

LITERATURE REVIEW

Implementation, Effectiveness and Political Context of Comprehensive Primary Health Care: Preliminary Findings of a Global Literature Review

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Primary health care (PHC) is again high on the international agenda. It was the theme of *The World Health Report* in 2008, thirty years after the Alma-Ata Declaration, and has been the topic of a series of significant conferences around the world throughout 2008. What have we learnt about its impact in improving population health and health equity? What more do we still need to know? These two questions frame a four-year international research/capacity-building project, "Revitalizing Health for All" (RHFA), funded by the Canadian Global Health Research Initiative (http://www.idrc.ca/en/ev-108118-201-1-Do_Topic.html). The RHFA project is organised under the umbrella of the People's Health Movement (<http://www.phmovement.org/en>) and the International People's Health University (<http://phmovement.org/iphu/>), and involves researchers from over a dozen countries. Our project team's understanding of PHC is of a *comprehensive* approach aimed at reducing health inequities that is based on meaningful community participation, multidisciplinary teams and action across sectors.

Our work takes as its starting point the well- documented challenges to PHC's abilities to fulfil its Alma-Ata vision:

- Its almost immediate eclipse by "selective" PHC which privileged a few low-cost interventions, mostly directed to child survival, abetted by confusion over whether PHC was an "approach" or a level of care, and the equation in some rich countries of

PHC with first line or primary (medical) care provided by general practitioners (Tarimo & Webster, 1994).

- The globalisation of market-driven models of health systems, coupled with the influence of the World Bank's 1993 *Investing in Health* report and its promotion of cost-effective "packages" that ignored the social determinants of health and further disintegrated individual and collective health care (World Bank, 1993; Sanders, Schaay, & Mohamed, in press).
- The weakening and fragmentation of public health systems in many countries partly consequent to structural adjustment and accompanying fiscal stringency, and the subsequent reliance of many low- and middle-income countries (LMICs) on a growing number of disease-specific global health partnerships for the financing of health services (Sanders et al., in press; Labonte, Blouin, Chopra, Lee, Packer, Rowson et al., 2007).
- Political concern that PHC's emphasis on community participation could challenge elite group interests during a period marked by powerful left/right ideological struggles in many countries (Solar & Irwin, 2006).

Despite these challenges, considerable experience has been gained in implementing PHC as a more comprehensive approach, enriched by a subsequent rise in social models of health promotion (World Health Organization [WHO], 1986) and rights-based approaches to health and development. This knowledge has not yet been systematically gathered and explored. The first year of our RHFA project, now completed, was devoted to this task (Box 1: Review Methods). Here we report preliminary findings of our literature review with respect to PHC's comprehensiveness, effectiveness and political contexts, and conclude with some of the research theme areas awaiting answers, to which our project will now turn.

Box 1: Review Methods

A comprehensive literature search was conducted of seven bibliographic databases using an OVID interface: Medline (1966 to present), EMBASE (1980 to present), HealthStar (1966 to 1998), HealthStar (1999 to present), CINHAL (1982 to present), the Cochrane Central Register of Controlled Trials (1st quarter 2007) and Socio Abstracts. The citations were entered into Reference Manager v11.0, and, after removal of duplicates, a total of 95,845 citations remained. These were distributed to geographically based teams in Canada, Australia, the Netherlands, South Africa, India and Colombia, and further reduced through reviews of abstracts. Other search strategies included internet Google searches, reference lists and proceedings from key conferences for abstracts of unpublished data. Project researchers also used their networks of content experts to search for published or unpublished ("grey") literature. Results reported here are based on preliminary analyses of 336 articles covering most regions of the world. While emphasis was placed on articles providing empirical findings, one-third reviewed so far were policy analyses and commentaries. These were helpful in assessing the impact of the political context on PHC programs. General themes have emerged that will be refined as analysis is completed.

How comprehensive has PHC been?

Long-standing definitional confusion surrounding PHC can be reduced to three contentions:

1. Whether PHC describes the primary level of care only or an approach that guides national and local health system organisation and its integration with household, community and secondary/tertiary care levels.
2. The extent to which PHC describes only therapeutic and rehabilitative care and within- sector disease prevention or health promotion, or also depends on horizontal engagement with communities and intersectoral actions on social, political and economic determinants of health.
3. The point at which stand-alone actions on social and economic determinants of health without any link to health services should be included under the umbrella of PHC.

Our project favoured the broader interpretations of points 1 and 2, but excluded many health promoting projects that had no apparent linkage to health services delivery. Our rationale for this exclusion is that PHC is grounded in health care services; it is where primary care meets the determinants of health. Within health systems different departments may emphasise one or the other; but unless a practice, program or policy link exists between treatment/rehabilitation and prevention/promotion components we do not have an instance of comprehensive PHC. An example of such linkages is a health system response to diarrhoea in children, which incorporates components of treatment (oral rehydration), rehabilitation (nutritional supplementation), prevention (education on hygiene, breastfeeding, immunisation) and promotion (community/ intersectoral interventions to improve child care, household food security, access to water/sanitation [Sanders et al., in press]).

Drawing on the experiences of our project's team and PHC commentaries, we created a list of the types of outcomes associated with idealised comprehensive PHC (Table 1).

Table 1: Desired Outcomes of Primary Health Care (CPHC)

- Increased equity in access to health care and other services/ resources essential to health
- Reduced vulnerabilities through increases in community empowerment (capacities)
- Reduced exposures to risk through changes in social and environmental determinants of health
- Improved participatory mechanisms and opportunities and political capabilities of marginalised population groups reached by comprehensive primary health care initiatives
- Increased intersectoral policy actions on the social and economic determinants of health that involve the health sector
- Improved population health outcomes and greater health equity.

We did not expect to find evidence of programs or health systems performing well on all of these outcomes; nor did we. Most of the scientific literature (though less of the grey literature) concerned improving access to primary care only, occasionally also examining improvements in basic health knowledge/behaviours. There were regional differences.

In Europe and North America, emphasis was on access to general practitioners, or, in the case of uninsured Americans, provision of services through publicly funded community health centres. Community involvement/ empowerment was also a theme, particularly with multidisciplinary community health centres (CHCs) or other "community-oriented primary care" (COPC)-styled programs (Yalnizyan, 2005; COPC is a primary care model first developed in South Africa in the 1940s that included actions to change the social determinants of health). Such centres often began as ways to bring primary care services to rural/remote or urban disadvantaged populations but expanded to incorporate community participation and health promotion activities. In some countries, such as Canada and Australia, these centres became part of universally funded health systems serving a mix of population groups. There were also descriptive studies concerning creation and management of multidisciplinary teams and formative evaluations of intersectoral collaboration. While these described PHC efforts to become more comprehensive, few outcome or impact results were reported. The review also found that Indigenous controlled health services often implement more comprehensive forms of PHC in response to the poor health status of Indigenous peoples (Box 2). A small number of the European studies did report on more comprehensive PHC projects. These included evaluations of a network of community health centres around Naples, the work of which was organised around issues of poverty, mental ill health, workplace hazards and social exclusion (Fuller, 1986); community and social movement involvement in PHC centres in Madrid (Ruiz- Jimenez, 2007); and COPC-styled programs in Belgium that became triggers for intersectoral action on health determinants (De Maeseneer, De Roo, Art, Willems, & Van de Geuchte, n.d.).

Box 2: Australian Aboriginal PHC Experiences

Aboriginal people have been critical in their success. In a collaborative project undertaken in rural New South Wales by the Division of General Practice to increase Aboriginal people's access to GP services, for example, implementation was overseen by a management committee with majority Aboriginal representation and regular reporting to the Aboriginal health council. Project strategies credited with improving service access included cross-referrals between Aboriginal health workers and GPs, outreach clinics and cultural awareness training (Andrews, Simmons, Long, & Wilson, 2002). Flexibility in service provision has also proved to be important in reaching underserved groups, extending to providing assessment and referral services in Aboriginal people's homes, local parks, schools or other more trusted settings than hospitals. Involving trusted Aboriginal workers is key (Cleweth, Smith, & Sealey, 2006). By contrast, other attempts to introduce coordinated care in Aboriginal communities in Australia have met with limited success partly due to low levels of participation and consultation with local community members—often a result of having an insufficient number of trained Aboriginal health workers to engage the community (Robinson, d'Abbs, Togni, & Bailie, 2003).

In South Asia, Latin America and Africa more emphasis was placed on evaluating population health effects. This is not surprising since many of these programs typified "classical" Alma-Ata-style PHC, targeting improved access to poor rural groups (Box 3). A review of South Asian grey literature, where several of the programs pre-dated Alma Ata

and little new research occurred post-1980, found that programs fell into three types: those that primarily emphasised community involvement in health care services; those that saw PHC as including income generation, agriculture and other service sectors; and those that saw PHC as a means of engaging communities in a more far-reaching empowerment project. Programs sponsored by non-government organisations were more likely to align with the last two approaches and less likely than government programs to prioritise only basic care provision. Both gave some attention to the social determinants of health, although some country-wide government programs less so. More recently, some countries are attempting to "roll out" PHC as state- or nation-wide programs (Boxes 3 and 4).

There is a long history of PHC programs in Latin America, many of which supported actions across most or all of the desired outcomes in Table 1. The sustainability of their comprehensiveness, however, appears to be significantly determined by the political climate. An important finding from the Latin American experience is that more comprehensive approaches to PHC exist in countries with universal (or near universal) integrated health systems, while selective PHC or targeting of basic care to disadvantaged groups is associated with segmented and fragmented health systems. More recently, Latin American PHC has also begun integrating technological advances and emphasising poorer urban areas.

Box 3: Thailand's PHC Program

Thailand began its PHC implementation in 1977 to service its largely rural population. Successes include adequate child nutrition rising from 47% between 1979 and 1982 to 79% by 1989, through a program of nutrition surveillance, nutritional cooperatives and encouraging families to grow nutritional crops. Similar successes were achieved in immunisation status, access to clean water and sanitation, and the availability of essential drugs (Nitayarumphong, 1990). Key to the success of its program was community participation through Village Health Volunteers and Village Health Communicators, who organised health activities and health promotion with the supervision and support of paid health workers. Intersectoral collaboration with education, agriculture and community development was part of the strategy. After some dissatisfaction with rural services in the mid-1990s, community groups identified a need for more attention to HIV/AIDS and health determinants. Thailand's PHC program subsequently expanded with foci on HIV/AIDS and the Millennium Development Goals (Ministry of Public Health Bureau of Policy and Strategy, 2007).

Some differences were noted between high- income countries (HICs) and LMICs in the type of programs they favoured. PHC in LMICs has often meant increasing access to maternal/child health programs and improving basic sanitation, while in HICs it has meant increasing access to a broad range of health services and programs on the social determinants of health. At the same time, there are examples of both orientations across all countries, and the political and institutional challenges to increasing PHC's comprehensiveness are widely shared.

Box 4: Brazil's PHC Program

Changes in Brazilian law in the 1980s strengthened local administrative authority. In tandem with democratisation, social mobilisations and a reformist climate, new PHC programs were initiated, such as the large-scale training and support of community health workers known as *Programa Agente Comunitario de Saude*. This program, which began in the mid-1980s in a north-eastern state of Ceara, informed and was integrated into the national *Programa Saude da Famtlia* (PSF) in 1994. The PSF, which is wholly government-funded, now covers 50 million Brazilians, or 40 per cent of the entire population. Comprised of teams of one physician, nurse, nurse assistant and four to six community health workers (CHW), PSF is credited with reductions in infant mortality and lower hospitalisation rates. Two features that make the program unique are its scale, and its integration of paid CHWs within its PHC teams (Macinko, de Souza, Guanais, & da Silva Simoes, 2007; Escorel, Giovanella, de Mendonga, & de Castro Maia Senna, 2007).

In summary, our review shows some evidence of comprehensive PHC. Most of the literature, however, deals only with narrow PHC "slices" rather than with the whole; for example, a study of intersectoral activities or the creation of new community groups but not with the overall services (including clinical care) provided by the program. This means the synergies between various aspects of a more comprehensive PHC are rarely captured in the formal literature. This could be as much an artefact of academic/scientific journal publishing—where articles must be short and focused—as a statement about the limited history of comprehensive PHC experiences. It is also why the grey literature, unfettered by the structural constraints of peer-reviewed journals, often contained the most useful and rigorous assessments of comprehensive PHC programs. A targeted follow-up of some of these slices is now under way to obtain more detailed information directly from the projects. A concern is that important examples of comprehensive PHC may be described in grey literature that we have so far been unable to access, or that they may be not written up at all.

What has PHC accomplished?

Our review to date confirms what has become generally accepted about PHC's health impacts. In many developing countries, PHC is associated with improvements in infant and under-5 mortality and maternal mortality rates, leading to gains in life expectancy at birth (John & John, 1984; Arole & Arole, 1994; McNay, Keth, & Penrose, 2002; Rosero-Bixby, 2004a; Macinko et al., 2007; Perry, Shanklin, & Schroeder, 2002; Jimenez & Romero, 2007; Shadpour, 1994). These gains are partly due to increased coverage of immunisation and family planning, and decreased rates of malnutrition. In Latin America, PHC programs that were more comprehensive had better population health outcomes than selective programs, with the exception of selective programs that targeted specific groups and for which sustainability is still to be proven. While generally PHC was found to provide better (or at least similar) quality of care than other service modes, in some instances it was seen as providing lower quality care, which stigmatised the poor receiving it. This may have less to do with PHC per se than with the poor level of funding received by publicly provided PHC. In several African PHC centres, for example, inadequate supplies, staffing, staff

training and managerial support were the reasons for low trust levels and utilisation rates by community members (Chukwuan et al., 2006).

Box 5: Costa Rica's PHC Program

In Costa Rica, a quasi-experimental study (Rosero Bixby, 2004b) attributed to programs an 8% reduction in the infant mortality rate, a 2% reduction in the adult mortality rate, and a reduction in access inequities from 30% to 22%, from 1985 to 2001. PHC reform in that country was based on equitable access, multidisciplinary teams, community participation, attention to social determinants of health and vertical integration of care across levels; that is, it embodied many of the aspects of comprehensiveness. For every five years post-PHC reform, child mortality dropped an additional 13% and adult mortality by 4%, controlling for other causes and health determinants.

In high-income countries PHC is associated with reduced laboratory costs, lower hospitalisation rates, fewer prescriptions, better use of mixed discipline teams and more disease prevention and health promotion activities, compared to other models of health care (Yalnizyan, 2005). CHC or COPC-style PHC, especially if it includes a broad discipline mix, is both more comprehensive and cost-effective than PHC programs that use a narrower discipline mix or rely upon general practice providers. Seminal work in OECD countries also found that the supply of primary care physicians is associated not only with lower health care costs, but also with lower standardised mortality rates, premature mortality and fewer life years lost due to preventable cardiovascular diseases, pneumonia and asthma (Starfield, Shi, & Macinko, 2005). These impacts persisted after adjusting for GDP, per cent elderly, doctors/ capita, average income (purchasing power parity-adjusted) and alcohol/tobacco use. Other studies of PHC in high-income countries have found similar outcomes (Franks & Fiscella, 1998; Guilloford, 2002). US-based studies are even more sanguine about the health gains achievable through greater density of primary care providers (Macinko, Starfield, & Shi, 2007). Most of these high-income country studies, however, did not distinguish between primary care provision and PHC, precluding inferences about what role more comprehensive forms of PHC that incorporated community participation or actions on social determinants of health might have played.

Box 6: PHC in Aotearoa/New Zealand

Newtown Union Health Centre in Wellington exemplifies a best practice model of the community-controlled, non-profit approach to comprehensive PHC found in many high-income countries. Primarily serving low-income families, including Maori, Pacific Islanders and refugees, the service was initially formed by a trade union to overcome financial barriers to primary care. It now operates through multiple sites and employs general practitioners, practice nurses, social workers, psychologists, CHWs, midwives, interpreters, receptionists, elders, traditional healers and visiting health workers from other services. Health workers are encouraged to involve community members in developing programs and advocacy related to health determinants such as housing, employment and recreation, based on issues identified by the community it serves (James, 2007).

Community participation was frequently cited as a crucial ingredient of effectiveness. Such participation maintained political demand for PHC services, comprehensive or

otherwise (Sanders et al., in press), improved service delivery and health outcomes (Manandhar et al., 2004), and sustained program activities when initial external funding ceased. In several African cases, communities themselves were able to finance their own health promotion/education programs through income generation activities or fees/dues (Diedhou, Ndiaye, Sourang, Ba, & Diallo, 2006). Community participation, however, was also often restricted to needs identification and resource mobilisation rather than including actual program decision-making or engaging in policy change initiatives on the determinants of health. Several studies nonetheless noted the positive role played by PHC's community participation efforts in improving the empowerment experience of women and marginalised groups (Arole & Arole, 1994).

Few studies examined whether PHC reduced inequity; those that did found that PHC services were more likely to be used by poorer groups, thus closing an access gap. One instance where equitable health improvements have been measured is in Iran, which embraced PHC to develop its national health system and also developed a robust health information system to measure health gains. IMR per thousand in urban and rural areas have declined from 62 and 120 respectively in 1974, to 28 and 30 in 2000, showing clear evidence of reduced inequalities despite persistently poor social and economic development of rural populations compared to their urban counterparts (Mehryar, Ahmad-Nia, Mirzae, & Naghavi, 2005). In the USA, PHC has also been shown to reduce race/ethnic disparities in some prenatal and perinatal health outcomes (Shi et al., 2004) and income-related self-rated health status (Shi, Starfield, Politzer, & Regan, 2002). Few cost-effectiveness studies of comprehensive PHC exist. Those that have been undertaken (principally of US and Canadian CHCs) find that such programs are more cost-effective than other forms of care provision (Yalnizyan, 2005; Franks & Fiscella, 1998). Several studies have also documented the cost-effectiveness of deploying community health workers in LMICs (Haines, et al., 2007).

In summary, there is accumulating evidence of positive impacts from PHC for some health outcomes, for improving community and intersectoral processes (though not usually outcomes of these processes) and for cost-effectiveness, with effects increasing with the degree of PHC's comprehensiveness. The quality of much of the evidence, however, remains poor, often due to apparent time and resource constraints in conducting research by those implementing the projects. The most rigorous studies of PHC (as distinct from those studying primary care only) were evaluations of older programs in South Asia, or, more recently, of newer programs in Latin America. But there were few comparative studies, most being descriptive single case reports. Few studies incorporated baseline data and most lacked suitable controls, apart from national or state averages. Attribution of documented effects was difficult due to other concurrent policy changes affecting health through social determinants (e.g. improved rural livelihoods, water/sanitation access, education). If the evidence base on comprehensive approaches to PHC is to improve, funding for evaluation research needs to increase and a new generation of researchers with the skills to conduct complex community studies is urgently required.

How does the political context affect the comprehensiveness of PHC?

Another of our project's assumptions is that primary health care comprehensiveness and effectiveness are influenced by the political and social context in which programs develop.

In Latin America, comprehensive PHC was more likely to be found (and to be effective) in countries that included political commitments to equity, a legal or constitutional right to health guaranteed by the state, and where policy clearly identified primary care, community participation and intersectoral action as PHC components. These conditions, in turn, were more likely to be found in countries committed to universally funded health and social programs. In some instances—notably Central America during the 1980s and 1990s—comprehensive PHC programs became a site of political struggle and repression. This sometimes led to withdrawal of support for comprehensive PHC by governments who feared the citizen empowerment it emphasised, and to its replacement by "safer" selective PHC programs. It also led to dangerous working environments for those still committed to comprehensive PHC (Barten, Perez Montiel, Espinoza, & Morales, 2002; Muller, 1979).

Among OECD countries that score higher on primary care (which would include PHC programs) the most consistent shared policies were government efforts to distribute resources equitably, universal financial coverage provided by or under government regulatory aegis and low or no cost-sharing (Starfield & Shi, 2002). Community participation proved important in ensuring that comprehensive PHC programs attended to issues of equity (access, outcome) in Australian cases, and in Middle East Healthy Cities projects (Donchin, Shemesh, Horowitz, & Daoud, 2006). This suggests that countries with broadly social democratic politics and openness to citizen engagement (including advocacy) are more likely to support a comprehensive PHC approach. This inference aligns with recent comparative studies of policies implemented in different types of high-income welfare states on public health funding and population health outcomes, showing that social democracies outperform liberal (market-oriented) democracies (Chung & Muntaner, 2006; Navarro & Shi, 2001). Whether initiated by NGOs or by governments, "political will" and commitments to equity were frequently referenced as contextual determinants of a more comprehensive PHC implementation.

Perhaps the major future constraint to a revitalisation of PHC, and any deepening of its comprehensiveness, is the continued promotion of privately financed/provided health care in LMICs by the World Bank's International Financial Corporation (International Finance Corporation, 2007), and the "performance (results)-based" legacy of earlier health system market reforms. Health system financing, whether provided by states, donors or global public-private partnerships, is increasingly being evaluated by narrowly defined outcome measures that are largely unable to capture the long time-horizons of community empowerment strategies or advocacy and other work to bring about changes in public policies/determinants of health—two qualities distinguishing comprehensive PHC from its "selective" kin. One recent Costa Rican study found that when general practitioners' pay was based on performance appraisals, they spent less time with their patients and scored more poorly on measures of how patient-centred they were in their practice (Gilson, Doherty, Loewenson, & Francis, 2007). How such comprehensive PHC programs can manage the tension between the competing discourses of results-based efficiency and community-based empowerment, or can use selective PHC as a base for horizontal expansion into a more comprehensive approach, have emerged from our review as two key researchable questions for the future. Others, to which our project's next phase of developing new research projects will shortly turn, are listed in Table 2.

Table 2: Representative Future PHC Research Areas

- How do differing governance structures affect comprehensiveness of PHC, community participation, and the likelihood of actions on social determinants of health?
- What is the role of community activism in initiating/maintaining comprehensive PHC?
- What is the effect of different funding models on comprehensive PHC (fee-for-service, capitation, global budgeting, social insurance, etc.)?
- What is the effect of different government policies relating to health workforce on the operation of comprehensive PHC?
- How are health system reform processes affecting the implementation of comprehensive PHC?
- What effects are new Global Health Partnerships having on the funding and implementation of comprehensive PHC?
- What is the extent, and impacts of, privatisation/ commercialisation of health systems on comprehensive PHC?
- What is the impact of community engagement on the extent to which PHC services are involved in action on the social and economic determinants of health?
- What is the impact of active involvement in comprehensive PHC on the participants in terms of capacity building and empowerment?
- What is the role and impact of comprehensive PHC in chronic disease prevention/management?
- How can indigenous healing systems and therapeutics integrate with Western systems in comprehensive PHC?

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