and [green space](#)), socio-economics and community infrastructure in new developments might improve or worsen [health](#) for its future residents.

By integrating [environmental economics](#) with public health systematic reviews and urban design analysis, researchers were able to value the potential health effects that may result from development proposals and provide evidence to assess the health costs of urban planning decisions.

The tool, which sub-divides the [urban environment](#) into 28 characterizations, places a value not just on air pollution, which is most commonly evidenced, but also on a range of factors which could lead to premature death and chronic morbidity, profoundly affecting quality of life and the cost of healthcare.

The work forms a core part of TRUUD, a major transdisciplinary research project which aims to reduce non-communicable disease (such as cancers, diabetes, obesity, mental ill-health and respiratory illness) and health inequalities linked to urban planning and development.

For instance, green spaces provide a range of health benefits, especially for adults in reducing diabetes and risk of weight gain. However, green spaces can also contribute to childhood asthma. Similarly, a significant link was revealed between noise from traffic and child conduct disorder (and the cost of treatment medically). By adjusting scenarios planners could have a tool for measuring the likely health impacts of increasing or decreasing the amount and quality of [green spaces](#).

University of Bath researcher Eleanor Eaton and lead author of the paper commented: "It is possible to value the potential health effects of our urban environments and weigh these against the traditional financial costs and benefits of city development.

"We still have some health impacts such as [mental health](#) and chronic pain where the evidence is incomplete where further research will help create a full picture for planners and [policy makers](#)."

The approach was originally conceived during two previous studies on climate risk, funded by Innovate UK and NERC, followed by a Wellcome-funded pilot project, UPSTREAM, which shifted the focus of the tool to urban health risk and revealed that there was likely substantial demand from senior decision-makers for a valuation approach like this. The pilot used a major regeneration site in South West England as an initial case study. The TRUUD program has since enabled a substantial expansion of economic evidence, as well as further testing of the tool in another major project setting.

Program Director for TRUUD at the University of Bristol Daniel Black added, "This is a key paper for our work in attempting to fundamentally change the way we make decisions about how we develop and manage the places we live in by re-prioritizing and more fully accounting for human and planetary health.

"We're doing more work in this area to develop the model, and to show where the burden of disease falls across the community."

More information: Eleanor Eaton et al, Developing and testing an environmental economics approach to the valuation and application of urban health externalities, *Frontiers in Public Health* (2023). [DOI: 10.3389/fpubh.2023.1070200](https://doi.org/10.3389/fpubh.2023.1070200)

Provided by University of Bristol

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