

improved from baseline to 5-year of follow-up for: 21% of those still in paid employment; 25% of those who exited the workforce not on health grounds; and 18% among those who exited due to their health. Regression analysis showed that normal exit from the workforce was associated with improving health subsequently (OR: 1.32, 95%CI: 1.07,1.61), while health-related exit was associated with poorer health subsequently (OR: 2.88, 95% CI: 2.16,3.85). These effects were stronger among males than females, and were robust to adjustments for demographic, employment, and socio-demographic factors.

**Conclusion** This study highlights the need for more in-depth exploration of the dynamic impact of work exit on health amongst older people, aiming to develop effective policy measures for a healthy transition from work to retirement.

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### MEASURING THE HEALTH OF PEOPLE IN PLACES: A SCOPING REVIEW OF OECD MEMBER COUNTRIES

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**Background** Defining and measuring population health in places is fundamental for local and national planning and conducting cross-geographic health comparisons. Yet availability and comparability of place-level health data is unknown.

**Methods** A scoping review was performed to identify how Organisation for Economic Co-operation and Development (OECD) countries measure overall health for sub-national geographies within each country. The search was conducted across MEDLINE, Scopus and Google Scholar, supplemented by searching all 38 OECD countries statistical agency and public health institute websites. For all three electronic databases, three concepts were created to identify studies where health indicators would have been used to assess health at a population-level: (1) health indicator, (2) population assessment and (3) OECD countries. Only at the full article assessment stage were studies excluded for not having health indicator data at a sub-country geography.

**Results** Out of a total of 1,157 non-duplicate titles and abstracts screened, 210 full texts were reviewed and sixty publications selected; plus extracted information from 37 of 38 OECD countries statistical agency and/or public health institute websites. Twelve health indicators were identified where data was available at a population level for sub-national geographies. Data sources varied by categorisation into mortality (all-cause, cause-specific, life expectancy at birth, life expectancy at 65 years, preventable, excess or amenable) or morbidity (self-rated health, long-standing illness, disability, activity limitations or healthy life expectancy) health indicators: the former mostly from national statistical agencies and the latter from population-level surveys. In all cases, geographic boundaries used administrative definitions. Region, or equivalent large subnational entities, was the predominant geographic level for both mortality and morbidity indicators. All-cause mortality, and some cause-specific mortality indicators, were available at regional level for all 38 OECD countries. All other mortality indicators were frequently available at this level, with the exception of life expectancy at 65 years (5 countries only). Similar but slightly fewer indicators were available for urban areas (max countries per most frequent indicator = 24),

followed by municipality (range of 1–14 countries per indicator). Other geographies, particularly those at smaller granularity, were infrequently available across health indicators and countries.

**Conclusion** Health indicator data at sub-national geographies are generally only available for a limited number of indicators at large administrative boundaries. Relative uniformity of health indicator question format allows cross-national comparisons. However, wider availability of health indicators at smaller, and non-administrative, geographies is needed to explore the best way to measure population health in local areas.

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### MAKING SENSE OF THE EVIDENCE IN POPULATION HEALTH INTERVENTION RESEARCH: BUILDING A DRY STONE WALL

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**Background** To tackle population health challenges, we must address the fundamental determinants of behaviour and health. Systematic reviews frequently conclude that the available evidence about the effects of population health interventions is too diverse, flawed or inconclusive to support a more general conclusion about what should be done. However, merely increasing the supply of intervention studies is not enough. The pivotal link between research and policy or practice should be the cumulation of insight from multiple studies. In spite of all the developments in quantitative methods for evidence synthesis, however, we struggle to derive meaningful generalisable inferences to guide and support public health action.

**Methods** We review theoretical, methodological and case study material from a variety of disciplines and propose a more eclectic, flexible and reflexive approach to building and interpreting the evidence.

**Results** If conventional evidence synthesis can be thought of as analogous to building a wall, then we can increase the supply of bricks (the number of studies), their similarity (statistical commensurability) or the strength of the mortar (the statistical methods for holding them together). However, many public health challenges seem akin to herding sheep in mountainous terrain, where ordinary walls are of limited use and a more flexible way of combining dissimilar stones (pieces of evidence) may be required. This would entail shifting towards generalising the functions of interventions, rather than their effects; towards inference to the best explanation, rather than relying on binary hypothesis-testing; and towards embracing divergent findings, to be resolved by testing theories across a cumulated body of work. We present case studies of mixed-method primary research and evidence synthesis to illustrate ways of doing this in practice.

**Conclusion** We should look beyond simple notions of ‘interventions’, search for patterns and embrace the mess in evidence synthesis in order to better understand what makes for an effective public health strategy. In this way we might channel a spirit of pragmatic pluralism into making sense of complex sets of evidence, robust enough to support more