

Population health development in the Latrobe Valley

A literature review of world best practice in building
healthy communities and health systems

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1. The Hazelwood Mine Fire Inquiry – population health responses

1.1 Background

The Hazelwood Mine Fire of early 2014 was, in the eyes of many, not the first disaster to hit the Latrobe Valley. Once this was a land of rich rolling pastures and forest, home to the Gunai/Kurnai traditional owners. With colonization came farming, and with farming conflicts over land with the traditional owners – between 1840 and 1850 several hundred Gunai/Kurnai died in clashes (Rule, 2002). The discovery of easily accessible rich layers of coal led to a new, additional focus of the Latrobe valley area of Gippsland – mining and (from the 1920s) coal-fired power stations changed the landscape and sources of wealth for the population. But in the building of the power stations asbestos was used liberally – a material we now know as highly carcinogenic, and the population of the Valley fell victim to many asbestos-related diseases. This was of grave concern and has impacted profoundly on health and well-being in the region (Walker & laMontagne, 2004) and clearly had lasting influence on how the population of Latrobe Valley regarded health and government authorities.

Other regions in Australia where open cut coal mine operate (e.g., the Hunter Valley in New South Wales) have been described as ‘sacrifice zones’ (Cottle, 2013) where population health and ecological balance have knowingly and deliberately been compromised. Thus, even before the Hazelwood Mine Fire the health and well-being of the Latrobe Valley population was under threat. According to DHS (Department of Health Victoria, 2013) rates of crime and drug abuse are twice that of the remainder of Gippsland (2013 report, table 12); residents of Latrobe Valley lose twice as much money on gambling as other Gippsland residents (table 13), have the highest unemployment of the region and twice that of Southern Gippsland (table 16), and have high rates of risky health behaviours such as smoking, and poor nutrition (17-19). Gippsland as a whole (and Latrobe Valley is no exception) is unhealthier than the rest of Victoria on a number of indicators, but inequities in health between and within Latrobe Valley are an even greater concern. A map of inequity in the Gippsland region and within the Latrobe Valley can be found in Appendix 1. To add insult to injury, the open cut coal mine on the edge of the Morwell town burned out of control for six weeks – placing enormous additional pressures on the health and wellbeing of the population.

This review of the literature has been based on two principal assumptions. The first is that the determinants of the poor health of the population of the Latrobe Valley are primarily within the control of the institutions and people who decide to expose other people and communities to unsafe, unhealthy living and working conditions. Institutions in the public, private, and civil society sectors and their agents make decisions about the distribution of health care, or quality educational opportunities, or about the availability of services and products (e.g. nutritious food, affordable housing, or children’s play areas. The decisions may be made at national and state level, but are also made at local levels of governance.

The second is that, communities and individuals who live and work under these conditions are, usually, the least well prepared of all the people and communities within the population to withstand the pressures of the conditions to which they are exposed. Individuals do have responsibility to take positive actions to protect and maintain their health and wellbeing – but their capability to do so is framed and shaped by the opportunities that are within their reach within the context in which they are making their health decisions. The likelihood of making positive health choices is also influenced by prevailing social and cultural norms. A history of marginalisation and ‘learned helplessness’ may become engrained in the social and cultural fabric of a local society, and it is hard to transcend this.

The Government of Victoria is to be commended for instituting the process of the Hazelwood Mine Fire Inquiry to enhance and expand the opportunities to access the resources (including health care)

that the communities in the Latrobe Valley require to enable them to achieve and sustain optimal health. In doing this, government has recognised that the circumstances in which the communities in the Latrobe Valley find themselves are unfair, unjust, and unacceptable in our socially just society. Residents of the Valley, as the study of Walker & laMontagne (2004) already shows, are well aware of this.

1.2 This review

The recommendations of the 2014 Hazelwood Mine Fire Inquiry called for further work on the mitigation of negative health impacts and improvement of the response capacity of individuals, communities and agencies in the Latrobe Valley. Two relevant strategies were identified: the establishment of a Health Conservation Zone, and the creation of a health advocate.

This background paper presents a review of the global literature on area-based health development and maintenance experiences, and efforts at the creation of community-based health and well-being leadership. It explicitly seeks to identify solutions to the problems identified in the 2014 Hazelwood Mine Fire Inquiry Report, and intends to leave further exploration of (causes of) problems to other elements of the Inquiry and appropriate government and industry (governance) mechanisms.

The social determinants of health inequities: the layers of influence



Figure 1. Victorian Health Promotion Foundation Fair Foundations approach

In order to discuss and present such solutions it will be necessary to introduce some key concepts from the worlds of public health, health promotion, and community development. The report will outline some critical concepts, e.g., public health, population health, health development, health promotion, and resilience. It will also introduce the kind of language that is used in this field, e.g., (social, proximal, distal) determinants, intersectoral action, policy and governance, participation and empowerment, etc.

The State of Victoria may in fact be better placed than many other Australian states and territories to frame and enact solutions to the complex health problems being experienced by the residents of the Latrobe Valley. In addition to a sophisticated, high quality system providing primary, secondary, and tertiary health care, Victoria also has a rich tradition of world-firsts in health promotion. These include a strict systems based tobacco control approach (leading to one of the world's lowest smoking rates) to innovations at the interface of community health, sports, and arts (through the Victorian Health Promotion Foundation, VicHealth), and a clear legislative framework that would require local governments to take wider causes and drivers of health into account in municipal public health plans (through the *Environments for Health Framework* and *Public Health and Wellbeing Act 2008*).

In particular VicHealth is at the cutting edge of novel approaches to address the complex social issues that influence health. Its Fair Foundations approach (Figure 1) describes the different layers of influence that lead to the unfair and unacceptable differences in the distribution of health in the Victorian population. Figure 1 shows that some of these influences (and possibly also the most critical ones) are deeply rooted in the structure of society, and that they are exacerbated by cultural, social, and political systems and values that are not easily changed. But the recognition of these influences, naming and identifying them, and connecting their more abstract nature (and language) to the lived experience of communities and individuals is an important start for tackling them. In their submission to the Inquiry, VicHealth highlights further operational approaches to health development:

- **Life is health is life:** Taking action to close the gap is designed for people who work in community and women's health services, Aboriginal community controlled health services and local government. It will also be useful to others who are working to close the gap. (<https://www.vichealth.vic.gov.au/media-and-resources/publications/life-is-health-is-life>)
- **Enabling Health:** Taking action to improve the health of people with a disability is designed for people who work across the disability sector. (<https://www.vichealth.vic.gov.au/media-and-resources/publications/enabling-health>)

1.3 Outline of this paper

In the following we set out to do the following:

- 📌 Describe the disadvantaged nature of the region, and the inequities that exist between Latrobe Valley and the rest of Gippsland (and between Gippsland and the rest of Victoria), but also within Latrobe Valley;
- 📌 'Flip' this perspective and argue that the population, context and environment of the region in fact is one of assets that can be mobilized effectively for health development and the reduction of health inequity;
- 📌 Show that a genuine systems perspective on health applied to service delivery hinges on an optimum primary health system. However, primary health extends beyond the biomedical gaze and includes other areas where health is made, including (but not limited to) education, justice, and safety and security. 'Primary health' is seen as 'first point of contact' in, for and on health matters;

We then move to an overview of the evidence about factors that create and sustain our health.

- An essential body of knowledge is the work by Sir Michael Marmot (carried out at local, national and global levels) on social determinants of health. In various ‘Marmot Reviews’ research shows that there is a social gradient in health: higher socio-economic status (SES) correlates with higher health status, and for each lower SES level health status is also worse. These Reviews also show, however, that the slope of the gradient can be reduced, and that health equity is possible. This would be attained mainly through action on systems that determine health.
- A historical benchmark in thinking about health development is the 1986 Ottawa Charter for Health Promotion. This paper outlines its key tenets (enable, mediate and advocate for health; reorient health services toward health promotion; create supportive environments for health; develop skills and community action for health; and build healthy public policy) and how this thinking has influenced health systems.
- A key demonstration project of Ottawa Charter principles are Healthy Cities. The paper lists eleven qualities local governments should strive to attain to commit to the Healthy Cities values, and describes how Healthy Cities around the world (but notably in Europe) have been effective in intersectoral action and policy for health equity. Essential ingredients for success are political commitment, a strong value base, vision coupled with attainable objectives, flexible guidance, and city-to-city learning.
- Another area-based health programme has been the UK Health Action Zone (HAZ) policy. We review its origins and tenets, and causes of success and failure. Again, HAZs did not unequivocally fail – they discontinued because of a lack of purpose, political commitment and support for the values they espoused.

These arguments then lead to a brief outline of the suggestions framed in the Hazelwood Mine Fire Inquiry I report to establish a Health Conservation Zone and Health Advocate:

- The idea of a Health Conservation Zone is valuable and feasible. The wording and reach of the initiative must be carefully considered in order to engage a whole-of-society perspective.
- The drive toward local leadership through the establishment of a Health Advocate, again, is sensible and should be supported wholeheartedly. However, consider the magnitude, scope and diversity of issues connected to health advocacy this is best framed as a function rather than a personal role.

The paper continues by describing mechanisms and structures that could be put in place to support and sustain a long-term area-based health development effort and a health advocacy function. Two aspects seem critical, namely community engagement in decision-making and a sensible approach to knowledge generation and utilization in support of health development:

- There is strong evidence that full participation of communities in decision-making around (determinants of) health is feasible and effective. We describe two forms of democratic processes, participatory budgeting and deliberative democracy, that enable a more practical and efficient use of resources for health.
- Good research is essential for good decision-making. However, we describe that knowledge per se is not necessarily valuable in change people’s lives and the conditions for health. The efforts toward health development and advocacy need to be monitored, measured and evaluated, but *with* people, not just *for* people, and certainly not *on* people.

- ✎ Critically, for the success of novel approaches to health it is important that individuals and communities, but also public figures, authorities and corporate leaders dare to think outside the box and traditional disciplinary boundaries. There are great benefits in engaging in such ‘boundary spanning’ efforts that would contribute to better health advocacy and brokerage.

There have been calls to make Latrobe Valley and its communities more ‘resilient’. The paper briefly reviews aspects of resilience and its determinants. An analytical framework distinguishes between structural and behavioural parameters at various levels of response to emergencies. Although these are important in post-emergency recovery, our main finding is:

- ✎ That the concept of resilient cities/communities relates to a ‘bouncing back’ to pre-disaster status quo, and if this would mean for the Latrobe Valley returning to a situation where health and wellbeing was already compromised, that being resilient would not add significant value. It would run in fact the danger of being merely a panacea, rather than a deliberate, long-term investment strategy in the people of the Valley and their assets.

In the conclusion we review our arguments and find that

- ✎ any future health strategy for the Latrobe Valley must be based firmly on principles of procedural, substantive and distributive justice.
- ✎ That there needs to be clear political commitment to a long term health development strategy that has a secure funding arrangement.

We conclude our arguments and analysis with a reflection on parameters for effective implementation. A clear plan and solid accountabilities, for example embedded in a regularly reaffirmed public statement (a ‘Charter’) with transparent community decision-making processes and an appropriate mix of capacity-building and capability support should make area-based health development and health advocacy feasible and effective.

2. The Latrobe Valley – a challenged environment or a valley of assets?

The 2014 Hazelwood Mine Fire Inquiry Report paints a clear picture that, understandably, the Latrobe community feels helpless, under attack, and left to its own devices. The level of trust in authorities that should have dealt with the emergency and its consequences may not have been high before the fire, and was reduced further as a consequence. The response of existing local professional infrastructure (e.g., health services and professionals, emergency response agencies, but also the education system and social work organisations) has been described as fragmented and wanting. From a post-hoc, analytical vantage point this paints a bleak picture of a community under threat.

In 2015, the situation revealed by the data and communities' own words (during community consultations and Inquiry submissions) is one of a community that has been marginalised and neglected for decades, excluded from decision-making by governments and the private sector, and denied the level of services and opportunities that are needed, by all communities, to survive and thrive.

The consequences of the history of neglect and marginalisation are reflected in the Latrobe Valley communities' higher levels of poorer physical and mental health than the Victorian average. The actions taken to reverse this situation will require high levels of community engagement and commitment, and the active engagement and commitment of the institutions and people responsible for governance to work jointly so that communities have ongoing access to the opportunities and resources they need to achieve and sustain good health. It is important not to leave the work to the communities, themselves, alone. It is true that many communities that have experienced exclusion from social decision-making, socioeconomic deprivation, and exaggerated exposure to hazardous working conditions and to poorly planned, poorly maintained physical facilities and environments that characterize the Latrobe Valley community are also resilient. Aiming to create resilience without changing the resources, services, and the environments available to communities is unlikely to succeed.

Naturally, resolving acute problems is the remit of many professions and agencies. The public health field in particular has a firm tradition in gathering evidence about "what works" from a deficit point of view, that is, seeking effective action to address faulty or suboptimal (health) conditions. Morgan, Davies and Ziglio (2010) in a landmark collection of essays flip this perspective. They identify that there is a tendency to focus on identifying problems and needs of populations that require professional resources and high levels of dependence on hospital and welfare services. This leads to policy development that focuses on the failure of individuals and local communities to avoid disease rather than their potential to create and sustain health and continued development. Whilst deficit models are important and necessary to identify levels of needs and priorities, they have some drawbacks and need to be complemented by asset perspectives. A key notion here is that deficits cannot (only) be located within the sphere and control of individuals and communities (e.g., ill health and unhealthy choices) but also in resources, facilities and opportunities that are available to them.

The asset model presented by Morgan, Davies and Ziglio (2010) aims to redress the balance between evidence derived from the identification of problems to one which accentuates positive capability to jointly identify problems and activate solutions, which promotes the self-esteem of individuals and communities leading to less dependency on professional services. This can lead to an increase in the amount and distribution of protective/promoting factors that are assets for individual and community level health. The asset approach should be seen as the 'shiny' side of the coin – the deficit approach remains valuable in responding to acute crises (be they at individual, community or societal

levels). But in evidence terms at least, the asset model may help to further explain the persistence of health and well-being inequities despite the increased efforts to do something about them.

Harrison et al. (2004) have defined ‘health assets’ as resources that individuals and communities have at their disposal, which protect against negative health outcomes and/or promote health status. These assets can be social, financial, physical, environmental or human resources (e.g. education, employment skills, supportive social networks, natural resources, etc.) (Harrison et al. 2004). As such, a “health asset” can be defined as any factor (or resource), which enhances the ability of individuals, groups, communities, populations, social systems and/or institutions to maintain and sustain health and well-being and to help to reduce health inequities. These assets can operate at the level of the individual, group, community, and/or population as protective (or promoting) factors to buffer against life’s stresses. Obviously, a balance needs to be struck between ‘intangible’ assets (skills, knowledge, intents and aspirations) and ‘hardware’ assets of a community – schools, work, infrastructure, etc. And even when both are available there may still be a disconnect between the two – individuals, families and communities may want to improve their health, but insidious factors such as (health) literacy, culture, sexism and racism may stand in the way of full and equitable access and use. An asset-based health approach should carefully take into account all elements of a complex individual, social and ecological environment.

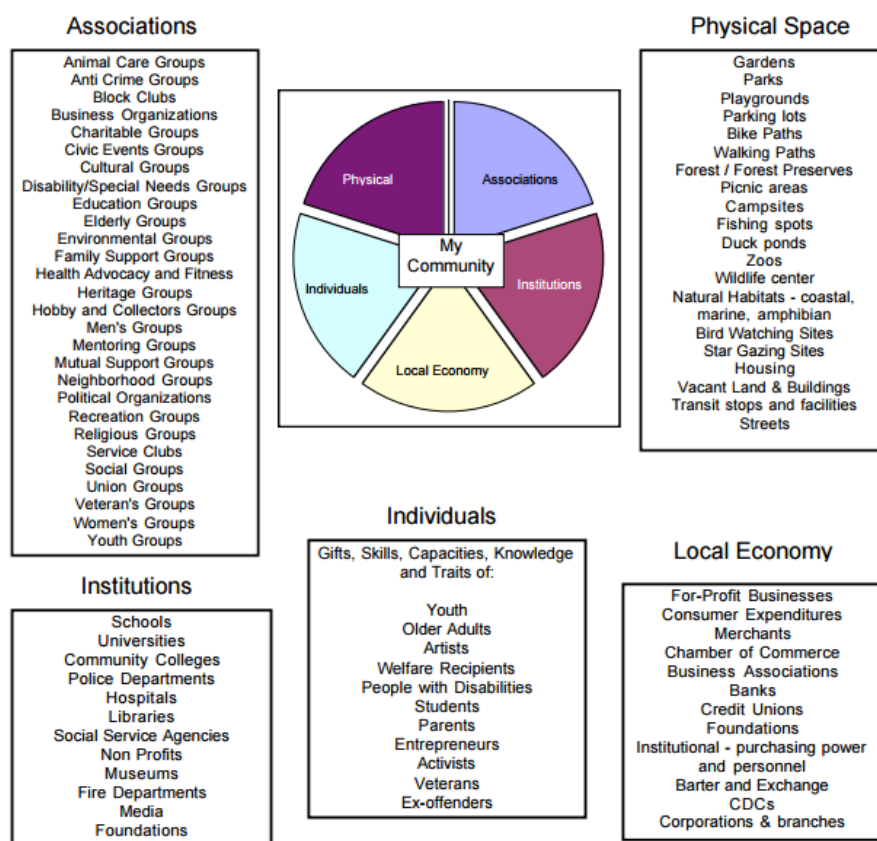


Figure 2. Mapping community assets. Kretzmann & McKnight (1993) and Kretzmann, McKnight & Punttenney (2005)

The father of asset-based community development (ABCD) is John McKnight. He sees community assets as all potential resources in a community—not only financial resources but also the talents and skills of individuals, organizational capacity, political connections, buildings and facilities, and so

on (Kretzmann & McKnight, 1993). Some authors (e.g., Page-Adams & Sherraden, 1997) criticize such a broad conceptualization as such assets might be taken to mean “all good things” and in order to make assets more tangible prefer to frame them in a more economic manner. Such a view denies, in our view, the fact that (social and health) equity depends on much more than only financial and resource capability and also reflects culture, history and heritage, and context (Wilkinson & Pickett, 2010).

Kretzmann & McKnight (1993) and Kretzmann, McKnight & Puntenney (2005) provide practical guidance as to the dimensions of community asset mapping and structuring (Figure 2).

In balancing the deficit approach with the asset approach it may be critical to take a closer look at the particular roles that the health system can (and should) play in reducing inequities in health and in promoting health in communities such as the Latrobe Valley. In addition to its roles in protecting, promoting, and maintaining the health of populations, and in providing diagnosis, care, and rehabilitation for people who are ill or injured, the health care system is one of the largest and most important economic and employment sectors in high income nations. The power, mandate, and resources invested in the nation’s health care system make it a vital leader of and contributor to the actions that are needed to redress the inequitable health being experienced by the population of the Latrobe Valley.

Although modern health care systems such as those that have evolved in Australia have been very effective in contributing to improvements in health and life expectancy, they have not reformed as expected – to assume a more powerful, effective role in promoting health. As early as 1973, Canadian top bureaucrat Laframboise criticized the contemporary health care system as being a ‘sick care system’. Despite the early recognition of the need for change reflected in the Ottawa Charter for Health Promotion (1986), calls for the reorientation of health systems have been the least amenable to innovation and change (De Leeuw, 2011). De Leeuw (2012) identifies the strength and rigour of medical professions as one of the reasons that ever since the birth of ‘modern medical education’ in the early 20th century there has been a process of ‘reform without change’ (Hafferty, 1998): the calls for health professional curriculum reform to respond to the inclusion of greater social justice, community orientation and true problem-based and solution-oriented perspectives in the very core of the profession have been rhetorical rather than operational. Such views, naturally espoused by many compassionate individual professionals, are not necessarily an integral part of the health (or sick care) system.

The world views of clinical and public health professionals about the causes/determinants of health is one potential reason for the resistance of clinicians to change. If poor health and early death are considered to be the blind effect of nature combined with individual responsibility, alone, for positive health choices, the response is to ‘care for people who are affected’. If, on the other hand, poor health and early death are considered to be a consequence of human decisions (intentional), combined with social responsibility for the options available to individuals, the response is more likely to be ‘health promotion and social development’ (Stone, 2002).

2.1 Asset-based health development: evidence of world best practice

Morgan, Davies and Ziglio (2010) and Kretzmann & McKnight (1993) have compiled compelling arguments about the value of asset-based health development. They see this approach not in competition with ‘standard’ health care delivery systems and traditional prevention models, but as an important, and hitherto underemphasized, strategy to build healthy and resilient communities.

A number of community development tools are available and should be used, not in a top-down and (re)enforced manner, but introduced with care and respect in often challenged communities through peer activism and existing infrastructures at 'street level'.

A number of tools and support mechanisms exist to stimulate developments in this field, e.g.,

- Our Community (www.ourcommunity.com.au)
- The Community Tool Box (<http://ctb.ku.edu/en>)

These academic and practical approaches emphasise the critical importance of respect for community expression, longevity of programmes and policies, careful mapping and involvement of all stakeholders, equity in engagement and outcomes, and sustainability of activities and organisations set up to shape community health development.

Implicit in this approach to community development is the notion of cultural communities (Stone, 2002) – in which members share decision-making, decide on and implement actions to improve their health, directly. The health promoting component of the health development arises from horizontal social capital, combined with the added power of working with local stakeholders and neighbours, and the added resources that are available as a consequence of collaboration.

However, there is increasing evidence that political communities (Stone, 2002) are also required to reduce existing inequities in health – and to prevent inequities from arising in the future. The purpose of such communities is to engage, directly and by right, in decision-making – not as consultees or invited representatives, but as decision-makers who are the equal of others 'at the decision-making table' (Habibis, Memmot et al, 2013).

This is challenging for the health system – and indeed, for all systems – to recognise that in the absence of the people who are most affected by the decisions being made, the reform of systems or programs, or the implementation of new initiatives are unlikely to address the causes of inequities and unlikely to succeed.

2.2 Integrated health systems

The health system is a powerful partner in local health development and merits some analysis in this context. What is a health system? According to the World Health Organization, a health system is 'all the activities whose primary purpose is to promote, restore and/or maintain health' (WHO 2013). Supposedly, a good health system 'delivers quality services to all people, when and where they need them'.

While the configuration of services varies from country to country, common elements include robust funding mechanisms, a trained workforce, reliable information on which to base decisions and policies, and well-maintained facilities and logistics to deliver quality medicines and technologies (WHO 2013).

Australia's health-care system is a multi-faceted web of public and private providers, settings, participants and supporting mechanisms. Health providers include medical practitioners, nurses, allied and other health professionals, hospitals, clinics and government and non-government agencies. These providers deliver a plethora of services across many levels, from public health and preventive services in the community, to primary health care, emergency health services, hospital-based treatment, and rehabilitation and palliative care. Public sector health services are provided by all levels of government: local, state, territory and the Australian Government. Private sector health service providers include private hospitals, medical practices and pharmacies.

To consider the multitude of agencies, professionals, governing and professional bodies, technology suppliers and financiers as ‘a system’ might be considered an ironic understatement. As a structure, a system may be considered as “a set of things working together as parts of a mechanism or an interconnecting network; a complex whole” sometimes governed by “a set of principles or procedures according to which something is done; an organized scheme or method”. A systems perspective would assume transparency of purpose, joint commitment to common outcomes, and seamless integration between components of the constituent parts (in health care often referred to as ‘continuity of care’ or ‘chain care’).

Systems science posits the following:

- A system has structure, it contains parts (or components) that are directly or indirectly related to each other;
- A system has behaviour, it exhibits processes that fulfil its function or purpose;
- A system has interconnectivity: the parts and processes are connected by structural and/or behavioural relationships;
- A system's structure and behaviour may be analysed via subsystems and sub-processes into elementary parts and process steps;
- A system has behaviour that, in relation to its surroundings, may be categorized as both fast and strong.

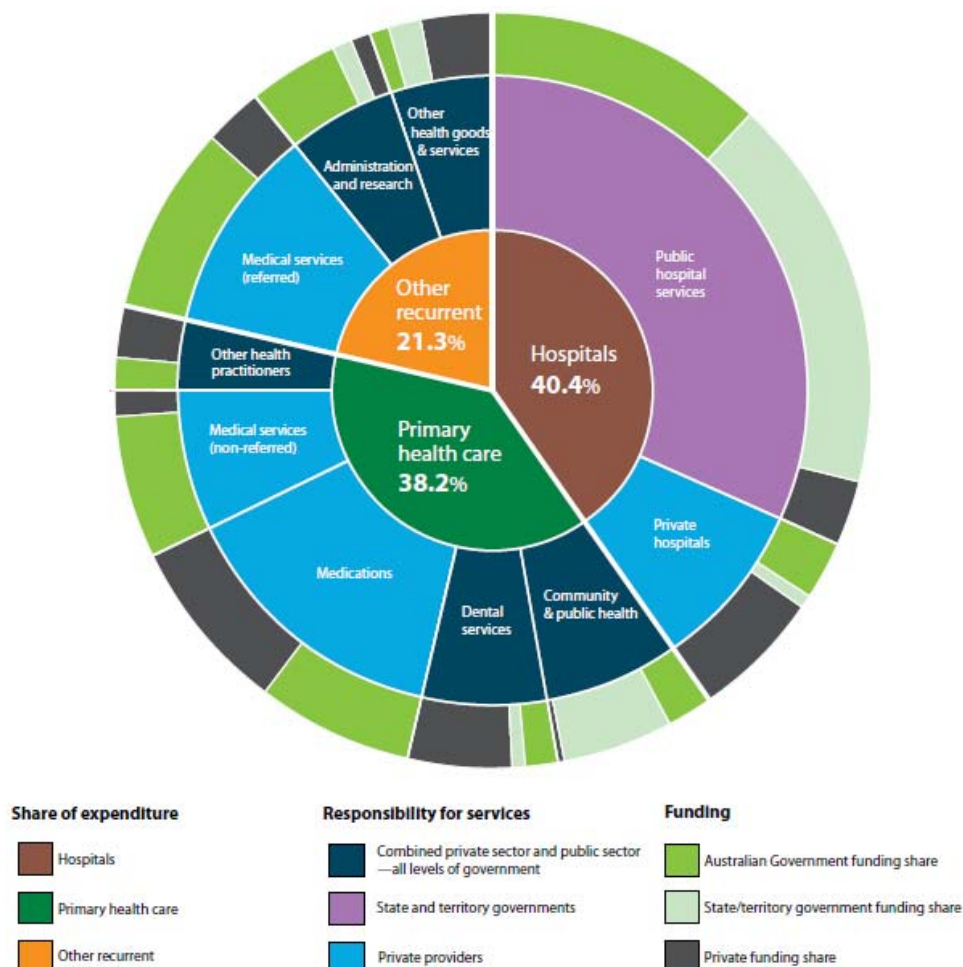


Figure 3. The Australian healthcare system – responsibilities and funding. Australian Institute of Health and Welfare (2014)

The Australian Institute of Health and Welfare regularly reviews structure and performance of our health ‘system’ (figure 3). This graph shows not only dimensions between public and private health care provision, but also varying scales of financing care and cure. There are inherent tensions between the different governance levels and parameters, and a coordinating mechanism or actor should be an independent and credible agent or organisation at the centre of the ‘system’ (figure 4). Navigating this jumble of actors and arrangements is not easy for individual patients or – for population health – families, communities and organizations. Doing this would require a sophisticated level of health literacy.

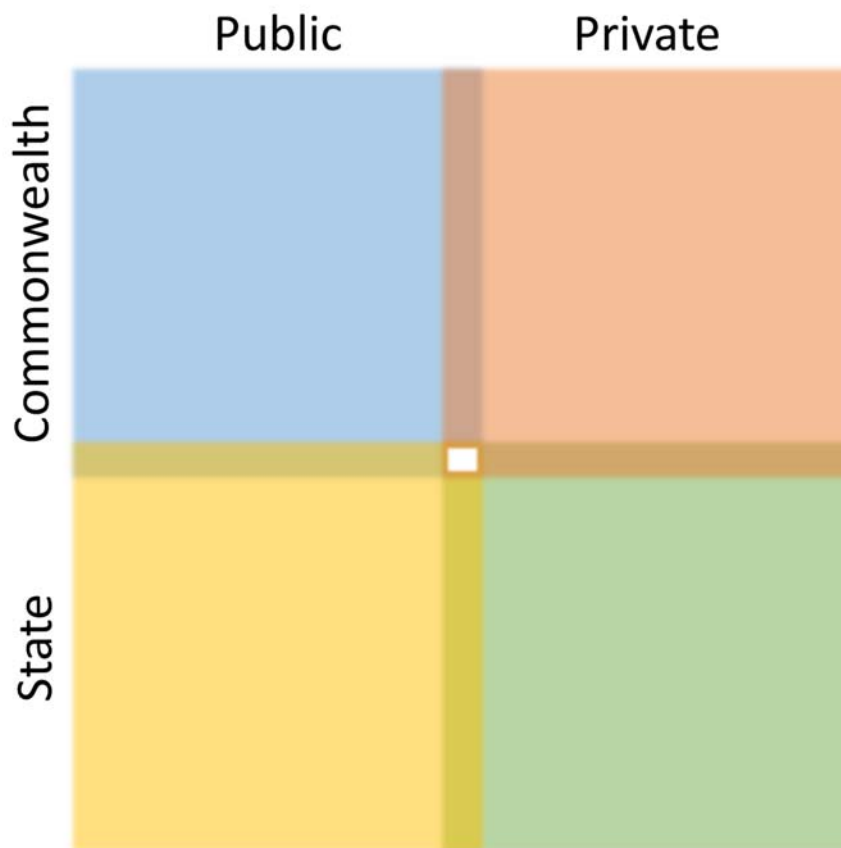


Figure 4. The place of a coordinating agent/agency in the competing governance areas of the Australian healthcare ‘system’.

The fact that many health ‘systems’ are dysfunctional and wasteful of precious resources has given rise to international attention to develop ‘health systems integration’: Armitage et al. (2009) provide a review of the literature on this subject and show that the parameters of the research into this arena are probably as diverse and complex as the subject matter itself – there is no agreed-upon single definition or decisive indicator that integrated (or integral) health systems yield better health for individuals. This review suggests that integrated (or integral) health systems may respond faster to health incidents, can be managed more easily, and may be cheaper to run, but each of these findings is offset by research that does not support such outcomes. This is understandable, as (health) systems science should recognize the unique, dynamic and contextual nature of open complex adaptive systems.

At least at a logical and rhetorical level, clear accountabilities and terms of reference for the constituent parts of the system should make it easier for users of the system (both individual patients, but

also referral professionals in the chain of care) to understand what services and facilities can be used and are offered at different stages of a health ‘career’ – and would make it clear to health care providers what is expected of them in a range of threats to health at individual and population levels.

Valentijn et al. (2013) make a compelling argument that primary care providers in the health system have a critical role in integrating appropriate care, cure, prevention and health promotion (Table 1).

Concept	Key elements
Primary care: Adapted from Starfield (1992 and 2005) [10, 18]	<p>First contact care: Implies accessibility to and use of services for each new problem or new episode of a problem for which people seek health care</p> <p>Continuous care: Longitudinal use of a regular source of care over time, regardless of the presence or absence of disease or injury</p> <p>Comprehensive care: The availability of a wide range of services in and their appropriate provision across the entire spectrum of types of needs for all but the most uncommon problems in the population</p> <p>Coordinated care: The linking of health care events and services so that the patient receives appropriate care for all his/her health problems, physical as well as mental and social</p>
Integrated care: Adapted from Fulop et al. (2005) [19], Leutz (1999) [17], Contandriopoulos et al. (2003) [20] and Delnoij et al. (2001) [21]	<p>Horizontal integration: Relates to strategies that link similar levels of care</p> <p>Vertical integration: Relates to strategies that link different levels of care</p> <p>System integration: Refers to the alignment of rules and policies within a system</p> <p>Organisational integration: Refers to the extent to which organisations coordinate services across different organisations</p> <p>Professional integration: Refers to extent to which professionals coordinate services across various disciplines</p> <p>Clinical integration: Refers to the extent to which care services are coordinated</p> <p>Functional integration: Refers to the extent to which back-office and support functions are coordinated</p> <p>Normative integration: Refers to the extent to which mission, work values etc. are shared within a system</p>

Table 1. Key concepts in integrated care (Valentijn et al., 2013)

From the above figures 3 and 4, as well as the range of parameters associated with *primary care* (first contact; continuous; comprehensive; and coordinated) as well as *integration* (horizontal; vertical; system; organizational; professional; clinical; functional; and normative) it will be clear that there are no ‘easy fixes’ in securing an appropriate health care system that is capable to respond adequately, effectively and appropriately to individual health challenges. At the population level this capacity may be diminished as responsibilities and accountabilities at this level are generally less strictly codified than in individual quality of care protocols.

In Australia, primary health networks have been on the agenda of many successive governments, and their performance has been evaluated, too, with varying degrees of success. Some uncertainty remains as to the priority of primary health care in Commonwealth and state health care policy, and some of the current Primary Health Networks (established as per 1 July 2015) still seem to be transitioning from the older Medicare Local parameters (a short-lived Commonwealth initiative to ground multidisciplinary and interprofessional primary health services and activities in consultative community governance – 2011-2014).

The Gippsland Medicare Local published its Comprehensive Needs Assessment in June 2014 and identified seven priority health needs (Aboriginal health; Access to services; Ageing; Children and families; Chronic disease; Mental health; Young people). As suggested in the introduction, Latrobe Valley is particularly vulnerable already in most of these areas, and it is worthwhile to highlight in particular the number of general practitioners in the area (figure 5): Latrobe Valley, in spite of its relatively central location and population centers, is the second-lowest in terms of number of GPs per thousand population. At the same time the compilation of health indicators suggests that a stronger primary health professional presence would be warranted.

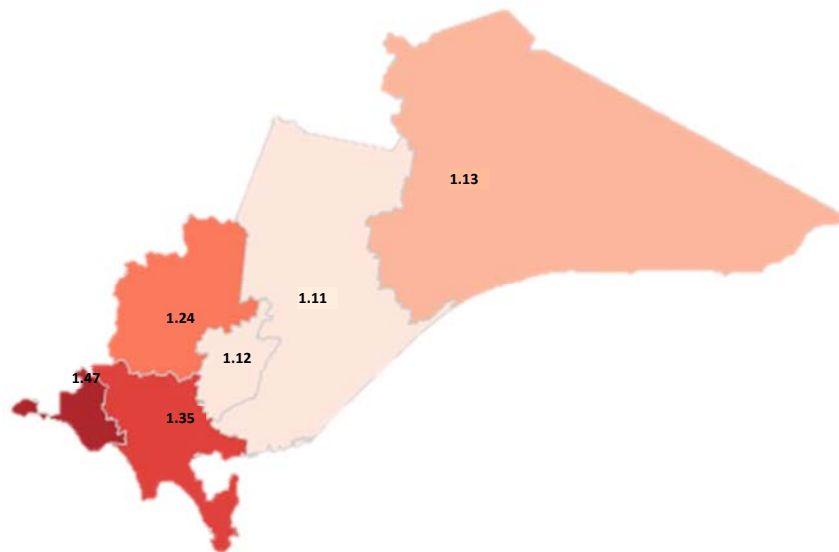


Figure 5: General practitioners per 1000 population, Gippsland Local Government Areas (Larter Consulting, 2014)

It must be noted that GPs do not form the full complement of services and professionals that are the primary health care system (although they do form the backbone of it), but a low number of GPs in an area is a strong indicator of low primary health care presence in general.

2.3 Integrated health systems: evolving evidence

Different national contexts, traditions, and professional positions have led to many different ways in which integrated health systems have evolved. The brief literature review that was introduced above was largely inconclusive with respect to the effectiveness and efficiency of integrated health systems, except for the observation that primary health care (the first point of health service contact, closest to the community) has an important role to play. This role has been identified as ‘the gatekeeper’ or ‘threshold’ by some, and as ‘the patient advocate’ and ‘broker’ by others. We will return to the latter below.

However, primary health care in itself also remains a complex and contested field. In a recent preliminary advice (Primary health care advisory group, 2015) a government advisory group sees a highly ambitious – but generally embraced - remit for the sector: “...going to the doctor when (...) unwell means seeing their general practitioner. Primary health care professionals also include nurses, nurse practitioners, allied health professionals, midwives, pharmacists, dentists and Aboriginal health practitioners. The types of services delivered by primary health care include a continuum of health promotion, prevention and screening, early intervention, clinical treatment and chronic condition management.” From an international perspective, this may be seen as a limited and contentious view of primary care. In terms of professional services it excludes, for instance, school health services, community dentistry, social work and health advisory bodies in other sectors of daily life, e.g., in housing, transport and work.

The challenge may be illustrated best when reviewing a recent Australian innovation, the ‘GP Super-clinic’ – although the Department of Health (2013) does not wish to prescribe in specificity what

such a Superclinic is and should do, it is clear that – privately operating – general practitioners are at the core of its operation.

Primary health experiences from other countries suggest that other modalities for most-proximate health services are also possible – from members of the community trained in basic health and triage capabilities acting as hosts and pivots of a community medical centre (Den Bosch, The Netherlands), to a ‘health shop’ that offers advice and referrals for self-help organisations (Horsens, Denmark), health posts staffed by volunteers and nurses (Central America) and multidisciplinary health centres where explicitly a social model of health is embraced and professionals from many disciplines offer ‘one window’ services (Rotterdam, The Netherlands). In the latter example it is recognised that often health problems have a social cause and may impact on socio-economic well-being – a divorce may stem from domestic violence, may result in homelessness and mental health issues, safety concerns, and schooling issues for children. ‘One window’ community health services would provide seamless services between counselling, law enforcement, social work, community nursing, education support, etc.

There is, therefore, a large and growing body of evidence of what constitutes a comprehensive, high quality health care system that contributes, optimally, to promoting, protecting, and maintaining the health and wellbeing of populations.

Australia in general, and Victoria in particular, has one of the world’s best such systems – including funding mechanisms that reduce (although do not eliminate) cost as a barrier to diagnosis, treatment and care, and the inclusion of systems for public health and health promotion that are embedded in the system. Communities such as the Latrobe Valley have higher than average levels of need for both health care at all levels (primary, secondary, and tertiary), and for preventive services and population-wide health promotion. However, it is also the case that such communities have more limited access to the range and quality of services and programs they need – for a variety of reasons (Levesque, Harris, Russell, 2013). Levesque, Harris and Russell (2013) conceptualise these reasons in two categories - characteristics of the health care delivery system, and characteristics of the patients or community members needing health care (including preventive care). The characteristics of the health care system determining patients/community members' opportunities to have their health care needs fulfilled were: approachability, acceptability, availability and accommodation, affordability, and appropriateness. The characteristics of patients were: ability to perceive, ability to seek, ability to reach, ability to pay, and ability to engage. The model highlights the need for the healthcare delivery system to examine the ways in which it enables or inhibits patients from obtaining the health care they need as well as focusing on enhancing the capabilities of patients.

The health sector has both the mandate and a renewed opportunity to work with the Latrobe Valley communities (and other relevant organizations) to update the health system to meet global standards of best practice, and to find new ways to ensure that all residents of the Latrobe Valley have equitable access to the services.

3. Factors that promote or challenge the health capacity of populations

An often used definition of health is found in the Constitution of the World Health Organization (1948):

Health is a state of complete physical, mental, social and spiritual well-being and not merely the absence of disease or infirmity.

This is an aspirational view of health – very few people would be considered healthy by this definition. A study of the literature yields at least 600 other definitions, ranging from epidemiological-statistical approaches (standardizing ‘health’ as deviating from the norm) to radical planetary reform ideas. The microbiologist-philosopher René Dubos recognised the profound interface between individual and social health and defined health as

...the expression of the extent to which the individual and the social body maintain in readiness the resources required to meet the exigencies of the future.

In the context of the concerns and contexts in the Latrobe Valley population, and more generally in populations that suffer inequitably from avoidable disease, injury and premature mortality around the world, this approach seems valuable as it explicitly regards health as both an individual as well as a social attribute. Embracing a social model of health will be critical for the sustainability and resilience of population health. This section will present some of the thinking about this model, and evidence that it makes a difference to health. It will argue that investment in/for health happens mostly outside the health care delivery sector and needs to be respectfully grounded in a deep recognition of community needs.

It must also be grounded in a deep reflection on the part of decision-makers – within and outside the health sector – about the fairness and justice of the decisions they are making about the distribution of resources necessary for health within communities such as the Latrobe Valley community. This reflection will need to include finding ways to include previously marginalised communities in decision making.

3.1 Social determinants of health

The biomedical model of health in the strictest sense assumes that the locus of disease causation is the blind impact of nature – affecting individuals by chance and randomly. In this model, ill health is the result of random exposure to disease-causing agents (e.g., bacteria, viruses, toxins). In the case of chronic conditions, the extension of the biomedical model saw the emphasis fall on individuals’ behavioural decisions as the principal ‘cause’ of disease.

Modern health and disease practice has moved beyond this model. Most medical doctors would acknowledge that family and living conditions influence an individual’s response to disease-causing agents and the capacity of a person to respond to those agents and curative interventions. They take a broader, more community-based, perspective to healthcare delivery. But many health practitioners are still challenged in embracing a full-scale social model of health which incorporates and values cultural, social, economic and (physical) environmental factors as critical determinants of individual and population health. Yet, the existence of a social gradient in health (that is, the fact that health parameters like mortality, morbidity and life expectancy follow patterns of the distribution of wealth, prestige, status and education in society) firmly demonstrates that ill health is profoundly determined by such social determinants of health. The acting chair of the Consumers Health Forum,

Rebecca Vassarotti, in a 2013 presentation presented this social gradient for four disease groups (figure 6).

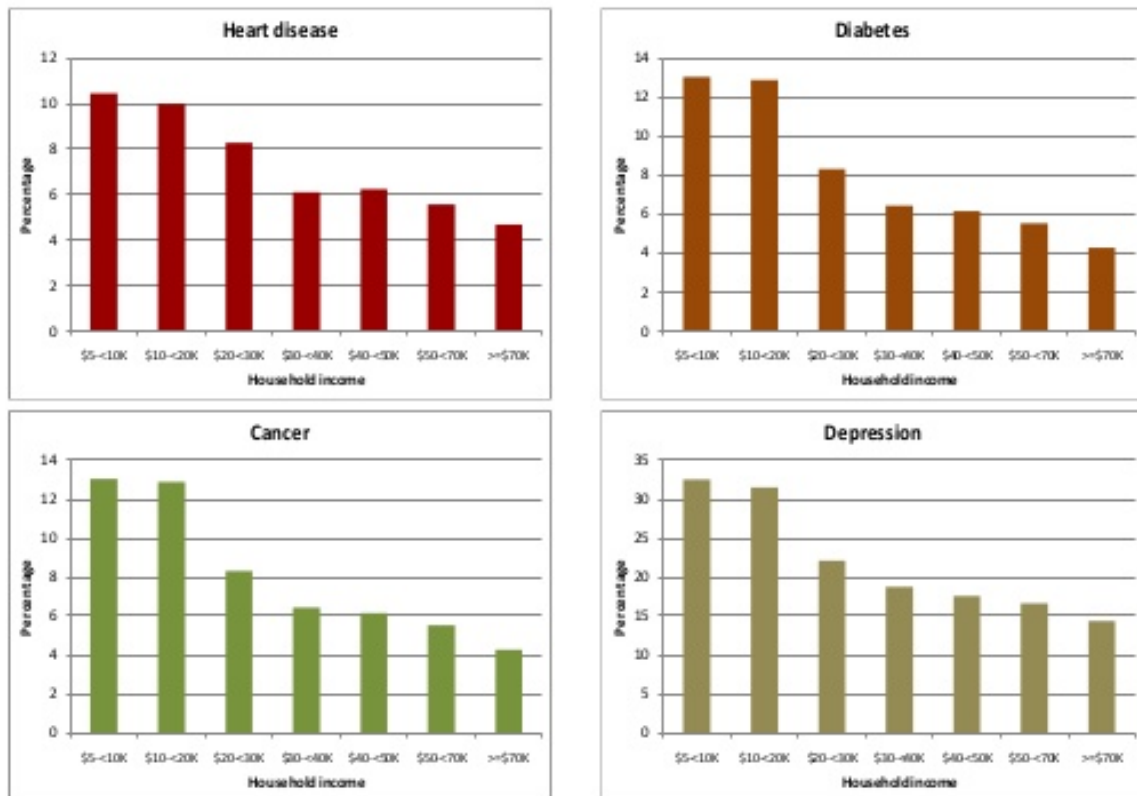


Figure 6. The social gradient of health in four Australian disease categories, Vassarotti (2013).

The existence of this social gradient in recent years has moved from a mere epidemiological curiosity to a political issue. Increasing numbers of governments around the world endeavour to place health equity and its causes high on their political agendas. This happens with varying degrees of success.

There have been arenas of governance with such a strong belief in their equitable nature that a debate around the sheer existence of health inequity in those societies and communities was unimaginable. There are also cases where existing inequity is attributed to personal lifestyle choice, rather than broader determinants of health. This so-called 'lifestyle drift' can be inspired either by uninformed behaviourist tendencies (assuming that all human behaviour is entirely within the control of the individual), or by political ideologies like conservative liberalism (assuming that the fate of societies can be entirely attributed to the resourcefulness of its individual members and their actions in a free market).

The evidence, however, demonstrates that individual choice is determined by social, environmental, cultural, economic, natural and built environments. Clearly these interact at extremely intricate levels. They are also the result of political preference, and commercial interest.

In 2005 the World Health Organization established the Commission on Social Determinants of Health, chaired by Professor Sir Michael Marmot, to identify the existence and impacts of social determinants of health. With a substantive research staff in Geneva, extensive global 'knowledge networks' that developed lengthy research reports on areas of interest such as gender, urban development, globalization, finance, etc., and a group of prestigious Commissioners (including Australian

professor Fran Baum), the Commission published its report 'Closing the Gap in a generation' in 2008. In receiving the report, the Director General of WHO Dr. Margaret Chan stated that beyond anything else, social determinants of health impact, create and sustain health inequities, and that it should be a commitment of the global community to respond not just in rhetoric but in concrete action.

Figure 7 shows the conceptual model that the Commission applied to map determinants of health and their impacts on health and health equity. It is noteworthy that the assumption is that all aspects of this model are amenable to change – its elements do not describe a 'natural order of things' – there is nothing 'natural' about inequity (although inequality may always persist). The model has been applied at the global, regional, national and local levels. In particular the 'Marmot Commissions' for England and Malmö (Sweden) provide a wealth of insight into the potential and opportunities for local government to take comprehensive and integral action on complex health challenges.

Both the England report ('Fair Society Healthy Lives') and the Swedish work ('Socially Sustainable Malmö') stress the interrelation between policies that aim to

- Give every child the best start in life
- Enable all children, young people and adults to maximise their capabilities and have control over their lives
- Create fair employment and good work for all
- Ensure healthy standard of living for all
- Create and develop healthy and sustainable places and communities
- Strengthen the role and impact of ill-health prevention

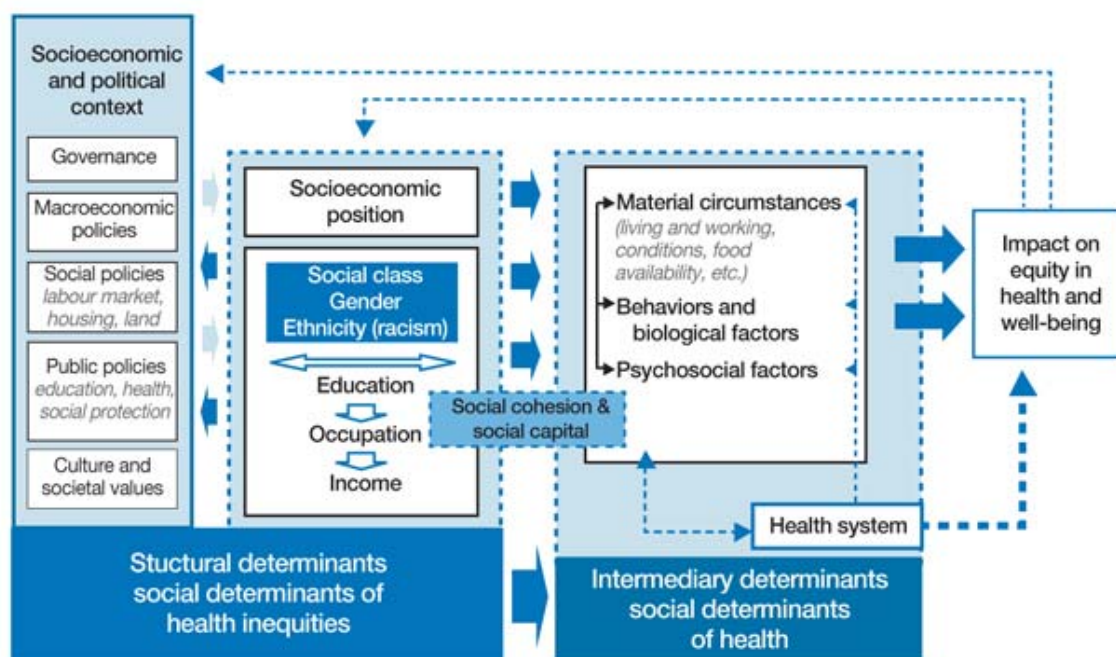


Figure 7. CSDOH conceptual model

In Australia, the Senate's Community Affairs References Committee (2013) responded to the WHO Report and noted that addressing the social determinants of health would yield significant benefits:

- 500,000 Australians could avoid suffering a chronic illness;

- 170,000 extra Australians could enter the workforce, generating \$8 billion in extra earnings;
- Annual savings of \$4 billion in welfare support payments could be made;
- 60,000 fewer people would need to be admitted to hospital annually, resulting in savings of \$2.3 billion in hospital expenditure;
- 5.5 million fewer Medicare services would be needed each year, resulting in annual savings of \$273 million; and
- 5.3 million fewer Pharmaceutical Benefit Scheme scripts would need to be filled each year, resulting in annual savings of \$184.5 million each year.

Responses to Social Determinants of Health

However, it appears that none of the Community Affairs References Committee recommendations (table 2) have been taken forward in tangible and operational ways by (Commonwealth and State) governments, although ‘parastatal’ organisations such as VicHealth clearly commit to a course of action that is in line with these recommendations.

LIST OF RECOMMENDATIONS

Recommendation 1

4.45 The committee recommends that the Government adopt the WHO Report and commit to addressing the social determinants of health relevant to the Australian context.

Recommendation 2

4.63 The committee recommends that the government adopt administrative practices that ensure consideration of the social determinants of health in all relevant policy development activities, particularly in relation to education, employment, housing, family and social security policy.

Recommendation 3

4.71 The committee recommends that the government place responsibility for addressing social determinants of health within one agency, with a mandate to address issues across portfolios.

Recommendation 4

5.36 The committee recommends that the NHMRC give greater emphasis in its grant allocation priorities to research on public health and social determinants research.

Recommendation 5

5.38 The committee recommends that annual progress reports to parliament be a key requirement of the body tasked with responsibility for addressing the social determinants of health.

Table 2. Recommendations, Senate’s Community Affairs References Committee (2013)

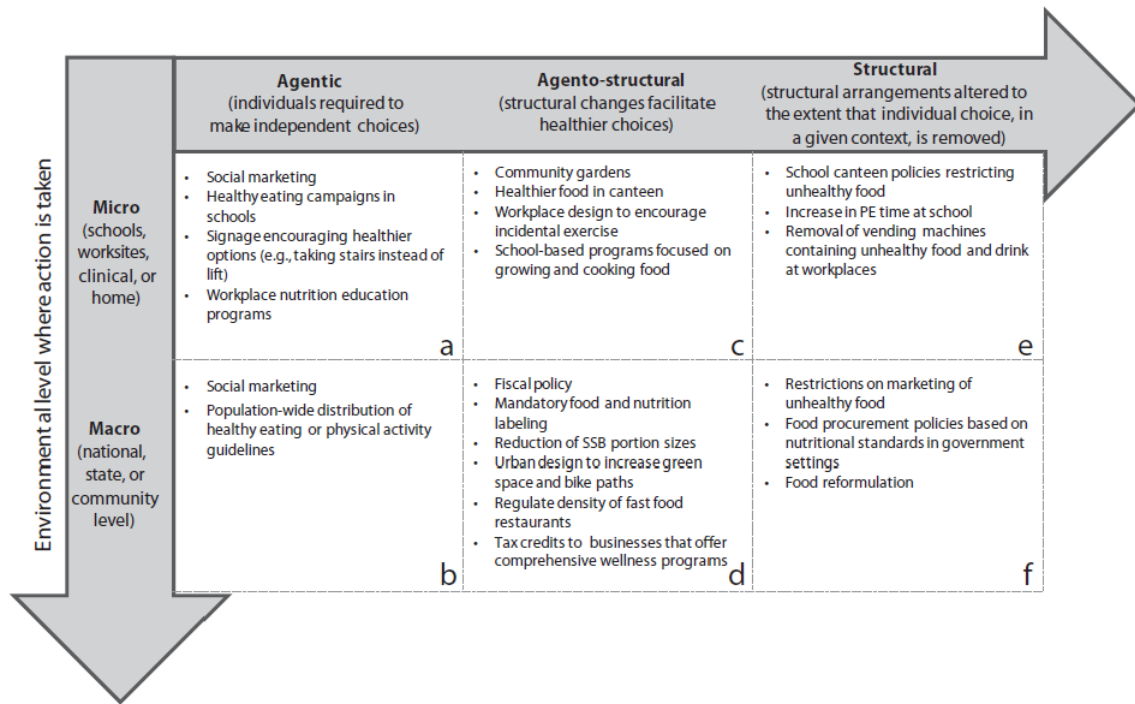
If the Victorian government had attended to and taken up these recommendations it would also have taken into account the significant (social) gains that would be possible in comprehensively addressing issues around the Hazelwood mine (Ward & Power, 2015). Social costs of the Hazelwood power plant are estimated to approach \$1 billion, and in the context of the Senate’s social determinants recommendations it may well be that a systemic approach to coal mining and power generation in Victoria would have significant social, economic and health benefits. Such a study, however, has yet to be undertaken, although a key operator in the Australian renewable energy arena (Meridian Energy Australia) has put forward proposals in this field.

This leads to a reflection on appropriate operational responses to the issues that are raised in relation to health equity, the social gradient, and social determinants of health. Typically, epidemiologists' analyses of these issues remain at a level where the issues are identified. Marmot (2013) has championed an approach called 'proportionate universalism': "...we need not only to deal with poverty but to examine the whole distribution. Hence the need for universalist policies with effort proportionate to need, what we have called proportionate universalism." Australian scholars Gemma Carey and Brad Crammond (2014) have attempted to clarify the programme logic behind 'universalism with proportionate effort': universalist policies tend to advantage the upper end of the social gradient, and it is unclear under which conditions those in need would in fact benefit more so as to reduce (health) inequity. Carey and Crammond went on to identify a further, more nuanced set of potential policy responses that would more explicitly reduce inequity in particular contexts.

The (in)famous 'inverse care law' (Tudor-Smith, 1975) still applies: those that need it most get it least – this is certainly true for health care, and for disease prevention and health promotion. It shows that if it is to be possible to reduce risks to health in very high risk social groups, explicit efforts are needed both to work directly with the groups (who are almost always marginalised from decisions about program design or delivery), and to ensure that, for example, mass media campaigns include marginalised groups, explicitly. In fact, in some cases 'more of the same' increases rather than reduces health inequity. In particular mass media behaviour change programmes and workplace smoking bans increase health inequity, and systemic fiscal policy may reduce inequities (Lorenc et al., 2013).

The reality of intervention development for equitable health promotion, however, is as always more complex than this analysis might suggest. Smedley & Syme (2001), drawing on a large systematic review produced by the US Institute of Medicine, show that effective interventions for health promotion and the reduction of health inequities, are *combinations* of regulatory, facilitative and communicative/behavioural actions. A qualification of the Lorenc et al. (2013) findings would be that, in singularity and isolation, systems interventions have more potential than individualist interventions. But combinations and permutations of intervention types may well yield synergy leading to more effective action for health equity. This is the emerging evidence, also, from community-based interventions in dealing with obesity, e.g., Borys et al., 2012 (the EPODE approach that is one of the foundations of the Healthy Together Victoria systems approach to health development). Backholer et al. (2012) developed an evidence-based framework to guide the selection of intervention strategies to reduce overweight and obesity and to reduce inequity. Their review of evidence found that interventions that change environments, norms, and products are more likely to reduce socioeconomic inequities in weight than interventions that rely on individual agency to achieve their effect. They constructed a model that differentiates between interventions that depend upon individual agency to achieve their effect and structural interventions that obviate the need for individual agency (or reduce it). Agentic interventions that rely on persuading and informing individuals to make personal choices about their health behaviours have been shown to increase socioeconomic inequalities. Structural interventions, such as food procurement policies and restrictions on unhealthy foods in schools, have shown equal or greater benefit for lower socioeconomic groups. Many current obesity prevention interventions belong to the agento-structural type – a mix of both approaches. Although they do change the environments in which health behaviours occur, they still require a level of individual agency to make behavioural changes. Examples of agento-structural interventions include workplace design to encourage exercise and fiscal regulation of unhealthy foods or beverages. The evidence of the impact of these interventions on the health of people of low socioeconomic status

is, however, unclear. Backholer et al confirmed that limiting further increases in socioeconomic inequality in the incidence and prevalence of obesity will require the implementation of structural interventions (figure 8).



Note. PE = physical education; SSB = sugar-sweetened beverage. Parts a and b show interventions more likely to increase the socioeconomic gradient in weight. Parts c and d show interventions in which the impact on the socioeconomic gradient in weight is uncertain. Parts e and f show interventions unlikely to increase the socioeconomic gradient in weight.

Figure 8. Framework for the likely impact of obesity prevention strategies on socioeconomic inequalities in population weight (Backholer et al., 2012)

3.2 Ottawa Charter for Health Promotion

Due to a growing recognition that health lifestyle change through traditional behavioural (health education) interventions had limited efficacy, and needed to be embedded in broader social change, the World Health Organization with Health Canada and the Canadian Public Health Association organised the first international conference on ‘the move toward a new public health’ in Ottawa, in 1986. The conference, followed by a series of global health promotion conferences, culminated in the adoption of the Ottawa Charter. The Charter defined health promotion as

...the process to enable individuals, groups and communities to increase control over the determinants of health and thereby improve their health.

The conference and its Charter saw a responsibility to enable, mediate and advocate for a broad view of health and health action in four areas:

- To reorient health services toward such a broader, participatory and health promoting position in society at any level;
- To create supportive social, economic, natural and built environments to create and sustain health promotion and to address the determinants of health equitably;
- To invest in personal skills and community action to drive and complement these actions; and

- To build Healthy Public Policy, recognising that health is created across many sectors in society that would all have the potential to enhanced institutional, community and personal health.

Responses to the Ottawa Charter

Reviews of the effectiveness of health promotion based on the strategies defined in the Ottawa Charter, including through concerted efforts at the follow-up conferences, have found that substantial progress has been made in our understanding of the drivers of success for each of these fields. Our understanding of the complex nature of natural, social, political and commercial determinants of health has increased, as has our appreciation of the impact of policies on all of these. Great advance has been documented in linking ('enabling, mediating and advocating') individual and community health potential with systemic action on environments for health. The only area where success has been lagging is reorientation of health services (Ziglio, Simpson & Tsouros, 2011).

The global community of health promoters continues to work on the basis of these principles and advances, and implements these especially in the context of 'Healthy Settings' – a concept that the Charter launched:

Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love. Health is created by caring for oneself and others, by being able to take decisions and have control over one's life circumstances, and by ensuring that the society one lives in creates conditions that allow the attainment of health by all its members.

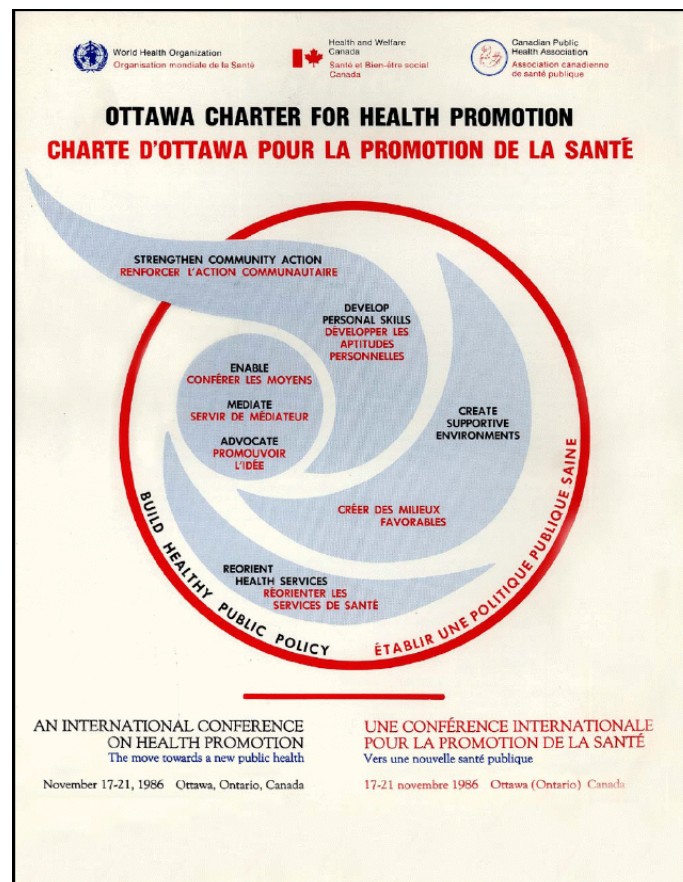


Figure 9. Ottawa Charter for Health Promotion cover page and logo (1986)

3.3 Healthy Cities and Communities

- The geographical set-up in which most people live is the town or city;
- Towns and cities have certain degrees of authority and governance to create, recreate and maintain their social and physical infrastructures;
- Towns and cities are more often than not the lowest level of formal (democratically elected, and therefore accountable to communities) authority and level of governance in a country;
- Thus, actions and policies of city authorities impact directly on the options people have for life choices;
- These options are also known as (social, political, commercial) determinants of health, health equity, and well-being;
- Local authorities are thus in an ideal position to formulate and implement policies impacting on determinants, thereby potentially improving health, health equity, and well-being; however, network governance parameters recognize the reciprocal importance of bottom-up and top-down engagement for sustainability of initiatives;
- Full involvement of local communities in formulation, implementation and evaluation of health promotion programmes is therefore imperative
- In order to achieve equity in health and well-being.

Table 3: The logic underpinning Healthy Cities (de Leeuw, 2001)

Human settlement and public health have been joined since early history. The early cities of Mesopotamia were designed and built by a planning code that took hygiene and the safe storage for food supplies into account. ‘Modern public health’ emerged in Western Europe in the 18th and 19th centuries, with the most notable champions of an urban sanitary and systems approach to population health Edwin Chadwick and John Snow, whose work led to the first Public Health Acts in the world in Britain (1848 and 1875).

The choice for the city as a demonstration vehicle to show that the new public health thinking advocated by the Ottawa Charter was indeed feasible was therefore logical. ‘Healthy Cities’ was initiated by WHO in Europe in 1986 with an invitation to European cities to participate in a ‘live experiment to put health high on social and political agendas’. WHO had hoped that perhaps a handful of cities might be interested, but very soon dozens of cities across Europe expressed interest.

The enthusiasm was soon mirrored by cities elsewhere in the world, with Australia a committed ‘early adopter’: Noarlunga (nowadays Onkaparinga) in South Australia, and Illawara in New South Wales have been long-standing champions of the approach.

Elsewhere in the world ‘Healthy Cities’ have resonated with similar existing local and area-based health efforts, for instance in the Americas through the ‘Sistemas Locales Para la Salud’ (SILOS) – integral local health systems – that emerged from traditions in liberation pedagogy and local empowerment efforts.

The European Healthy Cities Network from its very inception in 1986 embraced systems change for health. It took on board a number of strongly value-driven parameters for health development. The local government environment was found to be the most receptive and suitable to both actions for health (through community and individual action and behaviour change) and strategies for health (through policy and organisational change). A programme logic, grounded in earlier work by scholars such as Len Duhl and Trevor Hancock, firmly connected Healthy Cities to historical patterns of urbanisation and emerging challenges local governments could more adequately face (table 3).

Kickbusch (1989, p.77) in the early stages of the development of the network, formulated that a Healthy City “...endeavours to put health high on the agenda of political decision makers, key groups in the city and the population at large. It aims to develop feasible strategies for reorienting public health endeavours at city level and to make prevention and health promotion a highly visible and community-supported enterprise”.

The initial ‘experimentation stage’ was followed by a more strongly codified second phase in which European towns and cities were invited to sign up to the value base embodied in the WHO European Health for All strategy: “The WHO Healthy Cities project is a long-term international development

project that seeks to put health on the agenda of decision-makers in the cities of Europe and to build a strong lobby for public health at the local level. Ultimately, the project seeks to enhance the physical, social and environmental well-being of the people who live and work in the cities of Europe. The project is one of WHO's main vehicles for giving effect to the strategy for Health for All (HFA)." (Tsouros, 1994, p. 1) "The strategic objectives for the second phase include the speeding up of the adoption and implementation of policy at city level based on the European HFA policy and its targets; strengthening national and subnational support systems; and building strategic links with other sectors and organizations that have an important influence on urban development." (Tsouros, 1994, pp. 11-12).

A clean, safe, high quality physical environment (including housing quality).	The meeting of basic needs (food, water, shelter, income, safety, work) for all the city's people.	Encouragement of connectedness with the past, with the cultural and biological heritage and with other groups and individuals.
An ecosystem which is stable now and sustainable in the long term.	Access to a wide variety of experiences and resources with the possibility of multiple contacts, interaction and communication.	A city form that is compatible with, and enhances the above parameters and behaviours.
A strong, mutually supportive and non-exploitive community.	A diverse, vital and innovative city economy.	An optimum level of appropriate public health and sick care services accessible to all.
A high degree of public participation in and control over the decisions affecting one's life, health and well-being.		High health status (both high positive health status and low disease status).

Figure 10. Eleven qualities a Healthy City should strive to attain (Hancock & Duhl, 1986)

Examples of Healthy City Projects

There tends to be some colloquial misunderstanding around the term 'Healthy City' – critics would start to argue that it is unclear from which population level a human settlement can be called a 'city' (and then often continue to describe multi-million inhabitant megacities as in need of health development). Any human settlement, however, can be a 'Healthy City' – the smallest one known so far is the town of l'Isle Aux Grues in the Quebec/Canadian St. Lawrence River (population 200), possibly the largest one is Shanghai (16 million) but several megacities in Korea and Japan have embraced the idea at smaller neighborhood levels.

The aspiration to 'put health high on social and political agendas' through a vision on the Eleven Qualities from Figure 9 can be driven by many sectors in the local environment. Goumans (1998) in a network analysis of Healthy Cities in The Netherlands and Britain showed that the lead in local health development can be taken by many agents and efforts – the police, primary education, social work or small business sectors, but also concerned medical specialists, environmentalists and social entrepreneurs.

When we look at a list of case studies submitted for a European Healthy Cities evaluation it is obvious that Healthy Cities take a very broad and engaged view of social determinants of health (de Leeuw, 2015a, table 4):

European case studies focusing on caring environments		
Case Study	Title	pop
Amaroussion	The bioclimatic regeneration of the historic center of the municipality of Amaroussion	69470
Aydin	City council commitment to health	171210
Barcelona	How Barcelona systematized intervention on inequities by linking community action with neighbourhoods regeneration projects.	1638103
Izhevsk	Izhevsk is an active city	610800
Ljubljana	Development of Home Care Services for Seniors in Ljubljana	267760
Novi Sad	Healthy Diet Education and Food Control Programmes in the City of Novi Sad	359951
Rennes	Health and Nutrition measures for children	212494
Sandnes	Neighborhood hiking tracks for all	63000
Sant Andreu de la Barca	Healthy Aging: a local scheme	26579
Warsaw	The Warsaw Mental Health Programme for 2011-2015	1709800
Waterford	Community Health Network – tackling health inequality by connecting social and medical services	45748
Zagreb	“Needs assessment of single-parent families in the City of Zagreb”	780000
European case studies focusing on healthy living		
Amaroussion	The bioclimatic regeneration of the historic center of the municipality of Amaroussion	69470
Aydin	City council commitment to health	171210
Barcelona	How Barcelona systematized intervention on inequities by linking community action with neighbourhoods regeneration projects.	1638103
Cork	Cork Food Policy Council	119418
Galway	Galway City Healthy Urban Environment Team	72729
Izhevsk	Izhevsk is an active city	610800
Klaipedia	Map for physical activities	186500
Ljubljana	Development of Home Care Services for Seniors in Ljubljana	267760
Novi Sad	Healthy Diet Education and Food Control Programmes in the City of Novi Sad	359951
Rennes	Health and Nutrition measures for children	212494
Sandnes	Neighborhood hiking tracks for all	63000
Warsaw	The Warsaw Mental Health Programme for 2011-2015	1709800
Waterford	Community Health Network – tackling health inequality by connecting social and medical services	45748
Zagreb	“Needs assessment of single-parent families in the City of Zagreb”	780000
European case studies focusing on Health in All Policies		
Aydin	City council commitment to health	171210
Barcelona	How Barcelona systematized intervention on inequities by linking community action with neighbourhoods regeneration projects.	1638103
Cork	Cork Food Policy Council	119418
Galway	Galway City Healthy Urban Environment Team	72729
Rennes	Health and Nutrition measures for children	212494
Sandnes	Neighborhood hiking tracks for all	63000
Warsaw	The Warsaw Mental Health Programme for 2011-2015	1709800
Waterford	Community Health Network – tackling health inequality by connecting social and medical services	45748
Zagreb	“Needs assessment of single-parent families in the City of Zagreb”	780000
European case studies focusing on Healthy Urban Design		

Amaroussion	The bioclimatic regeneration of the historic center of the municipality of Amaroussion	69470
Aydin	City council commitment to health	171210
Barcelona	How Barcelona systematized intervention on inequities by linking community action with neighbourhoods regeneration projects.	1638103
Belfast	Good for regeneration, good for health, good for Belfast – developing an indicator framework for health and regeneration	267500
Cardiff	Incorporating healthy urban planning principles into the Cardiff Local Development Plan (2006-2026)	321000
Cork	Cork Food Policy Council	119418
Galway	Galway City Healthy Urban Environment Team	72729
Izhevsk	Izhevsk is an active city	610800
Ljubljana	Development of Home Care Services for Seniors in Ljubljana	267760
Modena	PHAN (Physical Activity Networking) in Modena: how to use WHO tool HEAT to plan and realize new cycle paths in Modena and to make possible that the healthy choice be the easy choice.	183114
Sandnes	Neighborhood hiking tracks for all	63000

Table 4. Selection of case studies submitted to Phase V Evaluation of the European WHO Healthy Cities project in the area of policy development.

Do Healthy Cities work?

Healthy Cities, around the world, have never been set up as controlled research environments although many refer to them as a ‘living laboratory’. Yet, since their earliest inception they have been subject to efforts to create evidence that the broad social, systems based and explicitly political approach to urban health made any difference to health. Individual city evaluations suggest indeed that the connected approach does make a difference, e.g., in Brazil in dental health (Moyses et al, 2006), in Sweden in the area of sustainability of neighborhood welfare systems (Fröding et al., 2013), and in ten European Union cities for ‘outside the box’ policy solution development (de Leeuw, 1999).

The most significant evaluation efforts have been driven by the European office of WHO. Increasing in scope and sophistication subsequent series of evaluations over the years have shown that a strictly codified approach to Healthy City development makes a difference for the way in which local governments effectively address the social determinants of health (de Leeuw et al., 2015a, de Leeuw et al., 2015b, de Leeuw et al., 2015c, de Leeuw et al., 2015d, Farrington, Faskunger & Mackiewicz, 2015, Grant, M., 2015, Green, Jackisch, & Zamaro, 2015, Jackisch et al., 2015, Ritsatakis, Ostergren & Webster, 2015, Simos et al., 2015, Tsouros, 2015, Tsouros, de Leeuw & Green, 2015). The network of nearly 100 designated European Healthy Cities created better policies to address health equity, worked intersectorally better in more engaged and transparent governance parameters (de Leeuw, 2015), tackled upstream determinants of health (and notably non-communicable disease) better, created conditions for healthy ageing better, addressed health urban planning in more tangible and substantive ways, and developed intervention programmes for healthy environments substantively.

It appears that Healthy Cities effectively work toward better health and reduced health inequity. However, the European evaluation experience comes from a network of local governments that operates under strict conditions: council decisions and commitments, including appropriate resource allocations and infrastructure developments, and long-term political pledges to the strategic goals of the European Healthy Cities movement are the firm foundations for change.

3.4 Area-based health action

Healthy Cities are but one example of ‘theme cities’. Davies (2015) further lists

- Just Cities;
- Green Towns and Cities;
- Sustainable Cities;

- Transition Towns and EcoDistricts;
- Winter Cities;
- Resilient Cities;
- Creative Cities;
- Knowledge Cities;
- Safe Cities and Communities;
- Festive Cities; and
- Slow Cities

In addition, we know of international networks of local governments coming together as Happy Cities (Montgomery, 2013), Smart Cities (Caragliu, Del Bo & Nijkamp, 2011), Child-Friendly Cities (Riggio, 2002) and Age-Friendly Cities (WHO, 2007), and Inclusive Cities (UN-HABITAT, 2010). All of these show the importance of human settlements for (social) change, and the search of local as well as global governments for opportunities to exploit the places where people come together toward human betterment.

Governments around the world have endeavoured to structure place-based *health* development through policy and infrastructure change. One of these efforts was the United Kingdom's drive toward the establishment of Health Action Zones (HAZs) between 1997 and 2004. HAZs had two strategic objectives:

- Identifying and addressing the public health needs of the local area, in particular trailblazing new ways of tackling health inequalities; and
- Modernising services by increasing their effectiveness, efficiency and responsiveness.

The HAZ approach was underpinned by seven principles which ministers asked all HAZs to reflect in their activities and plans:

- achieving equity;
- engaging communities;
- working in partnership;
- engaging frontline staff;
- adopting an evidence-based approach;
- developing a person-centred approach to service delivery; and
- taking a whole systems approach.

A cursory reading of the (many) evaluations of the impacts and effects of HAZs would suggest that they have been an unequivocal failure (Barnes et al., 2005; Cole, 2003). This failure, however, cannot be attributed to the ambitions and values of the programme, but rather to the lack of guidance and governance of its implementation. Cole (2003) shows that some HAZs have been a success and others a failure because of:

- the national policy agenda that aligns or contradicts the initiative;
- local policy agendas that support or counter a HAZ;
- trust among stakeholders that programmes and policies are feasible in collaborative environments;
- cultural convergence between values of the different stakeholders at different governance levels, and with communities;
- expertise of implementation actors and the political drivers of implementation efforts;

- managerial clout (“The presence of advocates in senior management can be crucial to the success of projects”);
- true engagement with crucial agencies and individuals;
- a managerial structure that aligns with the aspirations, goals and values of a HAZ; and
- legal constraints and opportunities to genuinely transcend traditional ways of organizing health equity action.

Area-based health action: what works

The evidence on health impact of area-based programmes suggests that it is very important to establish policy and political coherence between different levels of government and governance on the values, purposes, and outcomes of efforts to promote health and reduce health inequity. It may be helpful to reflect on policy implementation theory to see which factors contribute to such coherence. The work of Mazmanian & Sabatier (1989) and Hill & Hupe (2006) posits that successful implementation depends on careful consideration of (and explicit addressing) the following factors:

1. policy complexity (*‘how well do we understand the problem and factors that contribute to its causes and possible solutions?’*)
2. support (*‘which stakeholders and communities actively support or oppose resolving the issue at hand?’*)
3. capacity (*‘have relevant stakeholders and communities been endowed appropriately with the will and opportunity to engage with seeking solutions to the issue?’*)
4. resources (*‘can resources be made available sustainably to all relevant stakeholders, communities and programmes to pursue the activities that will contribute to the resolution of the issue?’*)
5. partnerships (*‘have all partnerships that need to be engaged in resolving the issue been mapped and explored for their opportunity, capacity, resources, and commitment to act jointly?’*)
6. timeframes (*‘is there a clear perspective on the time horizon that is required to deal with the issue at hand?’*) (de Leeuw & Peters, 2014)

4. From rhetoric to action

The report of the first stage of the Hazelwood Mine Fire Inquiry suggested the establishment of what was tentatively called a 'Health Conservation Zone' in order to promote and develop equitable health development in the face of adversity, and a 'Health Advocate' to provide leadership for health.

In light of the evidence provided above the following reflects on the options and opportunities for establishing such a Zone and Advocate.

4.1 A health conservation zone

Area-based health development is a legitimate and feasible approach to address adverse health situations, including health inequity. From the experiences with Healthy Cities, Healthy Communities, other theme-based local government initiatives, and Health Action Zones it is clear that at the local level there is potentially great enthusiasm and fertile ground to embark on an area-based health development initiative in the Latrobe Valley.

Pitfalls that have been encountered in earlier initiatives must be avoided in this development. Abstract and visionary aspirations may be useful in launching interest, and seem to have resonated already with substantial sections of the Latrobe valley population, its representatives and organisations, and other stakeholders at State (and possibly national) levels. The experience with Health Action Zones shows that clear terms of reference, realistic outcome parameters, and solid and sustainable political commitment at all levels are critical preconditions for effectiveness.

Purpose, flexibility, and words

These conditions had been met by European Healthy Cities through their strict designation requirements. At the same time, however, an inherent characteristic of European Healthy Cities has necessarily been great flexibility (considering the multitude of unique national governance parameters that drive glocal health in that region – with 53 member states ranging from Andorra to the Russian Federation and Luxemburg to Tajikistan). Striking a balance between clarity of purpose and social as well as political commitment with the potential for adaptation to dynamic complex environments seems critical for the success of an area-based health initiative.

The language used in naming this area-based health development initiative is also important. Some Healthy Cities in evaluations referred to above see the 'health' element of the enterprise as limiting: a distinctive quote would be *"If we say 'health', they hear 'medicine'..."* – the appropriation of the broad, social, economic and political determinants of health based effort by professions that typically would be associated with a more biomedical (individualistic, clinical) approach to health and disease is seen as confining efforts to the more traditional ways of doing business (de Leeuw et al., 2015a). Evidence from Québec suggests that 'Villes et Villages en Santé' (Healthy Cities and Towns) are more successful when they are driven by concerns about the physical (built and natural) environment than from a classic health and disease discourse (O'Neill et al., 1990).

Similarly, the term 'conservation' resonates with protection of the status quo, whereas the intent of area-based action in the Latrobe Valley would be the improvement of health status and its determinants in equitable ways across the region, within the region, and between Latrobe Valley and other local government areas. Careful consideration of a designation that mobilises and maintains support for that ambition across stakeholders must be considered critical.

4.2 A health advocate and broker

A challenge identified by the first Hazelwood Inquiry was a distinctive lack of local leadership for health in the Gippsland region and Latrobe Valley. A cursory analysis of this issue suggests that there are various dimensions to this lack of leadership:

- An – inappropriate – attribution of health development to the health care (or sick care) system, rather than seeking the locus of health control within the individual, family and community;
- A perceived lack of quality or accessibility of curative and preventive health services and opportunities for health development;
- A (continued and exacerbated) sense of loss of trust in (local, state and national – possibly even global) authorities, politicians and business leadership;
- A feeling to be left to one’s own devices, disrespect, and marginalisation, both within the local community as well as between the community and higher levels of governance and authority.

The health leadership perspective has been framed as that of an ‘advocate’ and ‘broker’. Skok (1995, p.326) has described such leadership roles also as ‘social entrepreneur’, ‘issue initiator,’ ‘policy broker,’ ‘strategist’ or ‘caretaker’. The literature also talks of ‘boundary workers’ or ‘boundary spanners’, and ‘catalysts’ (Harting et al., 2011).

A recent review by EuroHealthNet (*‘a not for profit partnership of organisations, agencies and statutory bodies working to contribute to a healthier Europe by promoting health and health equity between and within European countries’*) took a systematic view of advocacy for health equity emerging from the scholarly and policy literature (Farrer et al., 2015). Through expert consultations six critical constituent elements of advocacy were established, and then explored through rigorous literature study. In table 5 the findings of the review are summarized.

Kinds of evidence	Advocates & targets	Messages	Tailored Arguments	Barriers & enablers	Practices & activities
<ul style="list-style-type: none"> • <i>Evidence useful:</i> demonstrate impact of programmes and policies; cost-benefits; narratives and images appropriate for audiences • <i>Data & methods:</i> mixed methods with clear involvement of all stakeholders • <i>Knowledge transfer & translation:</i> research summaries rather than reviews; jigsaws of evidence; one page policy briefs; metaphors and imagery. Avoid stereotyping, calling for more research; staying in ivory tower 	<p><i>Advocates:</i></p> <ul style="list-style-type: none"> • Scientists and health professionals • Privileges health sector, but collaborating with other sectors • Civil society • Communities and disadvantaged people • Media • industry <p><i>Targets:</i></p> <ul style="list-style-type: none"> • Lumped ‘policymakers’ • Bureaucrats, politicians • Media • industry 	<ul style="list-style-type: none"> • Health as a value and social justice • Human rights • Environmental sustainability • Economics • Self-interest 	<ul style="list-style-type: none"> • Left vs right • Worldviews • Conservatives/liberals: <i>poor health result of poor choices</i> • Social democracy: <i>health result of society</i> • <i>Equality, balance and fairness</i> not to be used by right as these concepts are appealing to left 	<p><i>Barriers:</i></p> <ul style="list-style-type: none"> • Zeitgeist • Neoliberalism has hegemonic appeal • Public mood (values such as rugged individualism, responsibility, minimal collective action, argue against nanny state) • Healthism and medicalisation • Biomedical health paradigm • Cross-sectoral cooperation (and lack thereof) • Projectism and political short-termism • Market-led academic reforms • Academic difficulties and reluctance to speak up <p><i>Enablers:</i></p> <ul style="list-style-type: none"> • Public awareness and understanding • Advocacy back into curricula 	<ul style="list-style-type: none"> • Organisational capacity to deal with antagonism and cooperation • Coalition building • Social mobilisation • Lobbying • Collaborative multidimensional networking • Media prowess • Seize and open windows of opportunity

Table 5. Findings from a systematic review of scholarly and grey literature on advocacy for health equity, Farrer et al. (2015)

The analysis presented in the Hazelwood Mine Fire Inquiry Report concludes that the health response to the fire and its consequences was lacking in unequivocal and authoritative leadership. At

the same time, stakeholders in the Latrobe Valley are apprehensive when it comes to authoritative messages that come from Melbourne-based ‘experts’ – local leadership is direly needed. In addition, it will be vital to engage community representatives (transparently selected) within the leadership/decision-making bodies across the Valley. Without the direct, particular knowledge, experiences, and aspirations of community members decisions lack the information necessary to meet felt and expressed needs. Until community members are included formally in decision-making, they will not receive the respect or achieve the influence that is needed if social and economic environments are to change, and opportunities for people who have been marginalised are to be expanded. Cruwys et al (2012) identified what the opportunities need to be in order to marginalised groups to exit from the lowest socioeconomic quintile; Vos et al (2002) identified the mistakes that local decision-makers can make when the people ‘most affected’ are not included in decision-making; and Chandler and Lalonde (1998) highlighted the significant health gains that are possible when people are included.

Health advocacy – terms of reference

The evidence generated by Farrer et al. (2015) shows that good health equity advocacy is contextual, adaptive and multidimensional. It relates to the capacity

- to generate, use and apply a broad range of sources of evidence;
- to mobilise networks of influential and respected partners beyond the healthcare sector and frame clear messages aimed at carefully determined recipients of advocacy efforts;
- to gauge appropriate value-based policy and action communication frames;
- to tailor these frames discreetly in non-partisan or partisan approaches while recognizing how particular vocabularies resonate with specific value sets;
- to transcend traditional adversarial and biomedical views of health and connect to longer-term visions and trends;
- to organize, develop and maintain organizational capacity and sustainability for health equity and the health advocacy role.

Farrer et al. (2015) firmly state that “...every stakeholder could be a target and become an advocate, although it is not possible to gauge the effectiveness of advocacy by these different groups in different situations. Given this complex and dynamic situation, there is consensus in the literature that it is important to consider who has the power to effect change, who is most vulnerable to pressure, who is an ally, and who will actively oppose efforts. (...) A large number of articles in the gray and academic literature emphasized the importance of social mobilization as part of advocacy for health equity”.

In the Australian context, it seems critically important that a health advocate is firmly positioned (and more crucially, is *perceived* to be positioned) at the interface between local, regional, state and commonwealth health perspectives, between public and private service provision, and can advocate both for a health services perspective (the ‘deficit model’) and a health development/promotion perspective (the ‘asset model’). From figure 11 it will be clear that being at the centre of these tense relations is critical, and may be at the same time overwhelming. Solid institutional backing is required to sustain the advocacy function.

Considering the population diversity and geographical dimensions of the Latrobe Valley, and views expressed in community consultations and submissions to the Inquiry it has become clear that the Health Advocacy role is a function rather than a position – it must be an organisational agent for liaising between a great miscellany of actors and responsibilities, including professional individuals and bureaucracies (e.g., in the disease care system), authorities and public policy figures (locally, and

at State and Commonwealth levels), small business owners as well as larger corporate management that sometimes transcends the traditional boundaries of the nation-state, and Aboriginal, long-term-residents and new arrivals to the Valley.

The Health Advocacy Function (and Health Conservation Zone – whatever its final designation) could be designed within a strong value-based Charter that spells out linkages and liaisons with existing organisational, legal and traditional parameters. Such a Charter should be formalized and (re-)endorsed by not only the appropriate political structures, but more importantly by key community stakeholders. The Health Advocacy Function must be resourced within the Charter objectives and visions. The resources should be long-term and sustainable, ideally flowing from diverse funds, including both public and private sectors. Proposals have been floated to hypothecate the pricing of carbon emissions by major industries in the Valley to fund a health investment scheme – such an approach would follow the strong and sustainable funding of VicHealth through tobacco tax hypothecation.

Below we will review how an area-based health development initiative and the health advocacy function can be grounded in a systems architecture for health equity.

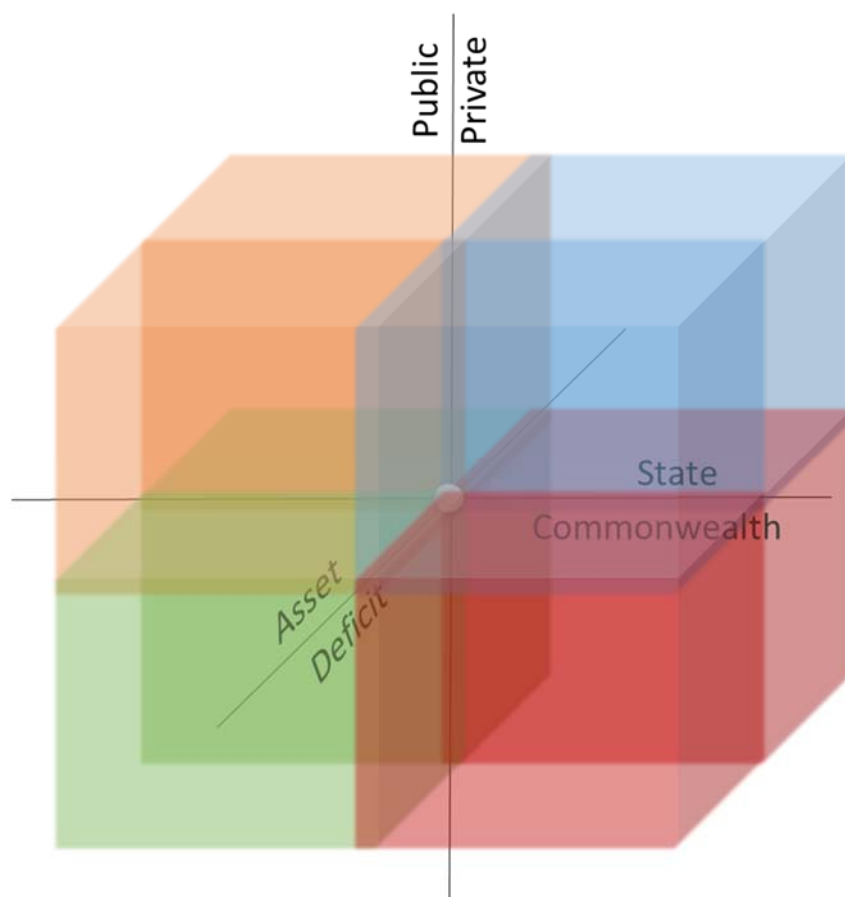


Figure 11. The place of a health advocate at the centre of a balanced health (not just care) system

5. Effective systems architecture for (health) equity

Respecting the challenges and opportunities the people of the Latrobe Valley face depends on a number of critical perspectives. These all embrace the notion that systems change is important and feasible. A critique of asset-based approaches to health (Friedli, 2013) *“...includes the relationship between public sector professionals and the communities they serve, the democratic deficit and abandonment of areas of deprivation by both the market and the state, steep income hierarchies within the NHS [UK National Health Service – EdL/MW] and the social, material and emotional distance between those who design public health interventions and those who experience them. International comparative studies suggest that status (the respect we receive from others), control (influence over the things that affect our lives) and affiliation (sense of belonging) are universal determinants of wellbeing (...). Public health needs to pay more attention to the factors that injure these needs and the health impact of injuries to these needs, undermining what Sen has called the freedom to live a valued life. But in these efforts to address the missing dimensions of poverty and deprivation, the distribution of economic assets is still of fundamental importance. There is a link between living conditions and dignity. The idea of justice is paramount.*

The assets literature includes a wide range of case studies describing what communities have achieved, in the face of considerable adversity, through focusing on assets and adopting strengths based, glass half full approaches (...). The emotional impact of stories of transformation like the widely cited Beacon and Old Hill estate in Cornwall is powerful (...). A reminder, where that is needed, that materially deprived communities are rich in relationships, resourcefulness and creativity. That coming together to change things for the better is inspiring and empowering. Many such projects provide an urgently needed sanctuary, a refuge from grim circumstances and respite from class disadvantage. But, it is the responsibility of public health to distinguish between providing ‘escape for some’, while leaving the system that produces the need for escape intact, and providing leadership in addressing the determinants of health. As John McKnight recently observed:

We must emphasise again that the local economic capacity for choice and sustenance is the threshold policy issue. For we have economically abandoned far too many communities and left at sea those citizens who have remained. It is these fellow citizens and their economic dilemma that is the first policy issue of the twenty-first century. (McKnight 2010, 76)

As has been noted, asset-based approaches also draw on the language of recovery, which traditionally adopted a strengths-based lexicon as a form of resistance to the imposition of psychiatric labels and diagnostic categories (...). By contrast, the asset movement employs psychological constructs that validate a very specific and narrow range of attributes: self-efficacy, aspiration, confidence, optimism, positive thinking, agency, self-reliance, resilience. These characteristics are frequently described in terms of mental ‘well-being’, and are used to explain ‘health behaviours’ and to reinforce behaviourist approaches.”

Barbara Ehrenreich (2009) shows that placing the locus of asset-based approaches to improving life within the individual (for instance, through the ‘positive psychology’ movement) is taking away impetus and momentum from organised community action addressing the systemic causes of inequity – corporate and political power, vested interests, and a neoliberal agenda in which people become clients rather than citizens and producers of their own future.

In this section we therefore suggest ways in which a health conservation zone and health advocacy function can contribute to significant systems change for individuals, communities and institutions in the Latrobe Valley.

5.1 Engaged decision-making

The direction of our argument above – in particular around asset-based health development and the discourse on social determinants of health – leads to a conclusion that stronger and more effective participation of individuals and communities is necessary in decisions that are pertinent to the determinants of health (and for that matter, to all factors that allow them to lead the best lives they could).

Such participation must be real and not symbolic, or a panacea for the continuation of bad political and corporate governance. Some would argue that the democratic system of government already allows for the fullest participation of people in decision-making. The evidence, however, is that increasing numbers of people feel disenfranchised with politics – and in the Latrobe Valley this translates in a significant lack of trust in ‘the centre’ (i.e., Melbourne and Canberra politics, and corporate headquarters possibly even further afield). Attempts at engagement in the past (e.g., related to asbestos related illness and privatization of the power sector and subsequent unemployment) have not led to tangible and reciprocal action – the population feels, rightfully, *disempowered*. To attribute the potential for change and improvement to just the capacities of people without recognizing structural and insidious power relations would yet again sustain inequity. Immediate, tangible and rewarding action with and by the people is required.

Many forms of Government have been tried, and will be tried in this world of sin and woe. No one pretends that democracy is perfect or all-wise. Indeed, it has been said that democracy is the worst form of Government except all those other forms that have been tried from time to time; but there is the broad feeling in our country that the people should rule, continuously rule, and that public opinion, expressed by all constitutional means, should shape, guide, and control the actions of Ministers who are their servants and not their masters.

Churchill, W. (1947) 206–07 The Official Report, House of Commons (5th Series), Hansard, Orders of the Day, 11 November 1947, vol. 444, 207

Processes of deliberative and participatory decision-making, when applied appropriately and culturally competently, may yield such immediate and rewarding action and outcome. This is not the place to reflect on philosophical ponderings on the nature of democracy and how it would best be secured, but of its many types there are three that are pertinent to the question how community action would yield more (health) equity.

Representative democracy

We, and most people in industrialised nation-states, live in a *representative democracy*. That is, we elect individuals that we feel best represent our needs, wishes and aspirations, and whom we entrust with making (policy) decisions on our behalf. These representatives (‘politicians’) are held to account through the electoral cycle – if they have not done their job, we may elect other representatives. This idea of a representative democracy assumes connectedness, transparency and accountability. But political representatives are not only supported by, and ac-

countable to, the electorate. In the *geopolitical space* of electorates there are business and industry interests, health care services, infrastructure and natural resource considerations, and many other issues that influence the political identity, perspectives and directions of representatives. In worst-case scenarios, politicians are not representing community concerns, but industry interests. In situations where decades of exploitation and distrust have created a polarized (or even worse, disinterested) community the opportunities for constructive dialogue and appropriate representation may seem to have vanished for good.

Participatory and deliberative decision making

There is, however, strong evidence (particularly sponsored by the World Bank for situations outside Australia) that other forms of democratic decision-making are effective: deliberative and participatory decision-making allocates resources better for greater (health) equity.

Participatory decision-making has acquired some fame through international examples around 'participatory budgeting'. Participatory budgeting (PB) is a process of democratic deliberation and decision-making in which ordinary people decide how to allocate part of a municipal or public budget. Participatory budgeting allows citizens to identify, discuss, and prioritize public spending projects, and gives them the power to make real decisions about how money is spent. When PB is taken seriously and is based on mutual trust local governments and citizen can benefit equally. In some cases PB even raised people's willingness to pay taxes. In the lead-up to a 2016 UN conference on human settlements (only the third in a series organised by Habitat – the UN Agency for human settlements, called Habitat III, see <https://www.habitat3.org/>) participatory budgeting has started to take centre stage as a strategy to make cities, or rather human settlements more generally, part of the solution rather than the source of the many problems humanity faces (e.g., food security, climate change, non-communicable diseases, migration, etc.). A major collection of evidence on the broader impact of participatory budgeting on the liveability, conviviality and sustainability of area-based policy has been edited by Cabannes & Delgado (2015).

Participatory budgeting generally involves several basic steps:

- 1) Community members identify spending priorities and select budget delegates
- 2) Budget delegates develop specific spending proposals, with help from experts
- 3) Community members vote on which proposals to fund
- 4) The city or institution implements the top proposals

Evaluations have shown that participatory budgeting – after a period of trial-and-error engagement to establish sufficient commitment and trust - results in more equitable public spending, greater government transparency and accountability, increased levels of public participation (especially by marginalized or poorer residents), and democratic and citizenship learning.

The first city to embark on participatory budgeting as a practice to allocate the entire municipal budget (apart from fixed expenses, e.g., on pensions) was Porto Alegre in 1989. A World Bank paper (Bhatnagar et al., 2004) suggests that participatory budgeting has led to direct improvements in facilities in Porto Alegre. For example, sewer and water connections increased from 75% of households in 1988 to 98% in 1997. The number of schools quadrupled since 1986. The high number of participants, after more than a decade, suggests that participatory budgeting encourages increasing citizen involvement, according to the paper. Also, Porto Alegre's health and education budget increased from 13% (1985) to almost 40% (1996), and the share of the participatory budget in the total budget increased from 17% (1992) to 21% (1999). There are now 1500 municipalities around the world where smaller or larger parts of, to the entire, public sector budget is decided through participatory budgeting. Many of these cities are in Europe and North America and participatory forms of governance are seen as convincing models for true democratic decision-making for the future (Fung, 2015).

The literature is, however, rife with cautions to see community participation as the miracle solution to dealing with complexity in a network age. Crawshaw, Bunton & Gillen (2003) have analysed 'the' community as a means of reinventing the relationship between the individual and society, and the

championing of civic responsibility (e.g., also, Giddens 1998, p. 64). To achieve this, it appeals to notions of community and the role of individuals as active citizens with both rights and responsibilities, and a duty to participate. Thus, community is promoted as a panacea for reconstructing civil society, a middle ground between statist models of ‘society’ and market models of the ‘individual’, both of which are understood to have failed as modes of governance (Jessop 2000). This reinvention of community as a site of social and political action has been influential in both policy and academic discourses, as shown by the emergence of new concepts such as social capital (see Putnam 1993) and capacity building (Labonte & Laverack 2001).

The critical importance of concepts such as social capital and community capacity building have, in the practical reality of many community programmes, been translated within the public health field into ‘communities taking direct action to improve their own health’. This conceptualization has not reflected the need for political power (not necessarily linked to healthcare but broader to all determinants of health in society) and has not understood that there is both an independent reason for this (perceived to be powerful, self-determining, respected) and a dependent reason (so that decision-makers have information they need in order to make better decisions for people and groups that may have been marginalised). Fung (2015) has developed the ‘democracy cube’ (figure 12) to guide individuals, communities, and public policy agents (such as bureaucrats and political representatives) in the wide array of options available to engaging different participants with the range of authorities and power structures, and through which ways of communicating with each other.

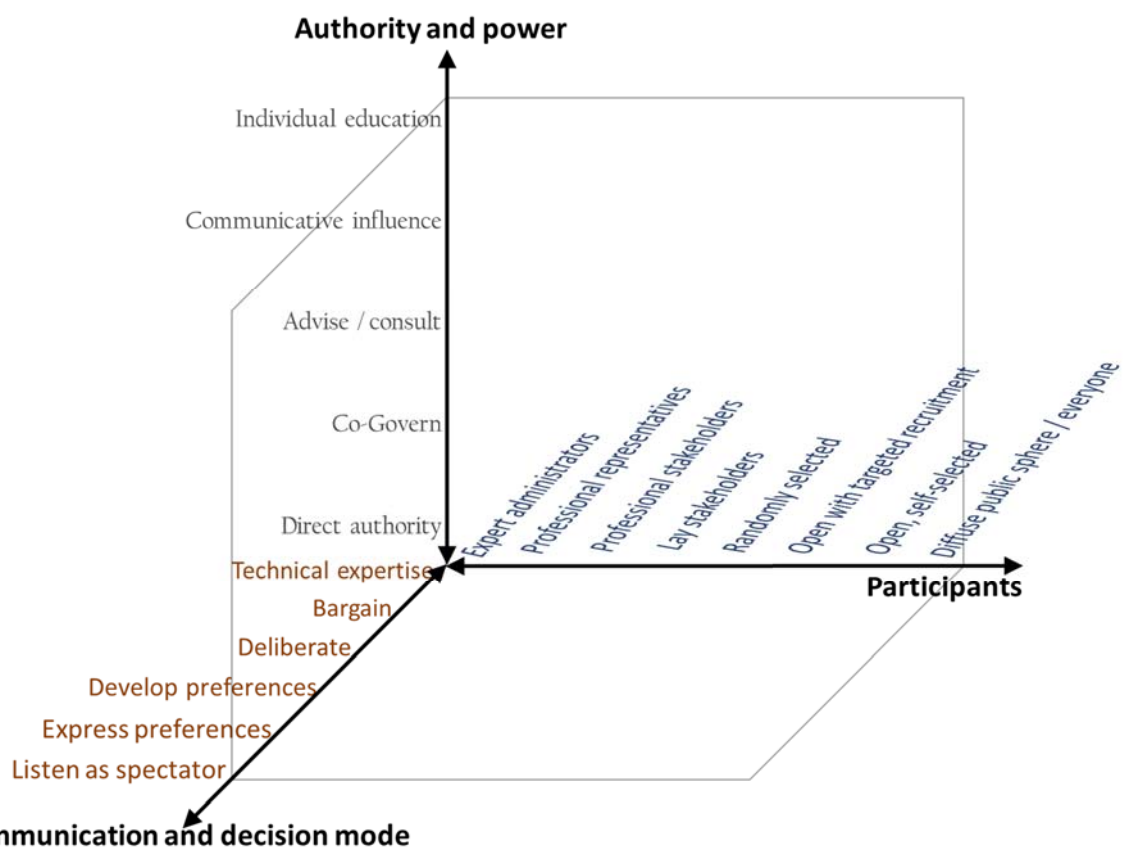


Figure 12: Fung (2015) Democracy Cube, mapping options for participatory community decision-making.

Fung (2015) summarises the practical implications of his analyses as follows:

- Practitioners should consider the full menu of design choices for engaging citizens. The “democracy cube” is one way of reflecting on the many other ways of designing participation—different kinds of participants; different ways of speaking, hearing, and exchanging information (e.g., small groups); and different levels of empowerment.
- In order to engage citizens, practitioners should be clear about the intention for convening citizens and design engagement in a way that envisions a clear path leading from engagement to the satisfaction of that intention.
- It is important to design participation in ways that its outcomes are meaningful to participants. Frustration, cynicism, or apathy can be the results of a poorly designed public engagement process in which participants’ hopes for learning, working, or accomplishing some goal are disappointed by a process that is futile, in which the relevant decisions have been made elsewhere by someone else, or in which the choices and stakes are trivial.
- Citizen participation is not just about policy; it is also deeply political. Substantial citizen engagement will be sustained over time only if citizens come to support the institutions and practices of participation—that is, if they grow into a constituency that will not just engage but also defend against efforts to reduce participation.

In the majority of interfaces between the three axes of Fung’s Democratic Cube there must be some form of deliberation and debate in order to achieve tangible outcomes. This leads to a brief review of the notion of ‘deliberative democracy’ as developed, among others, by Australian political scientist John Dryzek.

The idea behind deliberative democratic decision-making approaches is that, in order to achieve the optimum outcome of a political discourse with as many stakeholders as possible, it is necessary to have a transparent and guided reflection on standpoints and options. Various scholars and practitioners of deliberative decision-making have come up with varying degrees of abstract and philosophical ponderings on how this should be possible. Fishkin & Luskin (2005), based on a long history of deliberation in practice, note that deliberative discussion should be:

- *Informed* (and thus informative). Arguments should be supported by appropriate and reasonably accurate factual claims.
- *Balanced*. Arguments should be met by contrary arguments.
- *Conscientious*. The participants should be willing to talk and listen, with civility and respect.
- *Substantive*. Arguments should be considered sincerely on their merits, not on how they are made or by who is making them.
- *Comprehensive*. All points of view held by significant portions of the population should receive attention.

Clearly, managing the deliberative process requires serious and long-term investment in guidance and support mechanisms that respect and value diversity. Setting up an accessible and transparent agency that is shaped by the community and for the community must be a first step – this can be considered a critical element of both local health area development as well as the health advocacy function.

5.2 Health evidence co-generation

The first Hazelwood inquiry provided ‘firm’ evidence on serious health issues that had been known for at least a generation to the people of Latrobe Valley. Professionals often seem to have different ideas of what ‘legitimate’ evidence is from what citizens feel and believe. In the health field there

have been ideas that this disconnect can be bridged through a process of ‘knowledge translation’. There is, however, significant benefit in moving beyond a professional, technocratic, health services based ‘knowledge translation’ clinical evidence approach. The (co-)generation of evidence of effectiveness at all levels of action (individuals, families, communities, local government authorities) can happen through a methodological lens that is called ‘realist synthesis’ – this would make ‘lived realities’ a legitimate source of evidence that can be used to structure policy and intervention, and should be an important part of an design for a Health Conservation Zone and Health Advocacy function.

Public health scholars for a few decades, and following initial developments in medicine, have embraced the mantra of evidence-based policy and practice. The same seems to be true, at least in rhetoric, in practice and policy circles. But all too often solid evidence does not find its way from research into practice, or practice is not adequately reflected in the scientific endeavour. This remains a frustration for the public health community, and does not benefit community-based health action. This gap between effectiveness on evidence, policy development, and practical intervention design and fidelity (*‘implementing what was designed’*) has achieved increasing systematic attention since Sir Archibald Cochrane wrote ‘Effectiveness And Efficiency: Random Reflections on Health Services’ in 1972. One result was the international Cochrane Collaboration, a global endeavour to systematically review and analyse what works in health.

However, accumulation of ‘evidence’ did not equate with advances in the development and implementation of evidence-based policy. In the health field, the common analysis was that the nature of the evidence knowledge that was created was not attuned to the needs of policy-makers and practitioners, and that therefore this knowledge needs to be translated into a shape or process that would align better with policy and practice realities. The idea of ‘Knowledge Translation’ (KT) has become a major industry in the health field. Critics of the concept view it as a bad metaphor (Greenhalgh & Wieringa, 2011) that may have done more bad than good.

Translation as an inappropriate metaphor

‘Translation’ as a metaphor would either relate to linguistics, or to mathematics – but not to the social and political science perspective we have demonstrated above as necessary to be applied to policy and practice development. Translation as a linguistic metaphor would imply that health researchers speak a different language from those that develop policy and/or implement it – this is also referred to as the ‘two communities hypothesis’, an idea that has been rejected as mechanistic and stagnant (Lin & Gibson, 2003). It also might imply that one language is not just different, but superior to the other.

But there are also conceptual and substantive problems with the KT suite of approaches (defined as a *“dynamic and iterative process that includes synthesis, dissemination, exchange and ethically-sound application of knowledge to improve health”* (Strauss, Tetroe & Graham, 2009, p. 165). First, it is grounded in a presumed value-free Cartesian worldview where facts are facts, and only facts matter. We have shown in the above that facts, particularly in policy development and politics, are always subject to framing, morphing and negotiation. Facts are thoughts, thoughts are perceptions, perceptions are emotions, and we do not tend to think of emotions as facts. Second, the problem of the failure of evidence leading to appropriate policy and interventions is not unique to the health field – it is a challenge found in virtually every field of human endeavour, including agriculture, engineering, education, development assistance and humanitarian aid. Oddly, none of these fields uses the KT concept or translation metaphor. One might assume that something could be learned from non-health domain efforts to close the gap between research, policy and practice.

The nexus

We have called the areas of overlaps and gaps between policy, research and practice the nexus. What happens at the nexus, and connects or separates the three domains of policy, research and practice can and should be studied. Understanding processes and structures that determine overlaps and gaps would enable us to generate better ways of generating knowledge for practice and policy. This is a key focus of the work of VicHealth. The Victoria Health Promotion Foundation (VicHealth) has a strong and formal commitment to evidence-based health promotion in sports, community and arts sectors. VicHealth funds applied health promotion research and contributes to the systemic accumulation of practice and policy relevant health evidence of effectiveness. In the early 2000s, the Board of VicHealth was interested in confirming ‘best practice’ in acting at the nexus between their research, policy impact, and instrumental health development endeavours. A systematic review was to elicit two things about this interest (de Leeuw et al., 2007; de Leeuw et al., 2008): (a) what tried-and-tested theoretical and conceptual models for work at the research-policy-practice nexus have been reported in the international peer-reviewed scholarly literature, and (b) are there organisations or groups that have a reputation for success in acting at the nexus, and do they follow the processes and parameters identified theoretically and conceptually?

Nearly thirty different theoretical frameworks specifically dealing with actions at the nexus emerged. For analytical purposes we grouped them into seven categories, which could then be put into three groups:

Label	Focus
Institutional Re-Design	→ theories about changing the rules of the game
Blurring the Boundaries	→ theories about the structural interaction of actors and how the nature of evidence plays a role in this interaction
Utilitarian Evidence	
Conduits	
Alternative Evidence	
Narratives	→ theories about ways to communicate at the nexus
Resonance	

Table 6. Seven categories of theories and conceptual frameworks that explain what happens between research, policy and practice for health (de Leeuw et al., 2007, 2008)

We found that effective knowledge generation and implementation is best characterized by the notion of respect and reciprocity between communities, practitioners, politicians and research experts. Terms that reflect this situation are ‘knowledge co-creation’, ‘co-generation’, ‘dynamic development’, etc. The best way to do this is governed by a clear set of values, including good governance, transparency, accountability and sustainability. Perhaps the best way to illustrate how these values

apply to evidence co-generation in a local environment such as the Latrobe Valley is a reflection on the difference between dialogue and debate as outlined by Jones & Mittelmark (2007, table 7):

Dialogue	Debate
Collaborative	Oppositional
Common ground	Winning
Enlarges perspectives	Affirms perspectives
Searches for agreement	Searches for differences
Causes introspection	Causes critique
Looks for strengths	Looks for weaknesses
Re-evaluates assumptions	Defends assumptions
Listening for meaning	Listening for countering
Remains open-ended	Implies a conclusion

Table 7: the difference between dialogue and debate (Jones & Mittelmark, 2007)

In order to advance population health in the Valley the local health developments need to embrace explicitly an attitude toward dialogue rather than debate, to contribute to an environment of good governance in which deliberations can take place that would lead to effective participatory decision-making.

5.3 Boundary work, moving beyond the limits of health

There is a significant literature on boundary work, brokerage, health and social entrepreneurship, policy architect, etc. to show that activist scholarship and scholarly activism for clever political action makes a difference in achieving and maintaining positive change.

Harting et al. (2011) have empirically tested and described health brokerage and ‘boundary work’. They write: “A public entrepreneur contributes to innovations in public sector practice through the generation of a novel idea, its practical design and its implementation in public sector practice. Based on their formal positions, four types of entrepreneur can be distinguished:

- (1) bureaucratic entrepreneurs, who hold formal non-leadership positions;
- (2) executive entrepreneurs, who hold appointed leadership positions;
- (3) political entrepreneurs, who hold elected leadership positions; and
- (4) policy entrepreneurs, who do not hold formal positions in government.

As this typology relates to issues like mandate, power and resources, the types of public entrepreneurs will differ in the instruments they can bring into play, the strategies they are able to apply and the capacities they can build at the various levels of society. The typology also opens up the possibility of shared or collective entrepreneurship, representing greater investments of resources, time and energy.

The concept of policy entrepreneur has been further specified in the stream theory on policy development (Kingdon, 1995). This describes how policy entrepreneurs, as ‘catalysts of change’, may be successful in opening ‘windows of opportunity’ towards policy innovations. An essential entrepreneurial activity is that of linking the three ‘streams’ of problems, policy alternatives and politics. This requires defining and reframing problems, specifying policy alternatives and brokering ideas and people to finally make policy innovations enter the decision-making agenda. The authority of policy entrepreneurs thus also depends on their expertise, political connections and. Further requirements are a multi-frame perspective, proactiveness and reflectiveness (Selsky and Smith, 1994), as well as the capacity to lay out a strategic map of the three aforementioned streams (De Leeuw, 1999).

The concept of *boundary spanner* refers to the local coordinating role of a strategic broker, or ‘anchoring point’, needed to foster the collaboration between multiple entities. Boundary spanners are persons who have to interact with other people inside their own institute as well as negotiate system interchanges with other organizations. Their role is to connect two or more systems whose goals and expectations are likely to be at least partially conflicting, and to manage the tensions at the interface between flexible, collaborative partnerships and the bureaucratic organizational structures of their partners. Through such brokerage, a ‘health broker’ role may be expected to connect different networks, improve the integration and translation of different kinds of information, and thereby contribute to the social capital that may be required to improve health.

As public entrepreneurs, boundary spanners can be characterized as creative lateral-thinking rule-breakers; as policy entrepreneurs, they should be skilled at linking the streams of problems, policy alternatives and politics.”

Harting et al. (2011) used the – theoretical – conceptualisations of health brokers and boundary spanners to develop functional position descriptions to four appointments in Dutch municipalities that were to bridge the nexus between health evidence, action and policy. Although there was the strong suggestion that these functions worked, any changes could not clearly be attributed to the health broker-boundary spanner. The researchers recommend clearer role descriptions and protocols for both the individual person in the function as well as clear terms of reference for the broader structures in which they are to be embedded.

6. Resilience and health development

Outside the health landscape there are many other initiatives that would inform health conservation zones and their related health brokerage efforts. ‘Resilient communities’ is one such approach – but resilient communities as a concept need to be complemented with a ‘thriving communities’ vision. Other ‘theme communities’ have also shown to have impact on community resilience and sustainability, e.g., Happy Cities, Safe Cities, Child- or Age-Friendly Cities. We hope to show that embracing such a perspective and adopting its value system would yield significant (social and community) capital.

Main domains	Physical (structure)	Human (agency)
Context	Environmental conditions	Culture, economy, knowledge, well-being, governance
Initial knowledge of risk and vulnerabilities	<ul style="list-style-type: none"> • Hazard mechanisms • Buildings, infrastructure 	<ul style="list-style-type: none"> • Level of preparedness: governments, businesses, households
Needed improvements in risk reduction and preparedness	<ul style="list-style-type: none"> • Early warning systems • Regulation systems in planning, buildings • Infrastructures • Priority facilities • Protecting and working with nature 	<ul style="list-style-type: none"> • Identifying risk and setting priorities • Building organisational capacity • Connectivity • Communication awareness • Education and training for safety • Finance and budgeting
Aftermath and recovery	<ul style="list-style-type: none"> • Relief • Rehabilitation • Recovery in long term 	

Table 8: main approaches to make cities more resilient (based on Davies, 2015)

The recent focus on resilience marks a shift from resistance strategies focused solely on the anticipation of risk and the mitigation of vulnerability to more inclusive strategies that integrate both resistance (*prevent, protect*) and resilience (*respond, recover*) in the face of disasters. The meaning of resilience varies by disciplinary perspective. For most, resilience means to adapt and “bounce back” from a disruptive event. Similarly, resilience also refers to the ability of a system to absorb, change, and still carry on. As applied to social systems, resilience refers to the capacity of a community system, or part of that system, to absorb and recover from disruptive events. The definition of the multi-disciplinary Resilience Alliance reads: “*the capacity of a system to absorb disturbance, undergo change, and retain the same essential functions, structure, identity, and feedbacks*”. It can be a characteristic of individuals, small groups, networks, organizations, regions, nations, or ecosystems. Davies (2015) reviews the different characteristics of resilient communities responding to ‘disturbance’ (such as privatization of power generation or a mine fire) as in table 8. He distinguishes between ‘hardware’ (*structure*), and ‘software’ or behaviour (*agency*) and shows that development and capacity building efforts on both front must go hand in hand in order to enable communities and their institutions to ‘bounce back’ and become resilient.

There is, however, an inherent tension in the notion of resilient communities and reducing inequities in health. There is danger, we know, in implying that communities need to be resilient in order to cope with the marginalisation and disrespect and denial of opportunities and options that are forced upon them. In the light of the above ‘response/recovery/bounce back’ choice of words it is therefore worth noting that the people of the Latrobe Valley don’t just want to bounce back to what was an unfavorable and inequitable situation. At a systems level, resilience would therefore need to be

qualified by the sage words of Michael Marmot in describing the need to address social determinants of health:

"What good does it do to treat people's illnesses, then send them back to the conditions that made them sick?" (Sir Michael Marmot, CSDOH Chair, WHO, http://www.who.int/social_determinants/strategy/photostory/en/index6.html)

7. Conclusions

The social and economic disadvantages experienced by the residents of the Latrobe Valley are strongly, positively associated with poor health and premature death.

Although some of the poor health and premature death experienced by residents of the Valley are a consequence of individuals' personal choices, a significant proportion of the health disadvantages experienced by the population are a consequence of social decisions - of decisions made by people and institutions that have control of social and economic resources. Making healthy choices is not always easy when access to, for instance, fresh fruit, healthy physical activity, or appropriate health services, is (perceived to be) difficult.

The people who tend to make most of the decisions about the distribution of socioeconomic resources and about the social status accorded different social groups are, overwhelmingly, socioeconomically advantaged (comparatively), and are much more likely to be members of the dominant social or cultural group. This clearly biases their decision-making options and directions.

The lack of 'presence' of representatives of disadvantaged or marginalized groups in social decision-making means that the decisions about the distribution of resources and opportunities are, frequently, insufficiently informed about the histories, living and working conditions, needs and aspirations of people who are most disadvantaged. As a consequence, the resources and opportunities available to marginalised communities are - frequently - inadequate to meet need, or not of highest quality, or not accessible at all. Also and conversely, marginalised communities are exposed to greater levels of risks to health (in their workplaces and living environments). This has been manifestly true for the Latrobe Valley community.

Health services (including disease care services, preventive services, public health and health promotion services) are among the resources to which disadvantaged communities have too little access.

7.1 What we found

In this paper we have reviewed and presented approaches to resolving these persistent challenges. We have identified that existing parameters in the State of Victoria would allow for the development and implementation of novel infrastructures, practices and policies. The strong traditions in systems-based health promotion (through tobacco control, Healthy Together Victoria, and the Victorian Health Promotion Foundation VicHealth) would allow for strong, institutional, community-driven and area-based health development. This health development would not only enhance the health of residents of the Latrobe Valley in comparison to that of other Australians, but would also impact on reductions in inequities in health between groups within the area.

The paper explored asset-based community development as an important approach to achieving health equity. The asset perspective, however, must not and cannot be seen as a panacea for the absence of (access to) services, work and infrastructure. Community action all too often fails when inappropriate and unrepresentative processes lead to action for people, not by and with people. The paper has mapped forms of representative, participatory and deliberative democracy that would enable dialogue rather than debate toward the allocation of resources and development of strategic policies and actions.

The evidence from Healthy Cities and Health Action Zones for the successful implementation of a Health Advocacy function and Health Conservation Zone show that clear value-based, community connected and politically endorsed terms of reference with transparent accountability and sustainable resourcing are critical ingredients for health development and greater health equity. It seems

particularly important to ground these longer-term approaches (with clear short term yields) in a value set driven by concepts of justice. Health responses to the Hazelwood incident should hinge on express commitments to

- *procedural justice* - decision-making about policy, program, service design and delivery - making the composition of decision-making bodies more descriptively representative of the community (in cultural, socioeconomic, gender, etc. senses); and strengthening communities' power to define 'agenda' items independently of the 'dominant culture';
- *substantive justice* - influence - putting items on the agenda, influencing discussion and debate on all agenda items, and influencing the outcomes of decisions; and
- *distributive justice* - ensuring that the population has equitable opportunities to access social resources - including high quality health care, but also preventive services, and education, employment, transport, etc.

7.2 What to do?

We have reviewed different models for fair delivery of health care – with particular emphasis on increasing equitable distribution of services and equitable delivery of quality care. These models hinge on the notion of primary care as the pivot in the system – but we also described how primary care can and should move beyond a medical-only perspective and include issues and services around safety and security, social development, education, etc.

We also looked at new ways of extending health promotion and disease prevention. Systems-based and culturally safe approaches that drive healthier choices to become easier choices in all sectors and settings of society (government, schools, industry) have demonstrated to have greater, and lasting, effect on health development and equity. These approaches are not just rhetoric – they have been tried and tested, and the Valley could follow some excellent role models.

The systems gaze naturally extends to policy and organisational development. It is here where the conditions for health are shaped. Embracing health as a whole-of-society and tangible value (rather than in mere rhetoric) does more than reduce risks to health and prevent ill health – it builds stronger individuals and communities that can withstand threats and emergencies like a mine fire more easily.

Developing and sustaining such a systems approach with a whole-of-society reach requires the purposeful increase of the capability of the Latrobe community (or communities) to build internal capacity to determine collective needs – public policy agenda items can be developed and considered through deliberative and participatory mechanisms.

It is important to increase the formal inclusion of representatives of marginalized communities in social decision-making (across all levels of governance) – in the public and private sectors, and in civil society. Recognising (dis)advantage and privilege is a first step in embracing the diversity that we should be rightfully proud of.

Individuals, communities, governments, institutions and businesses should all be involved in monitoring progress toward the joint goal of health development and advocacy. Good data collection over the long term should not just look at potentially excess mortality due to the mine fire emergency. It should have a systematic and systemic look at the social determinants of health and health equity, and endeavour to map the actions that will be taken by all stakeholders to make the Latrobe Valley an (even) better place to live.

7.3 Toward implementation

The evidence base is clear. The arguments are irrefutable. But between data and deeds, between problems and solutions, we often find treacherous swamps of good intentions and political discourse. In the field of political science this implementation dilemma has been researched for years. One framework that determined the variables that promote or hinder effective and lasting implementation of policy has been proposed by Mazmanian and Sabatier (1989). It has been criticized for being too linear, with opponents showing that implementation checklists do not do justice to the ever-changing dynamics of the real world. Yet, as a starting point we offer the following (table 9) for consideration when it comes to moving ideas into action.

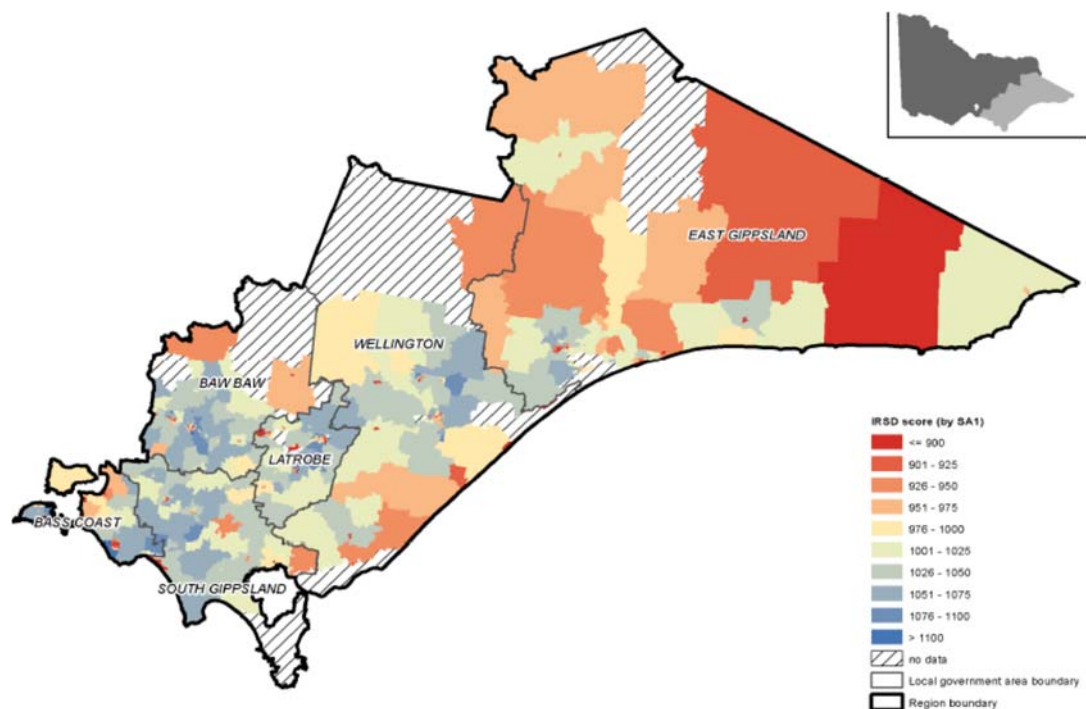
Tractability of the problem(s)	
A1. technical difficulties	<ul style="list-style-type: none"> • Agreement on the socio-ecological nature of the problem and its solutions needs to be ascertained and will need to be continually reaffirmed. • No one professional, organisational or disciplinary perspective (e.g., the 'biomedical model') should be allowed to dominate problem definition and ownership.
A2. diversity of target group behaviour	<ul style="list-style-type: none"> • Through dialogue rather than debate the approach and reach of Zone and Advocate need to remain inclusive whilst acknowledging that diversity is an asset. • 'Behaviour' relates particularly to organisational and social agency, with positive social health behaviour of individuals, groups and communities a function, rather than driver, of health development.
A3. target group as a percentage of the population	<ul style="list-style-type: none"> • Health equity and health development considerations must be inclusive of the entire population. • Actions, policies, and governance must be proportionate to need (appropriate 'proportionate universalism')
A4. extent of behavioural change required	<ul style="list-style-type: none"> • Aspirational vision must drive attainable short, middle and long term development and improvement objectives for organisational, social and individual behaviour. • 'Political behaviour' must be considered explicitly in this category.
Ability of statute to structure implementation	
B1. clear and consistent objectives	<ul style="list-style-type: none"> • Vision and objectives should be set transparently through accountable consultation mechanisms (e.g., deliberative and participatory democracy approaches) involving community, public and private organisations at all levels. • Objectives need to be embedded in a public statement (e.g., a Charter) that could be reaffirmed regularly. • Effort must be made to frame objectives in understandable language that stays close to lifeworld of those the objectives relate to – e.g., government departments would be susceptible to clear legal and managerial language whilst individuals and communities appreciate 'straight talk' directly relating to day-to-day concerns.
B2. incorporation of adequate causal theory	<ul style="list-style-type: none"> • The evidence base for action needs to be driven and communicated to stakeholders by clear causal linkage (e.g., '<i>Issue X is caused by phenomenon X1</i>' and subsequently '<i>Intervention x has been evidenced to impact on resolving issue X because it changes phenomenon x1</i>' in which each link can be reliably quantified).

	<ul style="list-style-type: none"> • ‘Causal theory’ can and must incorporate an extent of popular belief and perception (within reason)
B3. initial allocation of financial resources	<ul style="list-style-type: none"> • Transparent allocation of resources adds to the credibility and sustainability of action and policy. • Resource usage must be visible and accountable • ‘Low hanging fruit’ (or ‘quick wins’) within shorter term electoral cycles needs to be exploited appropriately to sustain longer-term resource identification and allocation. • A mix of longer-term resourcing from a range of bases needs to be sought. • One model for resourcing Zone and Advocate could be taken from the funding of the Victorian Health Promotion Foundation.
B4. planning integration within and among implementing institutions	<ul style="list-style-type: none"> • The public statement (or Charter, B1) needs to drive commitment and sign-up of all institutions involved in planning and implementing Zone and Advocate. • Measures must be taken to connect levels (system, organisational, individual) and types of governance (constitutive, directive and operational) cf. Hill & Hupe, 2006. • Planning integration is an on-going process and could become integrated in statutory requirements.
B5. decision rules of implementing agencies	<ul style="list-style-type: none"> • Measures must be taken to connect levels (system, organisational, individual) and types of governance (constitutive, directive and operational) cf. Hill & Hupe, 2006. • Planning integration is an on-going process and could become integrated in statutory requirements.
B6. availability or recruitment of implementing staff	<ul style="list-style-type: none"> • The public statement (or Charter) sets out responsibilities, resources and capacities required for the effective and timely implementation of Zone and Advocate. • This includes identification and designation of role requirements as well as (formal and informal) qualifications, behaviours and attitudes of ‘implementing staff’ (e.g., the people being part of the Advocate function). • Internal and external training capabilities in on-going learning at the individual and systems levels are to be identified and offered.
B7. formal access by outsiders	<ul style="list-style-type: none"> • Latrobe Valley is not an isolated, contained, system. It must be recognised that the system is dynamic and susceptible to change. • Resilience and development require the recognition of ‘outside’ actors and factors (e.g., Melbourne or Canberra politics; corporate overseas priorities and global economic shifts; influx of new residents) and the capacity to anticipate change.
Nonstatutory variables affecting implementation	
C1. socioeconomic conditions and technology	<ul style="list-style-type: none"> • Zone and Advocate need to be aware of, and have the capacity to anticipate changes in, socio-economic disruption and innovation. • Emergent technologies (both in ‘hardware’, e.g., machinery, but also in ‘software’, e.g., human relations) need to be assessed and embraced.
C2. public support	<ul style="list-style-type: none"> • Deliberative and participatory decision-making in transparent and accountable ways needs to secure the on-going public support of the Zone and Advocate.

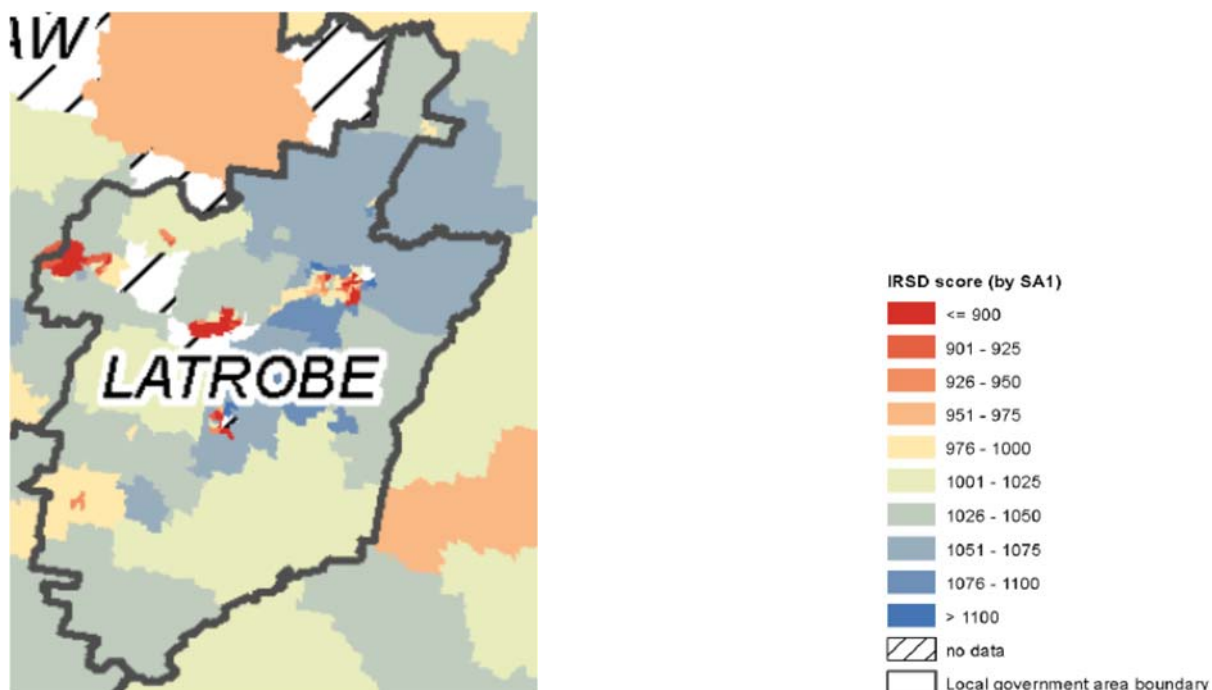
C3. attitudes and resources of constituency groups	<ul style="list-style-type: none"> • Deliberative and participatory decision-making in transparent and accountable ways needs to secure the on-going organisational commitment to the Zone and Advocate.
C4. support from sovereigns	<ul style="list-style-type: none"> • Multi-party political support, and endorsements from local industry should be secured regularly.
C5. commitment and leadership skill of implementing officials	<ul style="list-style-type: none"> • A programme of continuous support, recognition and skill development of all those involved in Zone and Advocate functions should be put in place. • This most specifically should extend to community leadership.

Table 9: Variables impacting the feasibility of implementation processes (Mazmanian & Sabatier, 1989) and an initial assessment of issues for consideration in implementing a Health Conservation Zone and Health Advocate in the Latrobe Valley

Appendix 1: Inequities in Gippsland and within the Latrobe Valley



Gippsland pre-Hazelwood Mine Fire Index of Relative Social Disadvantage indicative of health inequities (Department of Health Victoria, 2013)



Latrobe Valley pre-Hazelwood Mine Fire Index of Relative Social Disadvantage indicative of health inequities (Department of Health Victoria, 2013)

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