Integrating clinical medicine and population health: where to from here?

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Abstract

Efforts to contain healthcare costs have led a renewed clinician interest in addressing population-level outcomes, with some proposing that the integration of population health into clinical practice represents a novel concept entitled “clinical population medicine” (CPM). This commentary offers an examination of the function and utility of CPM. In reviewing relevant literature, we note several inconsistencies in CPM’s purported mandate, which ranges from simply incorporating the social determinants of health into clinical practice to broad involvement in community health planning. The latter of these seems to overlap, and potentially conflict, with the work of public health practitioners, and cited examples of activities used to define “CPM” seem to apply a label to established clinician activities around the determinants of health that would be captured more simply as research, evaluation, or advocacy undertaken by clinicians in other areas of practice. Our analysis suggests that CPM may have value in encouraging clinicians to incorporate community determinants and contextual considerations into their practices, but must take care to remain complementary and distinct from public health practice.

Résumé

Les démarches de contrôle des coûts des soins de santé suscitent chez les cliniciens un regain d’intérêt pour les résultats populationnels, certains cliniciens allant jusqu’à proposer que la pratique clinique intégrant la santé des populations devienne un nouveau concept : la « médecine clinique des populations » (MCP). Dans notre commentaire, nous examinons la fonction et l’utilité du concept de MCP. Dans la littérature pertinente, nous avons remarqué plusieurs disparités dans le mandat présumé de la MCP, lequel peut aller de la simple intégration des déterminants sociaux de la santé dans la pratique clinique à la participation générale à la planification en santé communautaire. Ce dernier aspect semble faire double emploi (et pourrait être incompatible) avec le travail des praticiens de la santé publique, et les exemples d’activités citées dans la définition de la « MCP » semblent apposer cette étiquette sur des activités cliniques articulées autour des déterminants de la santé qui, si elles étaient menées par des cliniciens dans d’autres domaines de pratique, seraient désignées plus simplement comme étant de la recherche, de l’évaluation ou de la défense des droits. Notre analyse indique que la MCP peut être utile pour encourager les cliniciens à intégrer les déterminants de la population locale et les considérations contextuelles dans leur pratique, mais qu’il faut prendre soin de préserver le caractère complémentaire de la MCP et sa distinction par rapport à la pratique en santé publique.

Keywords Public health · Preventive medicine · Socioeconomic factors

Mots-clés Santé publique · Médecine préventive · Facteurs socioéconomiques

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Introduction

With the intent to reduce demand on already overburdened healthcare systems, a new interest has emerged among clinicians around how to influence the broader determinants of health that exist beyond purely clinical settings. This clinical focus on population health has resulted in some who have proposed a new theory of practice, most recently termed “clinical population medicine” (CPM) (Orkin et al. 2017), but also referred to by various other names (e.g., upstream medicine, primary care-population medicine) (Upstream. Upstream: Institute for a Healthy Society n.d.; Ivory et al. 2013). Described in some venues as a “way of practice” as opposed to a new medical specialty, CPM purportedly aims to integrate population health into clinical practice. Literature on the subject suggests that clinicians might simultaneously deliver every aspect of care for the benefit of both individuals and the community at large, supposedly leading to healthcare system transformation that would reduce health inequity and improve population health.

This evolving field certainly holds some promise in improving the interface between population health and healthcare, but the literature regarding CPM presents various issues that merit consideration. These include resolving inconsistencies in the purported definition and scope of practice that may give rise to confusion arising from its potential overlap with public health practice. This paper aims to examine these concerns and proposes a place for CPM within the context of existing public health and healthcare planning functions.

CPM: definitional challenges

Current descriptions of CPM fall somewhat short of creating a distinct mandate, and in some instances, the proposed definitions appear to have internal inconsistencies. For instance, a paper on the topic by Orkin and colleagues (Orkin et al. 2017) describes CPM in at least four different (and sometimes conflicting) ways:

- 1) CPM is a way of practice, rather than a distinct medical specialty, and is the application of population health approaches to patient care and the design of healthcare systems.
- 2) CPM practitioners consider and deliver every aspect of their care for the mutual benefit of individual patients and the prevention and treatment of illness in the entire community.
- 3) CPM brings a determinants of health approach to the healthcare system to improve health and diminish health inequities, which is meant to complement the parallel work of public health institutions in the community.

- 4) CPM is a community of practice that might direct the delivery of population-based preventive and health promotion services, to champion population health approaches in health systems design, and to develop intersectoral partnerships for population health.

Part of definition (1) identifies the most pressing gap that CPM might address: emphasizing the need for patient care to incorporate an understanding of context and population health. This is in line with Abraham Flexner’s 1910 report that called for medical training to prepare physicians to fulfill their societal obligations to prevent disease and promote health. Indeed, numerous other subsequent publications have considered how best to incorporate the social determinants of health into training and practice (Andermann and CLEAR Collaboration 2016; DeVoe et al. 2016; Hughes and Likumahuwa-Ackman 2017; Harvey et al. 2011). In fact, CPM seems to reiterate guidance from the College of Family Physicians of Canada (CFPC), which explicitly states in their “Four Principles of Family Medicine” that family physicians are a resource to a defined practice population, not just individual patients (The College of Family Physicians of Canada n.d.). The CFPC further emphasizes that family physicians must “consider the needs of both the individual and the community” (The College of Family Physicians of Canada n.d.) (essentially definition (2), above).

The latter part of definition (1), however, broadens beyond the idea of simply using determinants-based thinking in practice. Instead, it suggests that CPM should adopt a leadership role in healthcare system administration, which is somewhat at odds with the idea of addressing community health considerations. While it can be argued that clinician leadership in healthcare system planning is valuable, it is equally important to remember the inherent limitations (in resources, effectiveness, and efficiency) to the influence of the healthcare system on broader population health determinants. Given as well that much healthcare system administration already relies on clinician input, it is unclear how CPM is unique in this regard.

Of further concern is that while definition (3) states that any work influencing healthcare system planning should not compete with the population health approach of public health agencies, definition (4) seems to conflict with this statement. The “development of intersectoral partnerships” and the “delivery of preventive and health promotion services to drive improved community health” represent the mandate of most governmental public health agencies and practitioners. The suggestion that CPM leaders might directly work (in an administrative/policy-setting sense) on these fronts risks redundancy, mixed messages, and greater confusion around the public health priorities of the community. This would be particularly confusing for non-healthcare stakeholders (such as elected representatives, funders, and other community bodies) that may not appreciate the

distinction and differing goals between the work of the healthcare system and public health agencies.

Public health practitioners also specifically undergo training that develops the knowledge and expertise required to successfully assess, develop, implement, and evaluate population health interventions. While clinicians should be encouraged to develop similar competencies that might be applied to their practices, most clinicians are not positioned to truly leverage such skills at a population level (unless, of course, they are employed in a public health or political setting).

These definitional inconsistencies highlight a lack of clarity as to the practicality and scope of involvement of CPM in population health activities. Perhaps, rather than stating that CPM leaders should direct such work, it might be better said that all clinicians may serve a role in facilitating and championing population-focused approaches that have been deemed cost-effective and beneficial by public health practitioners who have evaluated the feasibility and evidence supporting wide-scale implementation of such initiatives. For example, while most clinicians may not be best suited to determine the true population-level benefits of a new diet-assistance program for low-income families (and therefore should probably not direct the administration of the program), clinicians would certainly be well positioned to support the program through advocacy and facilitation, among many other ways. For instance, clinicians would be essential to identifying and referring at-risk families and advocating for patient access to the program. This type of clarification in the definition of CPM's mandate would be useful in ensuring that all stakeholders understand its distinction from public health practice.

CPM: ambiguity in activities

It is also unclear how the goals of CPM actually manifest in practice. The literature has attempted to identify various activities of CPM, but many of these examples remain problematic. In the same paper identified earlier, Orkin and colleagues (2017) present 10 papers intended to showcase the nature of CPM practice at a population level. However, a different perspective would be that these papers simply demonstrate research, evaluation, or advocacy elements captured in the practice of the specialty of public health and preventive medicine. Specifically, two of the studies considered represent research into the social determinants of health, with the unique aspect of these papers being that the primary investigators are clinicians (Trachtenberg et al. 2014; Naessens et al. 2005). Like similar research into the social determinants of health undertaken by non-clinician researchers, such studies might inform various population-level interventions, but do not in and of themselves represent population-level interventions. For example, Trachtenberg et al. determined that income-based disparities in hospitalization for respiratory conditions might be

explained by factors outside of the healthcare system (i.e., the social determinants of health), and suggested that addressing these issues may be an effective way to reduce hospitalizations among the poor (Trachtenberg et al. 2014). While this is an important insight, this study itself does not fully represent a population-level approach to the problem in the way that the public health community describes a “population health approach” (Health Canada Population and Public Health Branch Strategic Policy Directorate 2001). Work in the broader community would typically begin with public health practitioners using the results of such a study as one part of a broad evidence base, combined with community-level data, agency resources, and other considerations, to justify various population-level interventions designed to address these antecedent factors of disease.

Similarly, other studies presented as CPM are actually evaluations of pilot projects (Roetzheim et al. 2004; Thom et al. 2013; Kiran et al. 2014). Much like the research above, the unique aspect of these papers seems to be that they were carried out in clinical settings. The actual deployment of such findings at the population level, however, would be undertaken by public health or healthcare system leadership upon consideration of the broader state of evidence, community context, and other considerations. For example, the finding of Roetzheim et al. that a primary care cancer screening prompt could significantly increase cancer screening rates among disadvantaged populations (Roetzheim et al. 2004) might form part of the evidence base for a more intricate cancer control strategy. The same scenario holds true for other pilot studies (Thom et al. 2013; Kiran et al. 2014), which represent interventions that could inform policy concerning wider community-based strategies deployed by public health specialists and healthcare administrators, potentially facilitated by clinicians.

Similarly, physician advocacy is also a well-recognized entity unto itself and is a component of both public health and clinical practice. An article labeled as CPM (Orkin et al. 2017) by Rosenblatt et al., which draws on evidence to make a compelling argument for physicians to advocate for and support public health/policy efforts around climate change (Rosenblatt 2005), represents one such proposed advocacy effort. While all practitioners should be encouraged to advocate for more robust public health interventions, it is not clear why this activity should be specifically included within the “CPM” bucket, since non-CPM physicians presumably participate in similar advocacy initiatives.

Taken together, these examples do not make it clear as to why CPM should be clinically subsegmented on the basis of these activities that are already well established within clinical practice and notably within the specialty of public health and preventive medicine (PHPM). Equally important, CPM supporters must remember that such efforts may inform or support, but do not fully represent, population-level interventions.

Hence, while there is certainly tremendous potential for proponents of CPM to contribute meaningful research, implementation data, and an advocacy voice to population-level interventions, it is worth remembering that such efforts do not fully represent the complicated and multifactorial processes involved in implementing population-level approaches to health.

CPM and population health

A final critique concerns the stated goal of CPM to integrate clinical and population-focused practice with the intention of improving population health. Regrettably, it is unclear how CPM would uniquely accomplish this goal, given that individual-level clinical interventions are relatively ineffective at improving the health of communities, as captured in the evidence-based Health Impact Pyramid described by Frieden (2010). Indeed, the most effective interventions for improving a population's health are out of the direct control and scope of an individual clinician and often lie beyond the healthcare system. To improve population health, public health practitioners might argue that focus should be less on directing resources towards the establishment of CPM infrastructure in the healthcare system (which is already far more robustly funded than the public health system), and instead towards work on broader societal contexts as suggested by the Ottawa Charter (World Health Organization 1986). In this respect, clinicians would best serve the field of population health by becoming allies to, and collaborators within, the current public health infrastructure, rather than diverting limited funding resources to clinical interventions that may have limited impact at a population level.

Conclusion

From its various suggested definitions, the proposed scope of CPM would have its greatest impact through encouraging the incorporation of the social determinants of health into clinical practice and raising physician awareness of community determinants, existing public health infrastructure, and opportunities to contribute to public health research/evaluation. Additional activities defined as CPM may require further consideration as to how they best integrate with and avoid competing against the existing practice of the specialty of PHPM. It would be unfortunate if the label of “CPM” led to some clinicians believing that these practices should be sequestered into an arbitrary new specialty, rather than accepting the view that key population health concepts (i.e., social determinants) should be routinely incorporated into clinical practice. Proponents of CPM should thus focus on whether CPM merits a distinct field and title or whether its elements are already captured within the clinical aspects of existing PHPM practice.

Compliance with ethical standards

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

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