

Evaluating the impact of healthy cities in Europe

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Abstract

Background: Cities are engines of health development and not merely settings for health promotion. However, political scientists contest the extent of their powers and the scope of their influence.

Methodology: Assuming local governance is a locus of decision-making about intermediate determinants of health, then there are three methodological challenges to evaluating its impact: first, accounting for context; second, addressing multiple, interactive interventions; and third identifying mechanisms for change. 'Realist' evaluation is more appropriate for this task than traditional paradigms of public health research.

Review: Commissioned evaluations of the first three phases (1987-2002) of the WHO European Healthy Cities Network are reviewed against the three methodological challenges.

Conclusions: These evaluations are stronger in identifying necessary city structures and processes but weaker, as are the Network cities themselves, in identifying change mechanisms which convert sector interventions into health gains. This lacuna is addressed in Phase IV (2003-2008) of the Network by the themes of healthy urban planning and health impact assessment.

Key words: healthy cities, realist evaluation, intermediate determinants

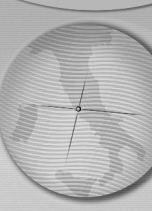
Introduction

This article reviews the evaluation of healthy cities, specifically the members of a Healthy Cities Network supported by the European Office of the World Health Organization (WHO). The Network is marked both by a red thread of continuity from its origins in 1987 and by development and innovation to match broad political and social changes on the continent of Europe. Essential values and principles have remained at the heart of the Network over the first three phases (1987-2002) and continue to underpin Phase IV (2003-8). Certain basic tenets characterize the WHO 'healthy city' approach. Cities are not identified primarily by their remedial health and welfare services, nor merely regarded as a 'setting' for health promotion by health professionals. Instead, local economic, social and political partners are encouraged into coalitions for health development. City mayors sign up to the Network with an explicit developmental agenda where health, environment and economy are intertwined. In the period prior to Phase 1, when many prospective Network cities experienced rapid de-industrialization, local governments were characterized predominantly as organizing welfare delivery, [1,2]. By the turn of the

Millennium, European urban elites had become deeply concerned about their local economies and eager to assume a developmental role [3].

This heroic conception of European city governance is challenged by many political scientists, with implications for the efficacy of local interventions promoting city health development. Gualini [4] describes how the modernist era of formal, rational, hierarchical tiers of government with settled competences, has been replaced by a post-modern dispersal of authority and the emergence of 'more complex, fluid, patchworks of innumerable, overlapping jurisdictions.' Jessop's [5] influential theories maintain that local government 'has no power - it is merely an institutional ensemble' deriving power from the forces acting in and through it. Nevertheless, his approach encourages a strategic role for local government by mediating the policies and programmes of myriad agencies acting through it. Within the concept of 'new urban governance' [6] is the potentially critical role of the city mayor and her municipal administration identified by WHO at the inception of the Network in 1987; *primus inter pares*, investing in health by integrating the effort of many local partners.

The working assumption of this article is that



decisions made at a city level do influence the health of city populations. The next methodological section explores the theoretical possibilities and difficulties of modeling and measuring the impact of such decisions on health development, and specifically the potential added value of a healthy city approach. There follows a review both of the evaluations undertaken of the first three phases of the Network of European Healthy Cities, and discussion on the evaluation in prospect for Phase IV.

Methodology

In addition to the multiple agents contributing to city governance there is another layer of complexity which poses methodological problems for evaluation. This is the city as a physical embodiment of very many diverse economic and social forces. The rationale for focusing attention on cities is the match between (a) the range of civic competences for decision-making and (b) the series of intermediate determinants of health made famous by the Dalgren and Whitehead [7] model favoured by WHO. European municipalities and their partners generally have formal competences [9] or at least a guiding hand on the living and working environments which mediate between the distal structures of society and proximal lifestyle determinants such as exercise and diet. Via regulation, capital investment, service reform or strategic planning, municipalities may enhance or erode the health impact of, *inter alia*; transport, housing, work environments, water and sanitation, food distribution and education.

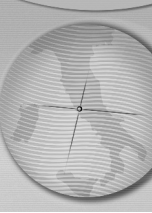
There are three critical methodological challenges to evaluating the performance of healthy cities, even assuming a municipality has moved beyond mere aspiration into action. In a model reflecting the complexity of real city life rather than laboratory conditions, De Leeuw [10] distinguishes 'determinants of health' from 'interventions for health.' Prior to any explicit intervention, an ensemble of determinants already constitute an urban milieu shaping the health and well-being of a city's population and setting a trajectory of health development.

The *first* of the three challenges is to account for these contextual factors. Economists define as 'deadweight' those health outcomes which would have occurred anyway, from a steady state of inertia in the policy community. For example the existing condition of a city's housing stock will continue to exert an influence on the health of its occupants, irrespective of specific new investment designed to improve their health

status. Dominant medical research paradigms (classically in randomised control trials) strive to control for the confounding effects of such contextual influences, whereas a contrary school of 'realist' evaluators [11] builds context into their methodology. De Leeuw maintains that the realist approach and associated 'Fourth Generation Evaluation' (4GE) techniques [12] are the more appropriate for gauging performance of healthy cities. It is not a soft option; evaluators must always question the added value of municipalities which join the Network and activate a social model of health development in their cities.

The *second* methodological challenge is how to account for multiple interventions. City *realpolitik* is nowadays about simultaneous development across many sectors, including local health services whose 'primary purpose is to promote, restore and maintain health,' [13] but more importantly, those many other sectors where health impacts are not the primary concern of their decision-makers. From the inception of Phase I, designated healthy cities were encouraged to adopt the slogan 'health is everyone's business' and establish an intersectoral steering group. Although WHO recommended that this should be supported by an intersectoral technical group, different professional epistemologies have tended to prejudice a broad front approach. A report for WHO by Kelley et al [14] at the UK's National Institute for Health and Clinical Excellence (NIHCE) posed the methodological difficulties in evaluating multi-factorial interventions and Ezzati for WHO [15] has also highlighted the difficulties of rigorously comparing the health dimensions of different sectoral policies and programmes.

The *third* methodological challenge is delineating and scaling the pathways to health from intermediate interventions such as those in the municipal domains of education, transport and housing. According to the former chief medical officer of health in England, improving health requires '*a broad front approach which reflects scientific evidence that health inequalities are the outcome of causal chains which run back into and from the basic structure of society.*' Policies need to be upstream and downstream.' [16]. Ezzati agrees that 'disease and health determinants occur along a continuum of complex and multi-factorial layers of causality.' Though, as the NIHCE report confirms, the science is stronger on proximal determinants, there is a growing body of evidence on mediating processes. From the classic Whitehall studies of the health and social status of English government



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officials, Wilkinson and Marmot draw out general conclusions on the social determinants of disease in their influential report to WHO [17] for distribution to the Network:

Social and psychosocial circumstances can cause long term stress...lack of control over work and home life have powerful effects on health ... turning on the stress response diverts energy and resources away from many psychosocial processes important to long term maintenance. Both the cardiovascular and immune systems are affected.' (Social Determinants of Health: the Solid Facts)

Though Wilkinson and Marmot also recommend remedial action in each policy domain, it is evident that the scientific evidence is stronger on the aetiology of disease than on what realist evaluators call the 'change mechanism' for health improvement. For example in their systematic review of thousands of studies on housing interventions and health, Thomson et al [18] revealed only a handful which had the power to detect and attribute an impact. Although a new generation of health impact assessments in housing and other intermediate domains is adding to evidence about causal pathways, holistic evaluators of healthy cities are camped on the frontiers of current knowledge.

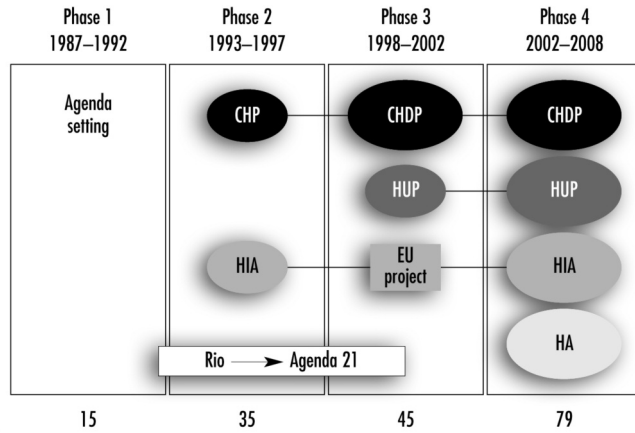
Review

Evaluation has always been integral to the development of the Network. Independent and sympathetic evaluation teams were commissioned by WHO to evaluate each of the first three Phases in order to inform subsequent developments. Figure 1 summarises the timeline of Phases I - IV and the number of cities in each Phase. The acronyms refer to the 4 themes (City Health Development Planning, Healthy Urban Planning, Health Impact Assessment and Healthy Ageing) which evolved in Phases II and III and defined Phase IV.

The commissioned evaluations of Phases I and II by Draper [19] the London School of Economics [20] and De Leeuw [21] focused on city context, analysing the institutional infrastructure and procedures for healthy public policy. Implicitly they all adopted a realist methodology referred to earlier; all were selective and pragmatic since a comprehensive study of every dimension of life in 35 cities would have required an enormous logistical effort beyond the resources of WHO. The strategic focus of their evaluation was heralded at an early business meeting in Belfast in 1990 when

Network cities agreed that demonstration projects alone were not sufficient to move health

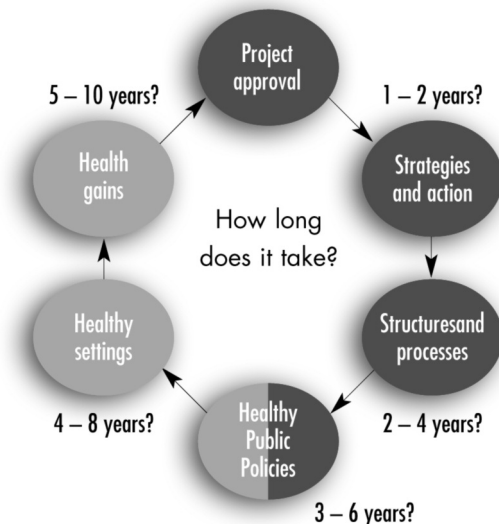
Figure 1. WHO Healthy City Network; Phases & Themes

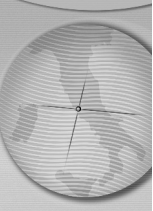


higher on political agendas and certainly not sufficient to fundamentally alter the direction of city development. A WHO review [22] signaled a switch of emphasis away from demonstration projects towards influencing strategic policies. Draper et al's evaluation of Phase I was organized around a ten year perspective (Figure 2) on the institutional steps required to secure healthy public policies as a prelude to health gains.

Draper's schematic model not only accounts for context (in realist mode) but seeks to change context. Strategies and actions emanating from the healthy city project are regarded as a precondition for modifying wider structures and processes of city governance, leading in turn to healthy public policy, the context for interventions to deliver health gain. And although the model appears at first sight to be linear, it is on

Figure 2. The ten year perspective





closer inspection a virtuous cycle. Thus the evaluations of all Phases include an assessment of the apparatus of the healthy city office as a driver of the Health for All agenda; its efficacy depending on budget, staffing, institutional location, communication with WHO and other Network cities. Assessing the sustainability of 10 exemplary healthy city offices, the LSE evaluators assumed that in the medium term, their existence was a prerequisite for the maintenance of healthy public policies and health gains already achieved.

All three sets of evaluators then refer to the broader city structures and processes, especially the connection between HCP office and, often via the intersectoral steering group, the sectoral committees of the municipalities and key decision-makers in partner agencies. De Leeuw especially focused on the 'intricate relations' between these various stakeholders, maintaining that evaluation (in 4GE mode) should be participatory and iterative, much closer to social than to natural scientific methodologies.

An independent study by Goumans and Springett [23] of 4 Network cities and six others in the United Kingdom and the Netherlands used participatory techniques to question whether 'healthy cities' were a successful 'mechanism for policy change'. They concluded that only a few of the sampled cities were struggling towards the radical, 'second order change' or 'paradigmatic shift' required by the Draper model.

City Health Development Plans (CHDPs) were the centerpiece of Phase III, requiring cities to simultaneously address the methodological issues of multiple interventions and causality. Originating in the basic City Health Plans of Phase II, CHDPs are strategic documents designed to embrace all sectors contributing to the health of a city population. Though sectors can be harmonized in a trivial sense by passive cross-referencing or cataloging assorted contributions, WHO guidance [24] recommended that 'integration is an active process...taking into account the interdependence of the effects of sectoral policies and actions. It means recognizing and promoting the positive synergistic effect of actions for health with a view to achieving maximum impact.' In our assessment of 40 CHDPs [25] as part of a wider evaluation of Phase III, we reported that for many Network cities the process of city health development planning was as important as the plan itself. Negotiating a common conceptual language was a first precondition of shared ownership. The NIHCE report referred to earlier,

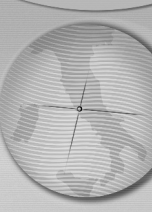
highlighted the methodological problems of reconciling 'different disciplinary paradigms, arenas of debate, agreed canons, and particular epistemological positions'. Many cities had at least overcome these initial barriers. Typically the city of Horsens reported: "The intersectoral cooperation and process leading to the plan is important in increasing a common language, understanding the broad concept of health, leading to common responsibility.' Adjustments to conceptual language were reciprocated. We distinguished a classic Type 1 CHDP (Figure 3) from a Type II approach which sought to influence the plans and policies of other sectors or a Type III approach where other actors sought to accommodate a strong health dimension into comprehensive and legally required 'municipal plans.'

In theory the Network cities build into their structures and processes an evaluation of the impact of CHDPs, insofar as they create or modify operational plans and encourage interventions which promote health development. City health profiles, assessed by Webster [26] also as part of the overall Phase III evaluation, constitute both a baseline prior to intervention and composite measures of outcome (Figure 3). Over time cities should expect an overall improvement as a result of several sectoral interventions and the synergies

Figure 3. City Health Development Plans as Change Mechanisms



between them. In practice, during Phase III, Network cities had not developed such a rigorous evaluation model. CHDPs tended to juxtapose rather than integrate the specific distal determinants characterizing each sector, and gave little attention to change mechanisms which provide a route to health gain. So typically, transport was referred to in many CHDPs, but the plan did not explicate the causal pathways by which the different modes of travel (for example, walking or driving) would lead to differential health gains. In response to this lacunae, WHO introduced into Phase IV, two (of four) core



themes which focused on change mechanisms. Healthy urban planning (HUP) had evolved in a sub-network of cities [27] in phase III and is embedded as a central theme of Phase IV, building on limited scientific evidence linking health development to the physical and social infrastructure of cities. Health impact assessment (HIA) is a more explicit tool for assessing, often prospectively, the causal linkages between an intervention and health outcomes. Refined by WHO in Phase III, the HIA toolkit marshals (but does not produce) scientific evidence. Axiomatic to the process is sustained commitment by decision-makers to consider the results of the HIA seriously.

Discussion and Conclusions

Truly comprehensive evaluations of the first, nineteenth century, urban health reforms in European cities acknowledge the role of medical research but do not privilege its contribution above those of politicians, social reformers, town planners, economists and mass community movements for the amelioration of living and working conditions. So we argue that the new healthy city movement should acknowledge and encourage evidence from natural scientists, but as part of a bigger picture.

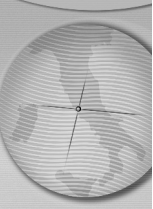
As with the creation of state social health and welfare systems in the period following the Second World War, and with global concerns about environmental sustainability following the 1992 UN conference in Rio, the science underpinning the Network of Healthy Cities is imperfect. However, there is a growing body of evidence that even in a period of globalization, cities continue as the locus of many decisions which influence the health and well-being of their citizens.

Commissioned evaluators of the first three Phases of the Network, drawn from different academic disciplines, have together addressed the three methodological challenges referred to earlier and pieced together many elements of a dynamic movement. Nevertheless, much remains to be done to distinguish the added value of sectoral interventions and remedy weakness in identifying the change mechanisms converting these interventions into health gains. A modified approach to the evaluation of Phase IV will focus on these issues. Healthy Cities can be regarded as natural laboratories for social reform. Though the initial impetus can be political or professional, the signature of the Mayor signals a commitment to fund and sustain the laboratory, modifying city structures and processes to facilitate quasi-

experimental interventions to enhance health development. The task now is to evaluate these interventions, within the broader context of each city and by comparison with other cities in the Network.

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