International Journal of Public Health (2018) 63:567–575
https://doi.org/10.1007/s00038-018-1083-9

ORIGINAL ARTICLE

A framework for regional primary health care to organise actions to address health inequities

Toby Freeman[1] · Sara Javanparast[1] · Fran Baum[1] · Anna Ziersch[1] · Tamara Mackean[1]

Received: 28 June 2017 / Revised: 13 December 2017 / Accepted: 12 February 2018 / Published online: 16 February 2018

Abstract

Objectives Regional primary health-care organisations plan, co-ordinate, and fund some primary health-care services in a designated region. This article presents a framework for examining the equity performance of regional primary health-care organisations, and applies it to Australian Medicare Locals (funded from 2011 to 2015).

Methods The framework was developed based on theory, literature, and researcher deliberation. Data were drawn from Medicare Local documents, an online survey of 210 senior Medicare Local staff, and interviews with 50 survey respondents.

Results The framework encompassed equity in planning, collection of equity data, community engagement, and strategies to address equity in access, health outcomes, and social determinants of health. When the framework was applied to Medicare Locals, their inclusion of equity as a goal, collection of equity data, community engagement, and actions improving equity of access were strong, but there were gaps in broader advocacy, and strategies to address social determinants of health, and equity in quality of care.

Conclusions The equity framework allows a platform for advancing knowledge and international comparison of the health equity efforts of regional primary health-care organisations.

Keywords Health equity · Primary health care · Social determinants of health · Health promotion · Equity of access

Introduction

How equitably a health system distributes health outcomes is critical to a fair and healthy society (Commission on Social Determinants of Health 2008). We use Whitehead's (1992) definition of health inequities: disparities in health between population groups that are avoidable, unfair, and unjust.

Political, social, and economic determinants are key drivers of health inequities, including housing, education, and employment (Commission on Social Determinants of Health 2008). Whole of government and society action on social determinants is needed to address health inequities (Baum et al. 2014). However, the health system is a vital determinant of health (Baum et al. 2009; Commission on Social Determinants of Health 2008). Health systems need to be sensitive to and oriented towards addressing health inequities (Browne et al. 2015). Strong primary health care (PHC) can contribute to health equity and improvements in population health (Macinko and Starfield 2003; Starfield et al. 2005). This study used the World Health Organization's Alma Ata Declaration definition of PHC (WHO 1978) as the first point of contact in a health system, and an approach to health care and health promotion that emphasises multidisciplinary teamwork, a social view of health, community participation, equity, disease prevention

✉ Toby Freeman
toby.freeman@flinders.edu.au

Sara Javanparast
sara.javanparast@flinders.edu.au

Fran Baum
fran.baum@flinders.edu.au

Anna Ziersch
anna.ziersch@flinders.edu.au

Tamara Mackean
tamara.mackean@flinders.edu.au

[1] Southgate Institute for Health, Society, and Equity, Flinders University, GPO Box 2100, Adelaide, SA 5001, Australia

and health promotion as well as curative and rehabilitative services, and action on social determinants of health.

Frameworks have been published for how PHC services can improve equity in access and health outcomes. Browne et al. describe Canadian equity-oriented services as providing contextually tailored, trauma- and violence-informed, and culturally safe care, and list ten strategies PHC services can use to enhance their capacity to address inequities (2015). Freeman et al. (2011, 2015) examined Australian PHC services, and developed a framework that extended on Thiede, Akweongo, and McIntryre's (Thiede et al. 2007) three dimensions of availability, affordability, and acceptability to encompass community engagement, improving access to other health services, and acting on the social determinants of health inequities. Similar frameworks to Thiede et al. also include those by Goddard and Smith (2001, availability, quality, cost, and information), Penchansky and Thomas (1981, accessibility, availability, acceptability, affordability, and adequacy) and Levesque and colleagues (2013, approachability, acceptability, availability and accomodation, affordability, and appropriateness).

In many countries, regional PHC organisations plan, co-ordinate, and fund PHC services in a designated region. The extent to which these organisations address health inequity varies, between and within countries. One UK study found a negative evaluation of the equity performance of Primary Care Trusts, and an expectation that the current clinical commissioning groups would not perform any better (Turner et al. 2013). Raymont and colleagues (2015) provide an example of an equity-oriented PHC organisation in New Zealand that focused on low cost access, more comprehensive services including health promotion, and integration with social services. The organisation reduced hospital admissions and PHC user fees, and increased PHC utilisation in an area of economic disadvantage. Thus, regional PHC organisations can make a significant contribution to health equity. The ways in which this can best happen require investigation.

Being able to compare different PHC organisations' contributions to health equity is critical to understand how to support such organisations to be equity oriented. However, there are no published frameworks on equity for regional PHC organisations to allow these comparisons. This paper aims to fill this gap, developing a framework to appraise regional PHC organisations' contributions to health equity, and providing an example application to Australian Medicare Locals.

Australian Medicare Locals

The first Australian National PHC Strategy (Australian Government 2009) recommended instituting regional PHC organisations to identify local needs, conduct population health planning, and co-ordinate PHC services. From 2011, the Australian Labor Government established 61 Medicare Locals in Australia. They were established as not-for-profit companies with boards, and received funding of approximately $520 million per year (total for all 61 Medicare Locals, Horvath 2014), representing 2% of the $21 billion spent on Medicare per year (Australian Government Department of Health 2017). Medicare Locals were short lived. A change in federal government in 2013 led to changes in PHC policy, which saw the replacement of Medicare Locals with 31 primary health networks in July 2015. The current study followed the work of the Medicare Locals until their disestablishment in 2015, and examined the extent to which Medicare Locals addressed health equity, with the acknowledgement that their development and planning did not come fully to fruition.

This study had two research aims:

1. To develop a framework to examine regional PHC organisation actions on health inequities.
2. To evaluate the usefulness of the equity framework, through an example application to Australian Medicare Locals.

Methods

Development of the framework

We searched literature for frameworks for equity in PHC, and identified in particular, Browne et al. (2015) and Freeman et al.'s (2011, 2015) frameworks. These were adapted to consider the particular role of regional PHC organisations that plan and co-ordinate PHC services. A draft framework was developed through discussion with all authors in research team meetings, and refined through reflection during the testing process for exhaustiveness and clarity.

Application to Medicare Locals

We applied the pilot framework to examine what actions Medicare Locals undertook to address health inequities. In 2014–2015, we gathered data through:

1. *Publicly available documents* from Medicare Locals' websites. Where documents were not available, we contacted the organisation to request them. We analysed documents to examine inclusion of equity as a goal in strategic plans (available for 50/61 Medicare Locals, 82%), the extent to which health equity data were collected in needs assessments (58/61 available,

95%), and strategies used from annual reports (54/61 available, 88%).

2. *An online survey* of Medicare Local senior staff between September and November 2014, using SurveyMonkey. The survey was designed in team discussions, with quantitative and open-ended questions on Medicare Locals' achievements, engagement with stakeholders, community engagement, and PHC planning for four population groups: Aboriginal and Torres Strait Islander peoples, new migrants and refugees, people with mental illness, and people living in low socio-economic circumstances. These groups were selected as important to consider for health equity. The information sheet and survey link was sent to all 61 Medicare Local CEOs for completion and distribution among Deputy CEOs, Senior Executives, Board members and program managers. We used the Dillman method (Hoddinott and Bass 1986) to increase the response rate, sending an advance notification letter to the CEO, followed by an email containing the survey link, and three follow up emails in 3 week intervals. We received 210 survey responses from 52 Medicare Locals (85% of Medicare Locals).
3. *Interviews with staff.* Survey participants were provided with the option of volunteering for an interview. A total of 106 survey participants (50%) did so, of which 51 were invited based on their position and role in population health planning, and to maximise geographic diversity in terms of state/territory, and urban and rural Medicare Locals. Of these, 50 agreed to participate in interviews, conducted between November 2014 and Feb 2015 (1 declined due to change of position). The qualitative, semi-structured telephone interviews focused on factors enabling or constraining population health planning, including addressing health equity. All interviews were audio-recorded, transcribed, and de-identified for further analysis.

Ethics approval was granted by the Flinders University Social and Behavioural Research Ethics Committee.

Analysis

The qualitative survey responses, interviews, and Medicare Local documents were imported into the QSR NVivo software for thematic analysis. Separate coding frameworks were developed for each data source based on the research questions for that source, discussed during team meetings. Eight interviews and documents from three Medicare Locals were double coded and discussed to ensure rigour of data analysis and interpretation. Emerging findings were presented and synthesised from the different data sources in regular team meetings and analysis workshops. Findings were presented to the project's critical reference group, comprising practice and policy actors, who provided feedback and information on context.

Results

This section presents the equity framework, followed by findings from applying the framework to Medicare Locals.

The framework

The framework (see Fig. 1) begins by considering the presence of equity as a goal of the organisation, e.g., in strategic plans (1). It then considers the extent to which the organisation collects local health equity data (2). PHC organisations collate population health data for their region, and presenting this data on inequities is the first step in addressing health inequities in the region. Finally, it considers effective strategies to address health inequities (3). The strategies are split into four categories (3a–3d).

3a: When regional PHC organisations are designing and implementing initiatives, it is important to consider if benefits would be spread equitably, or whether the initiative may exacerbate existing inequities (3d). The EFHIA (Equity-Focused Health Impact Assessment) is an example of a tool to address these questions (Simpson et al. 2005).

3b: community participation and engagement with communities experiencing health inequities is crucial to design acceptable strategies to address inequities (the vertical element of the box), (hence the horizontal element) and to address power relationships that underpin inequities (the horizontal element; Freeman et al. 2016; Marmot et al. 2008). The arrow back to collection of health equity information reflects that collaborative relationships with community organisations may aid in the collection of local health inequities information.

3c: PHC organisations have levers to address inequitable access to PHC, and the equity orientation of PHC services, to improve equity in access and quality of care. They can also foster stronger links and access to other health care and social services in the region.

3d: as determinants of health range from individual behaviour, through to living and working conditions, and political, social, and cultural determinants (Dahlgren and Whitehead 1991), there are different strategies available to organisations. Those focusing on individual behaviour are downstream. Those upstream include local intersectoral action on inequitable living and working

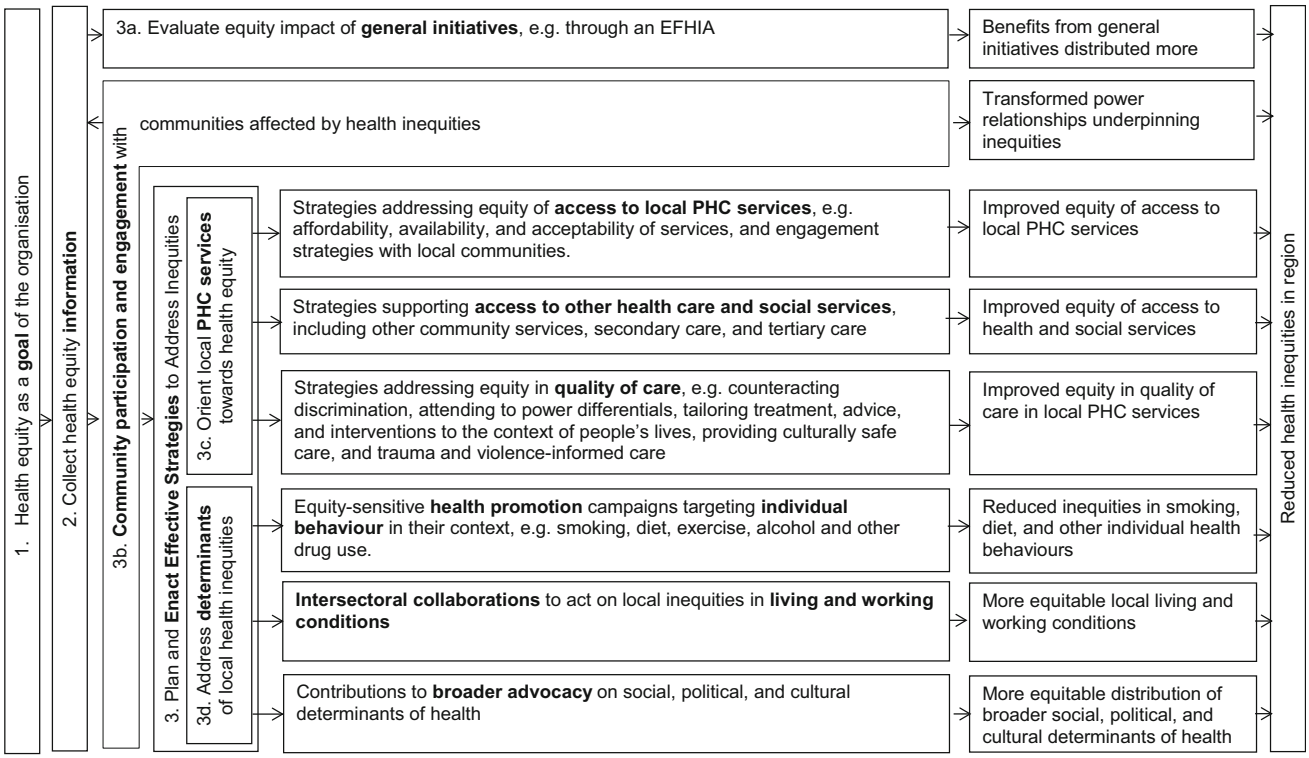

Fig. 1 Framework for assessing regional primary health-care organisations' actions on health equity (Australia, 2017, Regional Primary Health-Care study), *PHC* primary health care, *EFHIA* equity-focused health impact assessment

conditions, and contributions to broader advocacy addressing political and social determinants of health inequities.

The last two columns suggest potential health equity benefits of strategies, all contributing to the goal of reducing health inequities in the region. While strategies are presented alongside each other, this does not mean they are equally weighted, or equally likely to be implemented. Further down the framework, strategies reflect a more comprehensive, social view of health, working on more upstream determinants, and require the PHC organisation to view social determinants as legitimately within their remit. Such strategies may face more challenges to implementation in biomedically driven health systems (Baum et al. 2013), but may have the greatest power to alter health inequities (Commission on Social Determinants of Health 2008). We also acknowledge that in practice, strategies are not as easily demarcated, nor outcomes as linear as the framework implies—single programs may include multiple strategies, and contribute to multiple goals.

Below, we present findings from applying this framework to Medicare Locals, starting with the extent to which equity featured as a goal in Medicare Local strategic planning, then the extent to which they collected data on health inequities, and actions Medicare Locals undertook to address health inequities.

Equity as a goal

Equity did not feature in policy during the establishment of Medicare Locals (Commonwealth of Australia 2011). The objectives for Medicare Locals set by the Australian Government (2011) were to: (1) improve patient journeys; (2) provide support to clinicians and service providers; (3) identify health needs and develop locally focused and responsive services; (4) facilitate implementation of PHC initiatives; and (5) be efficient, accountable, effective, and well governed.

Only one point under objective 3 mentioned equity—stipulating looking at service gaps, strategies to improve health, and service quality "in local area populations, including for disadvantaged or under-serviced population groups" (Australian Government 2011).

In contrast, three quarters of available strategic plans (37/50, 74%) included references to equity in their mission, values, strategies, and/or objectives. Some Medicare Locals used the terms equity, inequities or equitable, while others referred to 'inclusive' or 'social inclusion', or prioritising population groups experiencing disadvantage.

Equity was most frequently mentioned in the broad mission or vision section, but was often less apparent in objectives and strategies sections. Instead, many Medicare Locals referred to the five objectives provided by the federal government, which did not include equity.

Medicare Locals' annual plans and annual reports were not sufficiently detailed to plot how health equity strategies featured in planning and then the extent to which they came to fruition. Interview participants provided details of how equity was considered during needs assessments and planning. This ranged from using a weighting system when deciding priorities with a "greater weighting for issues of equity" (CEO Interview) through to not considering equity, for example: "I don't think we started from a process of having a specific or transferred objective about equity as such as part of the process." (senior executive interview).

Collection of health equity data

The federal government provided a detailed template for Medicare Locals' needs assessment, which included compiling and reviewing "data on health inequity", "special needs groups (or sub-regions)", and "gaps in access for vulnerable and marginalised populations". Hence, all needs assessments included consideration of health inequities, mapping populations likely to experience health inequities, e.g., Aboriginal and Torres Strait Islander populations, geographic areas, culturally and linguistically diverse populations, single parent families, and homeless people, and examining social determinants of health, such as housing stress, unemployment, and education. Information on inequitable health outcomes was less common, i.e., data measuring the extent of health inequities, but some examples included reporting rates of low birth weight, avoidable morbidity and mortality, mental ill health, and hospital utilisation for different geographic areas or population groups.

Activities to address equity

Activities addressing health inequities were collated from Medicare Locals' annual reports, survey responses, and staff interviews, and categorised according to the equity framework (Fig. 1). The activities are summarised in Table 1, with some illustrative examples in Table 2.

General initiatives (3a) No evidence was found for Medicare Locals using formal equity evaluations of initiatives. There was sparse evidence that Medicare Locals considered equity informally when implementing general initiatives. For example, all Medicare Locals were funded to improve after hours access to general practice, and addressed this goal in different ways (e.g., service directories with after hours information, incentives to general practices to provide after hours services). Few Medicare Locals showed evidence of considering equity of access beyond providing materials on after hours access options in languages other than English. Some Medicare Locals did consider geographic equity, targeting resources towards more disadvantaged or remote areas that were otherwise not "commercially viable" (CEO interview), although Medicare Locals noted they weren't always successful in distributing resources in this way, due to political or contractual imperatives.

Community engagement and participation (3b) Community consultation was a strong feature of Medicare Locals, with 59 (97%) holding community forums, surveys, or focus groups. Most Medicare Locals had advisory groups that included community members, and 25 Medicare Locals (41%) had community members or staff from community organisations such as Aboriginal Community Controlled Health Organisations on their board. These structures may have provided community members greater scope than consultations to affect the decision making of the Medicare Local. Members of communities experiencing inequities, other than Aboriginal and Torres Strait Islander peoples, were less present in these participation structures, e.g., migrant or refugee populations or organisations, a gap noted by a number of survey respondents. Two exceptions were one Medicare Local had a refugee advocate on their board, and one had an "Afghan Community Engagement Team of volunteers", who served as "the link between the community and our programs." (CEO/Deputy CEO, Survey). Most community engagement appeared to have a limited focus on improving service design and acceptability, with less evidence of community participation to address the power relationships underlying health inequities.

Strategies to orient local PHC services towards health equity (3c) All Medicare Locals addressed inequity of access to PHC to some extent, as all, at the least, received funding to facilitate PHC access for Aboriginal and Torres Strait Islander people. Strategies ranged from activities with a potentially strong impact, such as provision of new, free services (e.g., to support management of chronic diseases), through to more nebulous activities on co-ordination of services. Some Medicare Locals attended to affordability of PHC, e.g., by providing free services (pulmonary rehabilitation, mental health, dental) in low socio-economic areas. Transport or outreach services were not common, but there were some examples.

One interviewee reported that equity of access considerations in the delivery of programs was driven by the federal government: "A lot of our programs that we run are

Table 1 Health equity strategies implemented by Medicare Locals, Australia 2011–2015, Regional Primary Health-Care study

Equity strategy (from framework)	Examples of Medicare Local activities
Evaluate equity impact of general initiatives	No evidence of formal use of equity frameworks, but equity was often reported to be considered, e.g., in the distribution of mental health funding
	After hours access program had some consideration of equity, e.g., materials in languages other than English
Engagement with communities experiencing disadvantage	Community consultation, (orums, focus groups, program evaluations) was very common
	41% had community members, community organisation staff on the board
	Many had advisory groups or subcommittees comprised of community members
	A few examples of volunteer community engagement roles
Strategies addressing equity of access to local primary health-care services	The most commonly attended to equity strategy. Aboriginal Torres Strait Islander services (chronic conditions, mental health)
	Strategies addressed affordability and gaps in service availability for disadvantaged regions (including regional and remote)
	Some migrant/refugee clinics and services
	Some outreach or transport services
Strategies supporting access to other health care and social services	Most commonly, development of service directories, and/or work with state government health networks on pathways with tertiary care, e.g., hospital discharge planning (not necessarily equity-focused)
	Some partnering with state government and non-government organisations to improve access to their services, e.g., helping staff a clinic for homeless people
Strategies addressing equity in quality of care	Rare—some cultural safety training conducted with practitioners in region
Equity-sensitive health promotion campaigns targeting individual behaviour	Health promotion programs targeting specific population groups, e.g., immunisation programs, smoking cessation, Aboriginal and Torres Strait Islander health promotion programs
	Health promotion resources sometimes provided in languages other than English
Intersectoral collaborations to act on local inequities	Some interagency collaborations on local social determinants, e.g., on food security, homelessness employment, family violence, recidivism
	One example of provision of financial planning services
	A few place based initiatives in communities of disadvantage
Contributions to broader advocacy	No evidence of broader (non-local) advocacy on determinants of health

Table 2 Selection of examples of equity strategies used by Medicare Locals

Partnering with state government and non-government organisations to provide "medical outreach services" in a "drop in clinic for homeless people" (board member interview)—coded as 'strategies addressing equity of access to local primary health-care services'
Cultural safety training in collaboration with state Aboriginal Community Controlled peak body, including for staff in general practice, pharmacy, aged care, and corrective services (survey response)—coded as 'strategies addressing equity in quality of care'
Identified high rates of respiratory illness in a low socio-economic area with a high smoking rate, and provided free access to pulmonary rehabilitation for this population (CEO interview)—coded as 'strategies addressing equity of access to local primary health-care services'
Placed-based equity initiative with a block of apartments with 460 residents, "the most disenfranchised, disorganisedly cared for people we've ever met". "So we have built them up. They have their own committee that we support, and that committee along with us backs family community services, housing, local council. We are setting up a wellness centre and we are getting all of those service providers. … We've got all the service providers, they will now run services from that wellness centre instead of hodge podge services that come in and out… So in relation to the social determinants: belonging, a sense of community, access to health services, access to literacy and knowledge, co-ordination, support. They're all the things we're trying to build." (senior executive interview)—coded 'strategies addressing equity of access to local primary health-care services', 'strategies supporting access to other health care and social services', 'strategies addressing equity in quality of care', and 'intersectoral collaborations to act on local inequities'

aimed at those people that wouldn't necessarily be able to afford those services otherwise, but I would argue that a lot of that is … driven by the Commonwealth." (CEO Interview). In some instances, these were explicitly residual services, only provided to those on low incomes. Medicare Locals reported limited scope to spend their

allocated funding on addressing equity: "we were still constrained very significantly by the key performance indicators and the contractual obligations of specific targeted funds that came from the Commonwealth and that's limited our ability to tackle some of the inequity issues in ways that we would think maybe slightly could potentially be more productive" (board member interview).

Thus, additional funding streams allowed Medicare Locals to address equity more comprehensively: "The only reason that we have been able to have a bit more forward momentum is because we have considerable budgets for Aboriginal health that are outside of what most Medicare Locals get … That has provided us with an enormous amount of ability to be able to do what we do." (senior executive interview).

Although Medicare Locals had a strong focus on working with state hospitals and health networks, and a number of Medicare Locals developed service directories for their region, these actions did not have an evident equity focus, and as such, there were few clear strategies identified for supporting equity of access to health and social services outside of PHC. Provision of cultural safety training programs to practitioners was the only strategy identified that targeted equity in quality of care received by different population groups.

Strategies to address determinants of health inequities (3d) We found evidence for eight Medicare Locals (13%) considering strategies to address determinants of health inequities consistently. A further seven (11%) Medicare Locals had more isolated examples of addressing a social determinant. Table 1 describes local, intersectoral projects. There were some instances of equity-sensitive health promotion activities. No evidence was found of broader advocacy that extended beyond Medicare Locals' catchment areas.

While needs assessments included social determinant and equity information, and Medicare Locals reported finding this useful, most Medicare Locals struggled to act on it. Typically, equity and social determinants data were used to target PHC services to those most in need rather than being used to inform advocacy or action to address the underlying causes. One interviewee commented that social determinants "has been discussed, particularly in terms of understanding the reasons why there's the distribution of health and illness in the area … Operationalising that has been a little bit more difficult." The eight Medicare Locals that had succeeded typically embedded social determinants in their ways of working, e.g., in program management templates and committee terms of reference and membership. Despite reviews finding evidence for effective population health strategies limited and patchy (Hawe and Potvin 2009; Lorenc et al. 2013), lack of evidence was not raised as a notable barrier.

Medicare Locals that engaged in a more comprehensive response to health inequities did not necessary have the strongest inclusion of equity in their strategic plans, and there were a number of Medicare Locals with strong equity statements that did not necessarily correspond to evidence of acting concertedly on inequities.

Discussion

This paper presented a pilot framework for examining the actions available to regional PHC organisations to address health inequities, and tested that framework by applying it to Australian Medicare Locals. We found the framework to be a useful means of assessing the equity performance, and gaps in strategies used by Medicare Locals. Previous frameworks focused on equity strategies that PHC services can implement. Broadening these frameworks to apply to regional PHC organisations that plan, co-ordinate, and fund PHC services has the potential to increase our understanding by generating comparative findings of regional PHC organisations' equity performance—between countries, and across time, given Medicare Locals have already been replaced with Primary Health Networks. In particular, over and above the existing frameworks for equity in PHC services, this framework for regional PHC organisations highlights the higher level strategies of distributing funding and attention to orient PHC in a region towards greater equity of access to PHC and greater health equity, including regional collaborations to address social determinants.

A common criticism of Medicare Locals was the variation in how they pursued their objectives (Horvath 2014; Robinson et al. 2015), and this study also found a wide range of approaches to addressing equity. In testing the framework, we found a general policy silence on health equity (except, as noted, in the needs assessments template and in program implementation). The strong inclusion of equity in strategic plans speaks to a normative expectation that regional PHC organisations ought to be examining and addressing health inequities in their region. A strength of this study was the ability to move beyond the inclusion of equity in planning documents and needs assessments to catalogue the activities Medicare Locals undertook to address equity. That some of this inclusion of equity in strategic plans did not lead to comprehensive actions on equity may indicate some of this language was rhetoric, or the disconnect may be due to barriers encountered when trying to address equity, or to the short lifespan of Medicare Locals, which did not allow all planning to come to fruition.

We found Medicare Locals' consideration of equity was largely confined to reducing access barriers to PHC, with some equity-focused health promotion activity. A more comprehensive PHC approach paying greater attention to social determinants of health inequities was evident at only 13% Medicare Locals. This is consistent with Robinson's (2015) findings that only a subset saw the social determinants of health as within their remit. In the strongest case of a Medicare Local acting to address social determinants, this was facilitated by a special grant, pointing to the need for this work to be sufficiently resourced. One clear absence was that no Medicare Local had evidence of contributing to broader advocacy on health. This may reflect a trend, previously noticed in Australia, where organisations reliant on government funding find advocacy is delegitimised or directly prohibited (Baum et al. 2016; Mellinger and Kolomer 2013).

The comprehensive PHC vision of the Alma Ata Declaration (WHO 1978) has been challenged by a more selective, technical approach to PHC, and rarely implemented fully (Baum et al. 2017). One contribution of this equity framework is to capture the comprehensive vision of PHC, and the contribution it could make to reducing health inequities, and capturing any drift from comprehensiveness. With wealth inequities (Piketty 2014) and chronic disease (Guariguata et al. 2014) increasing globally, the case for comprehensive PHC continues to grow stronger.

A key limitation of this study is that the implementation of equity strategies could not be followed through to equity outcomes (the last two columns in the framework). Any changes in health equity in the populations served by different Regional PHC organisations would be difficult to attribute back to these organisations alone. This case study demonstrates the usefulness of the regional PHC organisation health equity framework. Further applications of the framework in other countries may be valuable in illuminating any additions or changes to the framework that would aid its applicability to other countries.

Conclusion

Regional PHC organisations have a strong potential to reduce health inequities in the region they serve. The framework we have presented allows these organisations' planning and actions for health equity to be measured against the scope of actions available, and highlight strengths and weaknesses. Maximising regional PHC organisations' contributions to health equity could have a considerable effect globally on reducing health inequities, and help foster more equity-oriented health systems.

Acknowledgement Funding was provided by National Health and Medical Research Council (Grant No. GNT1064194).

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent Informed consent was obtained from all individual participants included in the study.

References

Australian Government (2009) Towards a national primary health care strategy: a discussion paper from the Australian government, Canberra. http://www.health.gov.au

Australian Government (2011) Medicare Locals: guidelines for the establishment and initial operation of Medicare Locals & information for applicants wishing to apply for funding to establish a Medicare Local. Australian Government, Canberra

Australian Government Department of Health (2017) Annual medicare statistics. http://www.health.gov.au/internet/main/publishing.nsf/content/annual-medicare-statistics. Accessed 20 Nov 2017

Baum FE, Begin M, Houweling TA, Taylor S (2009) Changes not for the fainthearted: reorienting health care systems toward health equity through action on the social determinants of health. Am J Public Health 99:1967–1974. https://doi.org/10.2105/ajph.2008.154856

Baum F, Legge D, Freeman T, Lawless A, Labonte R, Jolley G (2013) The potential for multi-disciplinary primary health care services to take action on the social determinants of health: actions and constraints. BMC Public Health 13:460

Baum F et al (2014) Evaluation of health in all policies: concept, theory and application. Health Promot Int 29:i130–i142. https://doi.org/10.1093/heapro/dau032

Baum F, Freeman T, Sanders D, Labonté R, Lawless A, Javanparast S (2016) Comprehensive primary health care under neo-liberalism in Australia. Soc Sci Med 168:43–52

Baum F, Freeman T, Lawless A, Labonte R, Sanders D (2017) What is the difference between comprehensive and selective primary health care? Evidence from a five-year longitudinal realist case study in South Australia. BMJ Open 7:e015271

Browne AJ, Varcoe C, Ford-Gilboe M, Wathen CN (2015) EQUIP healthcare: an overview of a multi-component intervention to enhance equity-oriented care. Int J Equity Health 14:152

Commission on Social Determinants of Health (2008) Closing the gap in a generation: health equity through action on the social determinants of health. World Health Organization, Geneva

Commonwealth of Australia (2011) Improving primary health care for all Australians. Commonwealth of Australia, Canberra

Dahlgren G, Whitehead M (1991) Policies and strategies to promote social equity in health Institute for Policy Studies: Stockholm

Freeman T, Baum F, Lawless A, Jolley G, Labonte R, Bentley M, Boffa J (2011) Reaching those with the greatest need: how Australian primary health care service managers, practitioners

and funders understand and respond to health inequity. Aust J Prim Health 17:355–361. https://doi.org/10.1071/PY11033

Freeman T et al (2015) Revisiting the ability of Australian primary health care services to respond to health inequity. Aust J Prim Health 22:332–338. https://doi.org/10.1071/PY14180

Freeman T, Baum FE, Jolley GM, Lawless A, Edwards T, Javanparast S, Ziersch A (2016) Service providers' views of community participation at six Australian primary healthcare services: scope for empowerment and challenges to implementation. Int J Health Plan Manage 31:E1–E21. https://doi.org/10.1002/hpm.2253

Goddard M, Smith P (2001) Equity of access to health care services: theory and evidence from the UK. Soc Sci Med 53:1149–1162. https://doi.org/10.1016/S0277-9536(00)00415-9

Guariguata L, Whiting D, Hambleton I, Beagley J, Linnenkamp U, Shaw J (2014) Global estimates of diabetes prevalence for 2013 and projections for 2035. Diabetes Res Clin Pract 103:137–149

Hawe P, Potvin L (2009) What is population health intervention research? Can J Public Health 100:8–14

Hoddinott SN, Bass MJ (1986) The dillman total design survey method. Can Fam Physician 32:2366–2368

Horvath J (2014) Review of Medicare Locals. Report to the Minister for Health and Minister for Sport, Canberra, ACT

Levesque J-F, Harris MF, Russell G (2013) Patient-centred access to health care: conceptualising access at the interface of health systems and populations. Int J Equity Health 12:18. https://doi.org/10.1186/1475-9276-12-18

Lorenc T, Petticrew M, Welch V, Tugwell P (2013) What types of interventions generate inequalities? Evidence from systematic reviews. J Epidemiol Community Health 67:190–193

Macinko J, Starfield B (2003) The contribution of primary care systems to health outcomes within organization for economic cooperation and development (OECD) countries, 1970–1998. Health Serv Res 38:831–865

Marmot M, Friel S, Bell R, Houweling TAJ, Taylor S (2008) Closing the gap in a generation: health equity through action on the social determinants of health. Lancet 372:1661–1669. https://doi.org/10.1016/S0140-6736(08)61690-6

Mellinger MS, Kolomer S (2013) Legislative advocacy and human service nonprofits: what are we doing? J Policy Pract 12:87–106

Penchansky R, Thomas JW (1981) The concept of access: definition and relationship to consumer satisfaction. Med Care 19:127–140

Piketty T (2014) Capital in the twenty-first century. The Belknap Press of Harvard University Press, Cambridge Massachusetts

Raymont A, Boyd M-A, Malloy T, Malloy N (2015) Rural health care in New Zealand: the case of coast to coast health centre, Wellsford, an early integrated family health centre. J Prim Health Care 7:309–315

Robinson S, Varhol R, Ramamurthy V, Denehy M, Hendrie D, O'Leary P, Selvey L (2015) The Australian primary healthcare experiment: a national survey of Medicare Locals. BMJ Open 5:e007191. https://doi.org/10.1136/bmjopen-2014-007191

Simpson S, Mahoney M, Harris E, Aldrich R, Stewart-Williams J (2005) Equity-focused health impact assessment: a tool to assist policy makers in addressing health inequalities. Environ Impact Assess Rev 25:772–782. https://doi.org/10.1016/j.eiar.2005.07.010

Starfield B, Shi L, Macinko J (2005) Contribution of primary care to health systems and health. Milbank Q 83:457–502

Thiede M, Akweongo P, McIntyre D (2007) Exploring the dimensions of access. In: McIntyre D, Mooney G (eds) The economics of health equity. Cambridge University Press, Cambridge

Turner D, Salway S, Mir G, Ellison GT, Skinner J, Carter L, Bostan B (2013) Prospects for progress on health inequalities in England in the post-primary care trust era: professional views on challenges, risks and opportunities. BMC Public Health 13:274. https://doi.org/10.1186/1471-2458-13-274

Whitehead M (1992) The concepts and principles of equity in health. Int J Health Serv 22:429–445

WHO (1978) Primary health care: report of the international conference on primary health care, Alma Ata, USSR, 6–12 September 1978. World Health Organisation, Geneva