Abstract
This paper highlights some of the fundamentally geographical features of primary health care and introduces some motivations and questions for focused research. Although not mutually exclusive, the research agenda distinguishes quantitative inquiries on distributional features, and qualitative inquiries focused on place. Each involves its own theoretical assumptions, concepts and empirical foci. To assist scholars, we provide some leads into the broader geographical literature on health care.

Key Words geography, place, primary health care, space

Geographies of Primary Health Care

GAVIN J. ANDREWS &
VALORIE A. CROOKS

Introduction

It has taken less than thirty years for primary health care (PHC) to progress from a conceptual discussion between policy makers and international agencies[1] to being a core component of health service delivery internationally. Although it has been interpreted broadly, as Crooks and Andrews illustrate, PHC is widely recognized to possess a number of core features.[2] First and foremost, PHC is a 'system' that is community-based and provides a first point of contact with health care for the public. The system incorporates a range of service types (including general practice, health promotion, chronic disease management, emergency care, holistic medicine), a diverse mixture of professions, occupations and work types (including physicians, nurses, occupational therapists, pharmacists), and possesses certain qualities (such as being responsive, comprehensive, internally continuous between services, and linked 'externally' to other sectors such as social care, housing and education).[2] Ultimately, after three decades of development and refinement, many commentators now regard PHC to be a health sector unto itself, which is distinct from secondary health care (SHC).*

Accompanying the emergence of PHC, recent decades have witnessed the publication of a wide-range of dedicated PHC research across the health and social sciences. The considerable volume and scope of the empirical output to date makes describing and categorizing it in a limited space challenging. Nevertheless, it is fair to suggest that substantial attention has been paid in this literature to a wide-range of subjects including PHC funding, financing, policy, law and ethics, interprofessional collaboration, technology and other innovation, service forms and integration,

community and family participation, continuity of care and care pathways.[2] Moreover, reflecting the maturing of this research tradition, a growing volume of literature focuses on the nature of research itself including methodological innovation, theoretical development and empirical coverage. Providing some ideas on future research directions, this paper argues for the extension of a geographical perspective. Examining the conceptual basis for such inquiry, the first part is focused the general arguments for studying all health care geographically. The second part focuses on those features of PHC which are fundamentally geographical in their orientation. Offering further insights, the third part introduces some key themes and scales of potential research. To assist future research, a final discussion provides some broader leads into the geographical study of health care.

Why study health care geographically?

Why study health care spatially; PHC, SHC or otherwise? Andrews and Evans argue that, beyond important, well-rehearsed geographical arguments (such as distance and location 'matter' in the planning of health care), the spatial character of the emerging health care is an additional contemporary factor.[3]

They posit that, first, recent years have witnessed the increasing spatial diffusion of health care provision. At one level, smaller and more specialized settings – such as clinics -have become commonplace.[3] At another level, health care is increasingly provided in public and private places completely new to the sector. Indeed, services now reach straight into the places where people live, learn, work, shop, and spend their leisure time.[3-4] Second, although communities were once conveyed in policy and practice circles somewhat as featureless spaces and/or basic population counts, they are now recognized as diverse groups of people possessing both health needs and the ability to partner in care.[3,5] Third, recent structural reform of traditional institutional environments has changed both their function and character. Most hospitals used to be bare and sterile places but many are now being reinvented under a corporate ethos as commercial, inviting and entertaining spaces.[3,6] Such change raises questions concerning the demands on professionals working on them, and the experiences of all others entering them.

Fourth, the new health care is very much dependent on technology. Emerging forms include assistive devises, telemedicine, remote monitoring systems, digital health records and information, and robotic surgery.[4] Technologies have altered the form, structure and range of places used for care, and the communication methods used in and between them.[3-4,7] Technology also changes social relationships, making professionals more physically and narratively distant from each other and their patients.[3,8] At a micro-scale, this can occur at the bedside, or at a macro scale in the context of increasing distance work.

Fifth, connecting variously to all of the above changes is the emergence of global health as a concept and specific set of challenges. It is increasingly recognized that social, disease, and service concerns cross the geopolitical boundaries of nation states, moral responsibility needs to be shared between nations and systems need to be developed that transcend them. Moreover, an emphasis is laid in global health on the interconnectivity of health care at various scales ranging from single facilities and neighborhoods to continents and the world. Geography runs throughout most discussions of global health.

The fundamentally geographical features of PHC

Despite the above observations, one notable criticism that has been made of PHC research is that it is often approached

Table 1: Space-centered inquiry on PHC

Questions
What are the key distributional features of different PHC facilities and types of services at different scales (e.g. local, regional, national)?
What are the relationships between distributions of PHC facilities and distributions of populations?
What social, political and economic forces determine the above distributions and relationships?
What are the relationships between distance to different kinds of PHC services, their use and population health across space?
What cultural, social, economic and political factors combine to make distance more or less of a barrier to PHC provision and use?
What are the optimal distributions of PHC resources and how might these be achieved?

aspatially.[2] In other words, lacking a strong geographical tradition, rarely does it consider the role of space, place, environment - and other geographical concepts - in shaping the production and consumption of PHC. This is despite the fact that PHC is based on a set of core principles that imply highly spatial qualities and relationships.[2,9] Below we briefly describe four of these: 'universal accessibility', 'embeddedness in community', 'sensitivity to local determinants of health' and an 'emphasis on settings'.

(i) As suggested above, at the heart of PHC is the principle for it to be first contact care which is 'universally accessible'.[1] Throughout the 1980s and 1990s this principle was translated into system priorities across many countries. In a strict definitional sense, universal accessibility means that every person has access. However beyond this, making accessibility morally 'fair' involves making sure that every person has equal access (what is know as 'equality of opportunity'). Even if it is never fully achieved, working towards equal access to PHC involves a priority that no particular social, economic, and demographic groups in society are overly advantaged or disadvantaged. At another level it involves a priority that where consumers live in relation to services poses neither as an extreme advantage or disadvantage. A spatial concern thus follows that PHC should be distributed across space in a way that makes such care accessible to the most people possible, the ultimate aim – even if practically unachievable - being 'distributive justice' whereby need is met equally across geographical areas.[10]

(ii) The emphasis on the 'community embeddedness' of PHC distinguishes it from other health care sectors and service delivery models.[2,9] Community, however, is a fundamentally spatial concept. At one level, communities are constructed from physical phenomena - such as roads, buildings, city quarters and urban neighbourhoods - where clients and workers live often in close spatial proximity to each other (thus becoming familiar with the same local social, economic, political and cultural contexts). As suggested above, at a social level community is now being re-imagined in PHC practice as the interconnected social environment of care, possessing a differentiated mosaic of locally distinct vulnerabilities, needs and capacities.[3,5] It follows that PHC must recognize community character and need while also being part of the community.

(iii) Related to community is the requirement for PHC to recognize and be sensitive to 'local determinants of health'. Research tells us that health status in populations is affected by residential location. Localized determinants of health include social composition (including ethnicity, socio-economic status), social contexts (such as housing, shops, services) and social cohesion and capital (for example, through family, friendships, clubs, religious organizations and other groups). In addition to these social variables are local environmental influences on health such as air and water quality, the presence of chemical contaminants, and even the local impact of global climate change. Geography is thus important in terms of the local health need to be serviced by PHC services, and the character of those services.

(iv) At the micro-scale are the 'clinical settings' within which PHC is provided and consumed (buildings, rooms and even mobile vehicles). These settings tend to be much smaller in size and more frequent in number than settings for SHC. However, in terms of their character, they are typically less institutional, more intimate and, as suggested above, designed to be more integrated into local community life. As we shall see in the following section, this integration - and how it is constructed and experienced - connects closely to emerging attention in contemporary geographical inquiry to 'place'.[7]

Table 2: Place-centered geographical inquiry on PHC

Questions. How are places/settings for PHC:
Located in the social and cultural life of local communities and neighbourhoods?
Envisaged and designed by different health care systems, organizations and individuals?
Negotiated, used and/or manipulated on a daily basis by different user and professional groups?
Felt, experienced and remembered (as for example, therapeutic/anti-therapeutic, safe/unsafe, medicalized/holistic, welcoming/unwelcoming)?
Influential in the nature and delivery of clinician's practice, including clinical decisions and disease prevention strategies?
Represented (such as in the media, by providers, users, professionals and others)?

The research agenda

(i) Space-centered inquiry on PHC

Since the late 1950s the positivistic tradition of 'spatial science' in human geography has viewed space as a blank surface; a template on which human activity occurs and thus on which its geometry can be mathematically measured and mapped. Motivated by a belief that space is a fundamental factor in human behavior, and that there is a logical spatial order to the world, 'spatial science' thus concentrates analysis on locations and the distances, directions and times between them. Moving beyond description, however, spatial science also involves constructing spatial models with predictive power and applications to planning.[10]

Although often being far more theoretically reflective than the above descriptions depict, a few geographers have drawn on these underlying approaches when analyzing PHC. Considering, for example the spatial expression and impacts of PHC policies, and other spatial features of the sector and its use.[11-15] Far more remains to be done, however, to develop a more comprehensive coverage and understanding of spatial features of supply, demand and consumption. In terms of scale, this research might focus on policy and practice internationally, between countries, within countries, between regions, within regions and within cities, towns and neighbourhoods (table one). It would be particularly useful for informing planning, resourcing, staffing and formulating policy for PHC at various levels.

Research methods used to investigate these kinds of issues are typically quantitative, to highlight broad trends and support potentially generalisable conclusions. They might include datasets on health services, user and local populations, and oftentimes dedicated surveys. Analysis and presentation might be assisted by computer technologies such as in Geographical Information Science (GIS).

(ii) Place-centered geographical inquiry on PHC

The humanistic tradition in the discipline of geography has a conceptual emphasis on place. Being recognized as far more than points or containers of human activities, places are thought to be created, experienced, represented and recalled socially and culturally.[16- 17] In terms of construction, individual and collective attitudes towards places might be attained through physical presence/experience or through their representation (e.g. in media or through how others talk to us about them). The result of these processes is that places have many qualities for people (who when in-situ experience a 'sense of place'), and evoke a range of emotions, from the personally very positive (e.g. happiness, therapeutic, nostalgic) to the personally very negative (e.g. fear, sadness). Moreover, places might provide a basis for social unity or struggle.[17] In terms of the social control, certain groups define the pro-social norms of places whilst other groups 'transgress' these norms by holding alternative ideas about, and having alternative uses of, them.[17] Equally, 'placelessness' is an important emerging concept. Referring to a lack of traditional attachments and identities to place, it helps explain human relations with and within the growing number of ubiquitous places in (post)modern life, through which people often pass in a transient fashion.[17]

Table 3: Key areas of inquiry on health care in medical and health geography

Broad sub-disciplinary reviews.[3,31-38]
Focused commentaries on the direction of specific empirical subfields/specialisms, or specific theoretical directions.[39-46]
Sub-disciplinary controversies and debates, such as on place and qualitative inquiry.[47-52]
Relationships between distributions of services, patterns of use and population health.[14, 53-57]
Structural features that shape distributions of services on the ground, such as policy and administration initiatives.[12,58-61]
The geographical dimensions to, or consequences of, decision making: specific financial, planning or clinical issues, downstream of policy change.[11,62]
The geographical dimensions to, or consequences of, decision making: workers' preferences with respect to where they live and work, and the implications for towns, cities and regions.[63-67]
Critical studies of economic, ideological and cultural changes that shape health care nationally, regionally and in settings.[68-69]
The representational politics connected with the corporization of health care, including conflicts over institutional provision, purpose and identity.[70-74]
The spatial features of interpersonal communication and everyday working life.[75-78]

With regard to theoretical underpinnings, as Crang has suggested, in the current post-modern era of geography, relationships with places are explained by three philosophical debates. Collectively these debates imply that places are a complex starting point for human knowledge, attitudes and actions.[18] First, debates on intentionality. Husserl argues that objects' intended uses are critical to their meaning (they are 'about' what we do with them). Extending such a perspective, it may also be argued that places' uses are critical to their meaning (they are 'about' what we do in them.[16-18] Second, debates on essences. 'Essences' are the characteristics that influence what we feel emotionally about objects. The argument follows that places also have essences that, for example, we might define or explore.[16-18] Third, debates on 'imbedded' knowledge. The idea of imbedded knowledge builds on Heidegger's view that humans can only relate through their physical situation, through their 'being-in-the-world'. As Crang describes, consciousness is always consciousness of 'something else' in the world. In relational terms 'something else' can be human-made objects, other life on earth (including people), and the places they are part of. Thus all knowledge is 'em-placed'.[18]

Notably, when embracing these ideas on place, space can be defined differently from the spatial science approach outlined above. The humanistic idea of 'social space' hence treats space not as a blank surface, void or distance, but as a complex human reality, existing through social processes.[17] Hence, in qualitative research, questions on space become centered around how the spaces (within places) are navigated, negotiated and 'owned' by different groups.[17]

The understandings of place introduced above can be applied to the study of PHC. Specifically, we need to understand how places for PHC are experienced and navigated through time-space routines and rituals, how they hold meanings, attachments and identities, and how they affect clinical practice. For example, the dynamics between different professional groups could be investigated. Like any workplace, settings for PHC are often constituted of coexisting occupational/professional categories that are engaged in coalitions, rivalries and negotiations over boundary issues.[3,7] These relationships potentially create local PHC cultures of production and that intimately affect its consumption. A small number of studies have started to articulate these kinds of issues.[19-20] Beyond these initial inquires however, more geographical research needs to be conducted (table two). Non-clinical places also require attention as part of moving towards a greater understandings of how communities, neighbourhoods and homes play a role in PHC.

Research methods used here would typically be qualitative, in order to articulate the rich and complex nature of place and place-relations. They might involve, for example, ethnography, observation, interviews and focus groups, oftentimes combined to address specific issues and questions.

Research leads: medical and health geography

For the relatively uninitiated, a range of books provide broad overviews of, and introductions to, the sub-discipline of medical and health geography,[21-22] or overviews of and introductions to key sub-disciplinary concepts or empirical subfields.[23-30] In terms of journals, Health and Place, and Social Science and Medicine are popular and prestigious interdisciplinary venues that publish a great deal of research in medical and health geography (the latter having a dedicated geography editor). Otherwise, a number of journals which span the 'parent discipline' of human geography also publish health-orientated research. These include general titles, such as Progress in Human Geography, GeoJournal, Area, The Professional Geographer, Social and Cultural

Table 4: Key areas of inquiry in geographical nursing research

Broad review and theory articles.[81-85]
The varied attachments and identities that nurses, doctors and patients develop with places, and how places come to symbolize different things to these groups.[86-89]
Health care places as essential to the character and experience of particular nursing and medical specialties.[90-95]
Place as a central feature in focused clinical initiatives [96, 97], and limits to their generalizability and transferability.[98]
The impact of places on nurses' communications and relationships with other nurses.[99-101]
The impact of places on nurses' communications and relationships with patients, and related ethical issues.[8,102-107]
The broader extra-institutional connections between nursing, local communities and local physical environments.[108-113]
The globalization of nursing, nursing labormarkets, and global health.[114-119]

Geography, Geography Compass, and more theoretically and/or conceptually and/or empirically focused titles including Gender Place and Culture, Emotion, Space and Society, Population Space and Place, and Cultural Geographies. Many other journals exist in both the above categories. Entry points into the geographical study of health and health care are highlighted in table three.[also see 2-3]

Research leads: geographical nursing research

Outside medical and health geography, nursing research has been very active in geographical explanations of health care. The impact of urban and clinical environments on health played a big part in Nightingale's original definitions and interpretations of nursing in the nineteenth century. Since the 1950s, alongside "person" and "health", the concept of "nursing environment" - thought of as the combined economic, social, and cultural contexts to professional activity- has acted as one of the central concepts underpinning models of nursing research and practice.[79,80] During the past decade, dedicated geographical studies by nurse researchers have provided some important insights into how many activities involved in practice, relate to space and place. Whilst the majority of these studies are 'explicitly geographical' (meaning that the authors in some way identify them as geography), a minority are 'implicitly geographical' (meaning that they are geographical in orientation but the authors have not identified specifically with the discipline). Unlike, medical and health geography, it is not possible to identify specific books and journals where this work is published, as it tends to be spread across a variety of venues. Themes and entry points are provided in table four [also see 3,81]. Overall, the emerging spatial or geographical 'turn' in nursing research has articulated many issues related to applied clinical practice that medical and health geography to date has not.[3,10,81] We therefore recommend it, alongside geography, as a reasonable place to start.

Conclusion

A rapidly changing and increasingly complex health care requires inter-disciplinary research both to understand it, and provide evidence to support its development [3]. New disciplinary perspectives are encouraged particularly if they are well matched. Because many features of PHC are spatial, it follows that PHC research should have a strong geographical tradition.[2] If this is to occur, many questions remain with regard to theory, methods and empirical directions. Hopefully however, this paper might help nurse researchers and other scholars make progress along these lines.

*Note

Secondary Health Care (SHC): It is worth noting that the 'secondary' descriptor originally arose in medical and policy terminology as an implication or 'bi-product' of the emerging emphasis on PHC, meaning simply every service that follows PHC - to which patients are referred by PHC providers (for example cardiology, dermatology, radiology and other focused hospital-based specialisms). In recent years however SHC has become a focus of dedicated attention and development itself. More sophisticated interpretations now lay greater emphasis on the collective nature of SHC, commonalities and cohesions across various forms of SHC, its needs, and place in whole health care systems. The emergence of PHC might well have assisted a split recognition of health care systems. Despite these origins however, PHC and SHC are very much connected and certainly not of 'primary' and 'secondary' importance.

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Contact Information for Author:
Gavin J. Andrews Ph.D.
McMaster University
Department of Health, Aging and Society
1280 Main Street West
Hamilton, ON, M6J 2G4
Canada
andrews@mcmaster.ca

Valorie A Crooks Ph.D.
Simon Fraser University
Department of Geography