

# Concept Analysis and Proposed Definition of Community Health Center

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## Abstract

**Background:** Community health centers (CHCs) have been used for delivery of health services since the 1920s and originally were intended to provide care to underserved populations. CHCs have become an integral part of healthcare systems in many countries; however, the term CHC is used synonymously with other concepts and there is no clear definition for CHC. The purpose of our concept analysis was to determine how CHCs are described in the literature and to develop a concept definition for CHC. **Methods:** Informed by the 8-step process described by Walker and Avant, we searched for literature spanning disciplines within health, business, and policy. We used a systematic review process to identify a range of peer-reviewed articles that help illustrate the attributes, antecedents, and consequences of CHCs. A total of 102 articles from 7 databases were included in our concept analysis. **Results:** We distinguished 6 attributes of a CHC: primary care; accessibility; preventative care; defined population; health promotion; and comprehensive and integrated care. About 4 antecedents fundamental to a CHC included: secure funding; vision and support; adequate human resources; and governance structure. Consequences of CHCs are improved health outcomes, efficiency, and cost-effective provision of healthcare services. **Conclusions:** Our concept analysis revealed core characteristics of CHCs that assisted us in synthesizing a concept definition for CHC. These characteristics and our proposed definition will help provide clarity on the concept of CHC to benefit evaluation, research, and policy development of CHCs.

## Keywords

concept analysis, community health center, primary health care, federally qualified health center, community health

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Community health centers (CHCs) originated from early forms of comprehensive healthcare delivery services first introduced in the 1920s as a strategy to facilitate access to health care and to promote the health of communities and populations.<sup>1-3</sup> The earlier prototypes of CHCs and similar entities originated in Canada and the United Kingdom to provide health care specifically to underserved populations, such as new immigrants and persons without healthcare insurance.<sup>4-6</sup> Since the 1970s, CHCs or variations of this concept are used in many countries to offer healthcare services in a variety of settings and contexts that include a range of population foci and geographical parameters.<sup>7-11</sup>

The literature reflects a broad range of services that CHCs can offer, and CHCs and similar entities are described in the literature from different philosophical perspectives in terms of models for delivery of healthcare services. However, there is no common definition for the concept of CHC and many other terms are used synonymously with

CHC, such as *primary health center*, *primary care centers*, and *primary care clinics*.<sup>12-14</sup> The lack of a common definition and the interchangeable use of terms for CHC present a significant challenge when trying to understand the concept, particularly when evaluating or comparing CHCs to determine impact on health outcomes, cost effectiveness, and other dimensions of service. As such, clarity on this concept is needed for evaluation, research, and knowledge translation purposes.

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In this paper we present a concept analysis for CHC using the systematic approach described by Walker and Avant<sup>15</sup> and propose a definition for CHC. The approach by Walker and Avant includes 8 steps: (1) selecting a concept; (2) determining the aims or purposes of analysis; (3) identifying all uses of the concept that could be discovered; (4) determining the defining attributes; (5) identifying a model case; (6) identifying a related and/or contrary case; (7) identifying consequences and antecedents associated with the concept; and (8) defining empirical referents. We begin by presenting a brief background of CHCs as part of Step #1 of our concept analysis and delineate the purpose of our analysis (Step #2). We then outline the systematic approach used to discover how CHCs are described in the literature (Step #3) and present our findings and synthesis of the literature (Steps #4-#8). We conclude with a proposed definition for CHC.

## Background

Following their introduction to Canada and Great Britain in the 1920s, CHCs emerged as a significant change to health policy in the 1960s and 1970s for the United States and Australia, respectively, to address gaps in access to health care.<sup>2,16-19</sup> Of particular concern were vulnerable and underserved populations who did not have the ability to pay for healthcare services, required specialized services (eg, maternal-newborn, pediatric), or lacked access to primary care and hospitals due to geography such as in rural settings.<sup>1,10,11,20,21</sup> While the original role and mandate of CHCs was to serve uninsured persons and decrease the burden on hospital emergency rooms, as is the case with federally qualified health centers (FQHCs) in the USA,<sup>2,10,17,22-24</sup> CHCs have become an integral component of health service delivery in many jurisdictions throughout Africa, Australia, Asia, Europe, and North America.<sup>12-14,25-28</sup>

As implied by the root term community, which can be defined as “a group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings,”<sup>29</sup> (p. 1929) delivery of health care services by CHCs seems to be directed within a broader paradigm in line with *primary health care*.<sup>12,30,31</sup> The principles of primary health care include: (a) access to health service delivery; (b) public participation in determining health services; (c) intersectoral collaboration; (d) appropriate use of technology; and (e) health promotion.<sup>32</sup> Within this framework, the focus of CHCs can be regarded as a socio-environmental or socio-ecological approach to health care that is population-based, oriented to social determinants of health that impact health and wellness, and considers an upstream approach to addressing societal health and wellness.<sup>1,7,30,33-35</sup>

Much of the literature reflects the role of CHCs as including a comprehensive approach of primary health care

in delivery of health services.<sup>1,7,10-12,27</sup> The range of services provided by CHCs in this context include access to health-care providers, health promotion programs, illness prevention interventions, community development, and utilization of an interdisciplinary or intersectoral approach to health care.<sup>18,33,35,36</sup>

However, a considerable amount of published material also describes CHCs or CHC-like entities solely in the context of mainly providing *primary care*.<sup>6,9,16,26,37</sup> Primary care is typically regarded as the first point of contact with the health care system for receipt of individual medical care, as is the case with a traditional physician’s office; this includes diagnosis and intervention to address specific health concerns like acute and chronic illnesses.<sup>6,9,12,37,38</sup> In this context, the concept of a CHC is more often associated with a biomedical model approach to health care that is largely physician-driven and focuses on pathological origins of illness and disease.<sup>6,9,16</sup> This interchangeable use of the concept CHC between 2 diverse approaches to health-care delivery causes ambiguity in the conceptual meaning of CHC and can present challenges when evaluating services and outcomes of CHCs.<sup>39</sup>

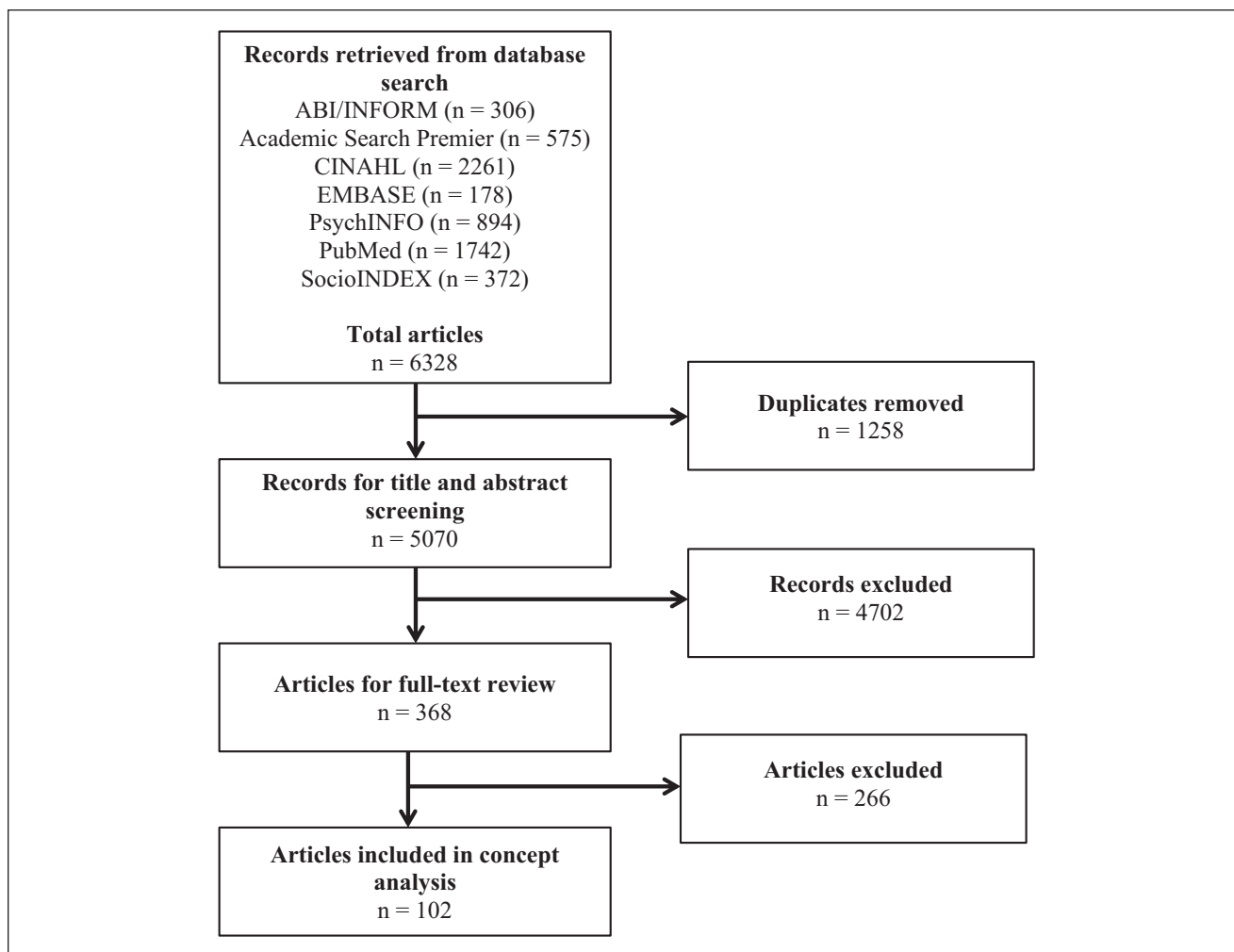
## Methods

### Step #1: Selection of CHC as a Concept

Concepts are foundational components to theory development and research, thus clarity of a concept’s definition is essential to facilitate a shared understanding of phenomena and consistent application of a concept in practice.<sup>15,29</sup> In preparing a formal scoping review protocol to explore evaluation frameworks of services and outcomes for CHCs,<sup>39</sup> our initial literature searches revealed varied terminologies associated with the concept *CHC* with different applications of this concept described in the contexts of program planning, implementation, and policy. Having an operational definition for CHC was essential to planning our scoping review and this was the genesis for selecting CHC as the concept of focus in this concept analysis. Furthermore, it is evident from the literature that development and implementation of CHCs continues to expand globally, thus having a shared definition and understanding of this concept will be beneficial for purposes of research and knowledge development in this area.

### Step #2: Purpose of This Concept Analysis

The main aim of our concept analysis was to provide a definition for CHC that can inform researchers, academics, policy makers, and change-leaders in health care. Our goal was to determine how the concept CHC was defined and described in various contexts and across disciplines. The first objective in support of this goal was to describe how



**Figure 1.** Results of systematic literature review for concept analysis of CHC.

the term CHC is used in the literature, identify related synonyms and CHC-like entities, and delineate key characteristics of CHCs. The second objective was to distinguish CHCs from other related concepts, particularly those that are principally primary care in nature. Finally, the third objective was to synthesize a coherent and comprehensive definition for CHC for our scoping review<sup>39</sup> that would also be beneficial for conceptual clarity in other future research and knowledge development.

### Step #3: Identifying the Use of CHC in the Literature

We undertook a systematic literature review process to identify use of the concept CHC in health care and across relevant disciplines (eg, medicine, nursing, allied health professions, and business). This process entailed 4 phases: (a) a robust literature search on the concept of CHC; (b) title and abstract screening of articles; (c) full text review of

articles; and (d) analysis of results and extraction of data from the final articles for the concept analysis.

The first phase of the literature review was a keyword and subject heading search conducted in the databases of ABI/INFORM, Academic Search Premier, Cumulative Index to Nursing and Allied Health Literature (CINAHL), EMBASE, PsychINFO, PubMed, and SocioINDEX to identify articles and other literature sources that described or referred to “community health centre” (British spelling) or “community health center” (American spelling). Synonymous or similar terms used in the literature search included *primary health care center*, *primary health center*, *community mental health center*, and *FQHC*.<sup>2,8,12,13,26,40,41</sup> No date restriction was applied to the search, and all literature sources were required to be in English, be peer-reviewed, and have an abstract. A total of 6328 articles were identified up to May 2020. Duplicates were removed (see Figure 1), and results imported into Covidence™ for screening.

In the second phase of the literature review process titles and abstracts of 5070 articles were screened independently by 2 reviewers in Covidence™. Inclusion criteria for this level of review were: (a) presence of both a title and abstract; (b) explicit reference to the concept of CHC or related synonym; and (c) a focus of CHC in the context of health care delivery to a community or population. Articles were excluded if the focus was a CHC used solely as a recruitment site for research, such as clinical trials of the provision of specific treatments or interventions. Disagreements on inclusion or exclusion of an article were resolved by a third reviewer or by mutual agreement of the team.

The third phase of the literature review was full text screening of 368 articles. Inclusion criteria at this level of review were: (a) availability of full text; (b) description of the context in which the concept CHC was used; and (c) clear delineation of characteristics of a CHC in the article. Sources were excluded if: (a) they were dissertations, conference, or poster presentation abstracts; (b) articles contained insufficient details to describe a CHC; and (c) if articles were unavailable.

During the full text review, reviewers noted how the term CHC was used and identified relevant data for extraction, including attributes, antecedents and other key findings related to the concept analysis. In the final phase of analysis and data extraction, our team first discussed the initial findings from the full text review and then determined which data would be extracted for purposes of this concept analysis. Through consensus, our team arranged the data as recommended by Walker and Avant<sup>15</sup> into categories that represent attributes and antecedents of CHCs.

## Results

### Uses of the Concept CHC

Although the literature search was comprehensive and included a diverse range of databases, the majority of articles that met inclusion criteria originated from health-related journal sources that had a focus on public health, healthcare delivery, or health professions.<sup>10,22,26,42</sup> However, some articles came from journal sources that represented other fields such as business administration, cultural diversity, policy, systems engineering, and general studies.<sup>12,13,21,36,40,43,44</sup>

Our literature search affirmed many concepts in the literature were similar to CHC, such as: community mental health centers; community health and development centers; family practice centers; primary health care centers; primary care centers; and primary health care units.<sup>12,13,26,40,43</sup> In Quebec, Canada, the French equivalent to CHC was *local community service centers* (CLSCs) that offer a variety of services to the community.<sup>11,28,36</sup> Community mental health centers appeared to share some of the same attributes

as CHCs in the literature, such as accessibility and having a defined population.<sup>41,45</sup> However, where most CHCs included care for individuals with a range of health concerns that encompassed mental health,<sup>8,34,46</sup> community mental health centers tended to focus solely on the more severe and chronic forms of mental health conditions (eg, schizophrenia, bipolar depression, etc.) independent of other health issues.<sup>41,45,47</sup>

The concept of CHC and its synonyms have been used to reflect delivery of a range of healthcare services, from individual medical-focused care to broader models of integrated and comprehensive healthcare delivery.<sup>7,8,26,27</sup> For instance, Cox et al<sup>48</sup> seemed to use primary health center synonymously with CHC but defined primary health care as being “provision of first contact care”<sup>48</sup> (p. 948). In other situations, CHC was a term applied to regional hospital systems.<sup>43</sup> Similar characteristics between CHCs and the other related concepts included a focus on access to healthcare services, having multidisciplinary teams for primary care provision, preventative care, or using input from community stakeholders to inform interventions by the center.<sup>4,26,43,49</sup>

Guided by the broader framework of the principles of primary health care, we refined the list of final articles and provide a summary of these articles in the Supplemental Appendix. The resulting articles from our literature search represent a wide range of countries, disciplines, and contexts. In Table 1 we list the attributes and antecedents identified from our findings and provide a sample of select articles to illustrate how attributes and antecedents are supported by evidence in the literature.

### Step #4: Defining Attributes of CHCs

Walker and Avant<sup>15</sup> describe attributes as being the defining characteristics of a concept that help distinguish what phenomena match the concept<sup>15</sup> (p. 157). From our analysis we identified 6 attributes (Table 1) that are core to CHCs: (a) primary care; (b) accessibility; (c) preventative care; (d) defined population; (e) health promotion; and (f) comprehensive and integrated care. We now delineate these attributes recognizing the wide variation in composition and mandates of CHC service delivery described in the literature. As we note later, some attributes are dependent on sociopolitical contexts and resource availability, which often intersect with the antecedents we present.

**Primary care.** The principal attribute referred to in most articles is *primary care* as a first point of contact for individuals seeking care that is focused on the screening, diagnosis, and treatment of disease conditions.<sup>3,9,38,46</sup> The literature typically described primary care in CHCs as being delivered by a range of healthcare professionals, predominantly physicians, nurse practitioners, and nurses.<sup>7,12,27,28,37,46,49,51,54,55</sup> Depending on the mandate and scope of a CHC, other disciplines

**Table 1.** Sample of Review Articles That Feature 6 or More Attributes and/or Antecedents.

Article sources	Attributes						Antecedents			
	Primary care	Accessibility	Preventative care	Defined population	Health promotion	Comprehensive and integrated care	Secure funding	Vision and support	Adequate human resources	Governance structure
Abrams et al <sup>50</sup>	X	X	X	X	X		X	X	X	X
Albrecht <sup>4</sup>	X	X	X	X	X		X	X	X	X
Anderson and Olayiwola <sup>16</sup>	X	X	X	X	X	X	X	X	X	X
Bozzini <sup>36</sup>	X	X	X	X	X		X	X	X	X
Bruna <sup>30</sup>	X	X	X	X	X		X	X	X	X
Carter <sup>51</sup>	X	X	X	X	X	X	X	X	X	X
Collins et al <sup>33</sup>	X	X	X	X	X		X	X	X	X
DeLeon et al <sup>49</sup>	X	X	X	X	X	X	X	X	X	X
Dievler and Giovannini <sup>20</sup>	X	X	X	X	X		X	X	X	X
Freedman et al <sup>52</sup>	X	X	X	X	X	X	X	X	X	X
Gallagher et al <sup>7</sup>	X	X	X	X	X		X	X	X	X
Geiger <sup>1</sup>	X	X	X	X	X		X	X	X	X
Hossain <sup>13</sup>	X	X	X	X	X	X	X	X	X	X
Hudson <sup>8</sup>	X	X	X	X	X	X	X	X	X	X
Klančar and Švab <sup>12</sup>	X	X	X	X	X		X	X	X	X
Kotelchuck et al <sup>53</sup>	X	X	X	X	X		X	X	X	X
Lefkowitz <sup>2</sup>	X	X	X	X	X		X	X	X	X
Li and Yu <sup>27</sup>	X	X	X	X	X	X	X	X	X	X
Li et al <sup>9</sup>	X	X	X	X	X		X	X	X	X
Mabuchi et al <sup>40</sup>	X	X	X	X	X		X	X	X	X
Pan et al <sup>25</sup>	X	X	X	X	X	X	X	X	X	X
Russell et al <sup>27</sup>	X	X	X	X	X	X	X	X	X	X
Stanton <sup>19</sup>	X	X	X	X	X		X	X	X	X
Suschnigg <sup>28</sup>	X	X	X	X	X	X	X	X	X	X



may also be included into the staffing mix such as social work, pharmacy, mental health, dentistry, nutritionist, other allied health care professionals, and/or other skilled staff.<sup>3,4,8,26,40,43,56-59</sup> Delivery of primary care is often evaluated at the individual client level in terms of impact (eg, managed care), health outcomes, and satisfaction with service.<sup>9,14,50</sup> However, the impact of primary care on overall population health, particularly in relation to chronic disease management (eg, diabetes care, hypertension) was frequently measured as a health outcome of CHCs through evaluation of parameters such as biometrics (eg, glucose levels, blood pressure management), frequency of emergency room visits, and hospitalizations.<sup>9,23,31,37,60</sup>

**Accessibility.** *Accessibility* as an attribute of CHCs was described within 4 main contexts across the literature. The first context was related to affordability of healthcare services, particularly when universal health care is not publicly funded and clients either require insurance coverage or the ability to pay for services.<sup>1,10,17,42,50,56,61-63</sup> In the United States, the primary mandate of FQHCs is to provide access to care for individuals with financial barriers.<sup>1,2,8,22,42,49,50,64-66</sup> The second context for accessibility was of a temporal nature that accounted for ability of clients to schedule appointments with providers in a timely manner, and included factors such as hours of operation, scheduling, and waiting times.<sup>16,17,22,55,61</sup>

The third context was of a resource nature, namely the availability of appropriate care providers, services, and resources to meet specific client needs.<sup>8,12,16,28,35,37,40,43,46,52,57,67</sup> An aspect of this third context was access to care that is culturally appropriate through inclusion of translation services, culturally competent care, and/or use of traditional health practices.<sup>7,35,37,42,68,69</sup> The fourth context was the ability of clients to physically access CHCs due to factors such as logistics of transportation, physical limitations, and socioeconomic factors.<sup>1,10,12,35,49,50,65</sup> Several articles offered solutions to enhance accessibility to care, such as locating required programs in neighborhoods with high-risk populations, providing outreach programs, and increasing ambulatory care services.<sup>1,7,8,20,28,67</sup>

**Preventative care.** Engaging in preventative care was reflected as an important attribute of CHCs in the literature, and this seemed to align with 2 main roles. The first role of preventative care pertained to health maintenance, such as facilitating chronic disease management, addressing health risks (eg, obesity, harm reduction, etc.), perinatal care, and providing screening.<sup>8,10,23,40,52,56,60,61,63</sup> Benefits attributed to prevention and favorable health outcomes in chronic disease management through CHCs included both health promotion programming and a multidisciplinary team approach to care.<sup>37,52,56,70</sup> Screening (eg, breast examination, colorectal, Pap smears, sexually transmitted infections, etc.) was

cited as both a preventative practice and point of comparison between CHCs and other healthcare service delivery models.<sup>8,10,31,54,71</sup>

The second role of CHCs in preventative care was a public health focus, specifically in relation to surveillance and control of disease, illness, or injury.<sup>1,23,25</sup> Provision of immunizations, screening and tracking of illness or disease patterns, engagement in health services research, and proactive work in health policy were described as functions of CHCs.<sup>1,10,25,40,51,54</sup>

**Defined population.** As noted by Albrecht, a CHC may be “community-defined as belonging to a geographic area or a specific group of people”<sup>4</sup> (p. vi) and the original mandate of CHCs aligned with the latter aspect of this definition goal through provision of care to underserved populations. Geiger<sup>1</sup> described meeting “the needs of poor, uninsured, and disease-burdened populations” (p. 315) as 1 principle for CHCs in delivery of healthcare. Many articles described CHCs specifically in terms of serving vulnerable and high-risk populations, such as persons affected by poverty, domestic violence, homelessness, specific disease conditions (eg, HIV/AIDS, chronic mental health issues, etc.), and/or cultural considerations.<sup>7,8,18,20,35,49,56,62,64,65,72</sup> Often in these situations, CHCs were designed to provide comprehensive services for populations that have poor health outcomes “with medically and socially complex issues that are not served well by traditional health services”<sup>7</sup> (p. 26). Other specific populations served by CHCs included women and children, older adults, the LGBTQ populations, and individuals residing in rural settings.<sup>2,8,11,21,30,51,56,57,73</sup>

In some articles, the population was defined by geography or community, such as for persons in rural settings.<sup>30,40,43,57,71,73</sup> Geographical demarcation for CHCs seemed to generally fall along the lines of catchment areas for delivery of services, often representative of the healthcare agency responsible for delivery of services.<sup>25,26,40,43,70</sup> Geographical location of CHCs frequently represented the location of the affected population as a means to enhance accessibility to services for defined population.<sup>7,21,30,40,43,49,71</sup>

**Health promotion.** Health promotion is formally recognized by the World Health Organization<sup>74</sup> as “the process of enabling people to increase control over, and to improve, their health” (p. 1), and as noted in the background of this paper, is one of the 5 principles of primary health care. Health promotion is supported by strategies that: (a) build healthy policy; (b) create supportive environments; (c) strengthen community action for health; (d) develop personal skills; and (e) re-orient health services.<sup>74</sup> Many of these strategies were reflected in the literature to various extents as either goals or functions of CHCs, frequently being framed within addressing gaps in social determinants of health.<sup>21,33,53,58,64</sup> For instance, Kotelchuck et al<sup>53</sup> describe

CHCs as both engaging in community and business development that serve to build community capacity through environment interventions, education, and employment opportunities. Further, development of personal skills was often described in terms of health education to clients, whereby healthcare professionals at CHCs assisted individuals to better manage aspects of their health. In most articles, this was reflected directly as maintenance of physical or mental health, such as chronic disease management and illness prevention.<sup>11,14,54</sup> Reorientation of health services through CHCs was exemplified by designs that incorporated outreach services, specialty clinics, and other innovative interventions.<sup>8,22,30,40,43,71,75</sup>

Often health promotion strategies overlapped with each other. An example of an overlap was involvement of CHCs and community members in strategy and policy development that highlights the intersection of building policy with strengthening community action.<sup>30</sup> Another example of overlap was the partnership of CHCs with the community to address upstream determinants of health to reduce health inequities for vulnerable communities; this illustrated the creation of healthy environments and building healthy policy.<sup>33,53</sup> Strengthening community action by CHCs was reflected as ideally being “bottom-up,” community-based initiatives to address health-related social problems and gaps in social determinants of health, such as housing, food safety, and health literacy.<sup>1,19,25,28,52</sup>

*Integrated and comprehensive services.* Provision of integrated and comprehensive healthcare services was a theme common across the literature, involving collaborations and partnerships internally within the CHC and externally between the CHC and other health services stakeholders. Internally, the intent of integrated and comprehensive services were demonstrated by the design or model of the CHC through incorporation of multidisciplinary teams, care coordination, co-location of community health programs, and utilization of information technologies that facilitated holistic and coordinated care to clients.<sup>7,8,27,28,49,52,56,58,59,67,72</sup> Comprehensive care also included incorporation of traditional healing practices, such as traditional Chinese medicine and other cultural-based care.<sup>25,42,69</sup> A recent focus in the USA has been the concept of the *patient-centered medical home* in CHCs that originated as an enhanced model of primary care with the intent to increase quality of care through improved access, better coordination of care, and continuity of care.<sup>16,17,59-61,66,73,75</sup>

External integration of services for clients between CHCs and health service stakeholders were achieved through collaborations and partnerships to aid in disease prevention and health promotion. Examples of this included specific programs, such as: maternity coalitions; infant and toddler programs; specialized care for overweight children; and learning centers.<sup>28,44,70,75</sup> Networks within systems and

developing better links with other healthcare agencies (eg, hospitals), other community-based services, and research institutions was also reflected in the literature.<sup>19,26,30,37,43</sup>

### Step #5: Model Case of a CHC

Model cases are empirically described examples derived from the literature or pure constructed exemplars that reflect all defining attributes of a concept.<sup>15</sup> Only a few sources in our literature review explicitly described exemplars of CHCs that reflected most, although not all, attributes outlined in Table 1.<sup>7,67</sup> Here we present a constructed model case to illustrate incorporation of all 6 attributes identified for the concept of CHC:

The South Peninsula CHC has been established for the residents of a priority neighborhood of a small city where there has been an identified need for access to a broad range of healthcare services. The demographic profile of the neighborhood reflects a high degree of poverty, broad range of age groups, and a significant homeless population. The epidemiological profile of the neighborhood reflects a disparity in health outcomes compared to the rest of the city, including higher incidence or prevalence rates for chronic disease conditions (e.g. diabetes, hypertension, and chronic heart failure), injection drug use, higher rate of teenage pregnancy, sexually transmitted infections and mental health concerns (e.g. depression and anxiety). Historically, healthcare resources in the area were limited to a few private physician offices and visits to homes or schools by other healthcare professionals. Access to healthcare services for residents of the neighborhood were restricted by lack of transportation options, cost for transportation and/or operational mandate of health agencies (e.g. mental health services). As part of a publicly funded health system, there was a financial commitment from the regional government to provide necessary monetary resources to develop, implement and maintain operations of this CHC.

To plan the location and services to be provided by South Peninsula CHC, residents from the neighborhood were invited to be part of the steering committee to help identify health priorities for their community and outline programs that would help address health concerns. The site selected for the CHC was a central location situated on a major city transit route and within two blocks of the neighborhood's high school. Services within the CHC are integrated to provide a seamless and integrated range of amenities that include: primary care (nurses, nurse practitioners, physicians, social worker); alcohol and addictions counselling; mental health services; ambulatory care (for wound care and medication management); on-site lab for specimen collection; and, prevention services (perinatal care, well baby clinics, and immunizations). Weekly specialist clinics are held on site for clients of the CHC by an obstetrician, clinical psychologist and nutritionist. As well, the CHC administers a variety of on-site and outreach programs for the community, such as pre-natal classes, support groups (e.g. peer-led diabetes care, Alcoholic Anonymous) and street

outreach. Stakeholder participation by neighborhood residents through ongoing participation on the CHC's advisory board and inclusion of client feedback are used to continually refine and improve the centre's healthcare service provision.

### Step #6: Contrary Case to CHCs

Walker and Avant<sup>15</sup> suggest providing other cases to contrast a model case of a concept to illustrate those that might be related to the concept of focus, such as a community mental health center, or a borderline case that has most, but not all, of the defining attributes. For the purpose of our concept analysis, we present a constructed contrary case that is a medical clinic. While this exemplar partially reflects elements of some attributes of CHCs, such as primary care, it does not fully illustrate any of the attributes outlined in our concept analysis.

City Centre Medical Clinic is a physician-run private general practitioner office located on the South Peninsula but situated close to the business district. The staffing consists of a receptionist and three physicians who solely provide primary care services. The medical clinic focuses mainly on episodic care, has restricted hours of operations, and has a long waiting list for clients not already on the caseload. Treatment for most complex conditions, such as chronic diseases (e.g. diabetes) and addictions, must be referred elsewhere for follow-up care. Visits with the physicians are limited to 10 minutes for episodic care, so very little time is spent on health education and prevention for health issues, such as management of chronic disease conditions.

### Step #7: Consequences and Antecedents Associated With CHCs

Consequences are defined as the occurrences or outcomes of the concept,<sup>15</sup> and there are a number of desired consequences of CHCs. The primary consequence is improved health outcomes of clients at the individual level and more broadly, the well-being of the community at a population health level.<sup>1,4,10,18</sup> This is realized through access to health services, provision of quality health care, and utilization of health promotion strategies that enhance individual and community capacity to address health concerns. To that end, many of the attributes are operationalized to influence positive health results through a combination of individual and community-based initiatives that optimizes interprofessional and intersectoral collaborations to build community capacity and influence health policy decisions.<sup>1,4,33,53</sup> However, given the expense of healthcare service delivery and the differences in financing delivery of health care (eg, public vs private funding), another consequence of CHCs is the efficient and cost-effective provision of healthcare services.<sup>19,73,76,77</sup> Throughout the literature many articles

explored dimensions of quality improvement of services, evaluated accessibility to care, and compared outcomes of CHCs to other models of service delivery such as private physician practice and hospitals.<sup>9,25,27,61,78,79</sup>

Antecedents are those elements or conditions that need to be in place before a concept can occur.<sup>15</sup> Our review of the literature revealed 4 antecedents that need to be in place for planning and operationalizing a model CHC, and to realize the consequences of a CHC: secure funding; vision and support; adequate human resources; and governance.

**Secure funding.** Most articles reflected CHCs as non-profit healthcare agencies, often fully or partially funded through federal, provincial, state, or local governments.<sup>8,12,16,18,26,37,43,66,78,80</sup> Funding schemes for CHCs were variable, including program financing, fee-for-service, capitation, dependence on insurance coverage, or a combination of these methods.<sup>3,4,19,27,28,42,51,63</sup> However, stability and consistency of funding was identified as a challenge for CHCs in some systems since budget cuts or lack of financial resources often negatively impacted service provision and in turn, negatively affected outputs such as client health outcomes.<sup>19,25,40,63,78,80</sup> A particular element of CHC services that has been identified as vulnerable to funding cuts is prevention and health promotion, since often a lack of funding means shifting focus to treatment.<sup>25,70</sup> Funding for expanded services in private healthcare systems is a challenge, since often the goal in service delivery is to be self-sustaining and the viability of CHCs can be an ongoing concern.<sup>3,20,44</sup>

**Vision and support.** Historically, the main goal of CHCs was to alleviate health disparities for marginalized and vulnerable populations that were grounded in inequities, such as inability to access or pay for healthcare services due to socioeconomic, political, and/or geographic factors. While that same goal appears to remain a core value over time, the vision for CHCs has evolved to include more intentional involvement of community members and other stakeholders to help define missions and strategic directions for CHCs that meet the needs of a community.<sup>4,25,52,81</sup> Incorporating community input into CHC planning has been found to enhance engagement, build capacity and ultimately, lead to more effective and successful healthcare delivery to a community and its constituents.<sup>1,52,78,79</sup> Support in promoting the vision for CHCs occurs at multiple levels, ranging from the grassroots of community engagement to the involvement of intersectoral partnerships (eg, non-profit agencies, private business) to government ministries that finance health care and influence directions in health policy.<sup>2,3,37,53</sup>

**Adequate human resources.** Human resources were highlighted as important to the function and effectiveness of



CHCs within 2 main contexts: (a) skill mix of healthcare providers; and (b) availability of educated and qualified personnel. In relation to skill mix, the literature reflects the potential for a diverse multidisciplinary and interprofessional team of providers to meet the health needs of community members. In addition to physicians that may provide general or specialist medical care (eg, internists, obstetricians, pediatricians) and nursing professionals, CHCs may employ mental health workers, dentists, social workers, health educators, psychologists, pharmacy personnel, and many other categories of health workers to provide services.<sup>1,7,18,20,43,77,80</sup>

With respect to availability of personnel, recruitment, and retention of some healthcare providers to CHCs can sometimes be a challenge due to shortage of trained professionals, low wages, competition for recruitment with other health agencies, and a lack of willingness to work with clients who access CHCs.<sup>12,16,42,43,50,61,68,77,80</sup> Additional factors that may affect appropriate utilization of healthcare professionals in CHCs are limitations to scope of practice (eg, prescription authority of nurse practitioners), level of basic education for health providers (eg, physicians and nurses), lack of formal preparation for specialized roles, limited resources for staff development, and critical shortages of skilled staff.<sup>9,25,37,40,46,68</sup>

**Governance structure.** Oversight that maintains a balance between both a community-focused vision and operational effectiveness is an important element of framing a governance structure for CHCs. Community participation and engagement is a critical component of CHC governance to ensure representation of the population being served and to facilitate partnerships between community stakeholders.<sup>1,16,20,30,33,52,79</sup> Community participation is key to ensuring consistency of vision and fostering community empowerment through collective decision-making, such as providing input to strategic planning and informing evaluation of CHC programs.<sup>1,7,19,44,78</sup> While in some jurisdictions the mandate and direction of CHCs may be solely determined by the state, in many contexts policy may explicitly direct that composition of boards of directors include active participation of community stakeholders.<sup>4,12,14,19,25,49</sup> Strong leadership and management are also important to maintain community relationships, foster collaborative partnerships, and manage the day-to-day operations of an effective CHC.<sup>19,40,73</sup>

### Step #8: Empirical Referents for CHCs

We discovered a dearth of assessment methods to comprehensively evaluate or measure CHCs, although a major focus of evaluations related to the desired consequences of CHCs, including improved health outcomes, quality of care, efficiency, and cost-effectiveness.<sup>23,76,82</sup> There were several empirical referents used to measure attributes of

CHCs (eg, primary care) or were indirectly used to evaluate relationships of phenomena to attributes (eg, relationship of service utilization to accessibility and client satisfaction). Empirical referents are actual phenomena that exist or are present and demonstrate the occurrence of a concept.<sup>15</sup> Since a CHC is a complex concept with many measurable phenomena and also is highly abstract, empirical referents can be used to “recognize or measure the defining characteristics or attributes”<sup>5</sup> (p. 168) of a CHC. We identified a range of quantitative and qualitative methods to measure, evaluate, or compare empirical referents of CHCs, including validated tools, surveys, chart audits, analysis of databases, interviews, and observations.<sup>33,35,54,58,60,62,64-67,82,83</sup>

Two main examples of empirical referents in our literature search were for primary care and accessibility. Primary care was the most commonly evaluated attribute of CHCs for a wide variety of dimensions including service utilization, health outcomes, client satisfaction, and so forth.<sup>3,21,66,73</sup> The Primary Care Assessment Tool (PCAT) was a frequently cited instrument for evaluation of primary care in CHCs and was used to measure the affiliation between the client and CHC, utilization of services, and perceptions of ongoing care.<sup>3,27,83</sup> Utilization of services, which spans provision of primary care and other attributes (eg, accessibility and defined population), has been evaluated through collection of information through billing databases, analysis of national databases, and other survey methods.<sup>46,62,76</sup>

Accessibility was another frequently evaluated attribute, and often evaluated in situations where CHCs had a specific mandate to serve specific communities or populations; this was particularly evident for agencies, such as FQHCs, whose funding might be tied to demonstrating benchmark criteria such as demographics of clients, availability of providers, and location of the CHC and associated services.<sup>22,65,76</sup> Aspects such as flexibility in scheduling appointments, wait time, and availability of after hour appointments were used as empirical references to determine accessibility to CHCs.<sup>22,27,55,83</sup> The relationship of accessibility to client satisfaction or service utilization demonstrated other empirical referents for CHCs, including the impact of interactions between clients and providers.<sup>22,35,67,73,76</sup>

More often, the evaluation of characteristics and attributes were reflected in the broader contexts of the consequences of CHCs. For instance, there were comparisons of efficiencies and cost-effectiveness between CHCs and other models of care delivery, such as physician private practice and outpatient departments in hospital.<sup>20,76,82</sup> Health outcomes related to diabetic care and other chronic conditions were indicators used to measure effectiveness of care delivery in CHCs, as were rates of emergency department visits and hospitalizations.<sup>10,14,20,50,58,60</sup> These parameters were also empirical referents for attributes, such as health

promotion, integrated care, and impact on defined populations.<sup>10,20,52,58</sup>

## Discussion

Our goal in this concept analysis was to explore how CHC was defined and described in the literature with the aim of providing a concept definition for CHC. Through our search of peer-reviewed literature we did not find an explicit definition for CHC; however, there was ample data to either describe CHCs or delineate components of the services they provide in a variety of community contexts. Through our review we were able to discern 6 attributes common to CHCs and 4 antecedents necessary for CHCs to exist. With completion of our concept analysis and identification of the attributes, consequences, antecedents, and empirical referents we present the following concept definition for CHC:

*Community health centres (CHCs) are healthcare agencies that actively engages and collaborates with community stakeholders to provide a range of accessible, comprehensive, and integrated services based on the principles of primary health care that attends to existing health concerns and addresses root causes of poor health outcomes for individuals, families, and communities.*

In considering definitions of CHCs from non-peer reviewed sources, our concept definition provides a more comprehensive, yet flexible, definition to help facilitate consistency in theory development and evaluations of CHC outcomes. For instance, the Canadian Association of Community Health Centers defines CHCs as “not-for-profit organizations that provide primary care together with health promotion, community programs and social services in one-on-one group settings.” Our definition, in comparison, explicitly includes the broader primary health care principles (ie, access to health care delivery, public participation, intersectoral collaboration, appropriate use of technology, and health promotion), not solely primary care, and community focus of CHCs. Other definitions, such as for the similar concept of FQHC, are limited to primarily being “safety-net providers that offer outpatient services” for underserved populations or narrowly defined notions of community (eg, homeless, public housing, and migrants) and seem to mainly focus on primary care services.<sup>24,84</sup> In comparison, our concept definition extends outside of underserved or at-risk populations to reflect a broader sense of community and to situate CHCs as a more universal component for delivery of care to communities and populations within a robust health system similar to that envisioned in some jurisdictions.<sup>85</sup> A final and important aspect of the definition we propose is that it recognizes inclusion and participation of community stakeholders as part of the governance structure for CHCs to ensure representation and

input in the development, implementation, and evaluation of CHC programs.

A limitation to our concept analysis was that our literature search focused on peer-reviewed sources that explicitly referenced CHCs or related synonyms and specifically situated CHCs in the context of health care delivery to communities or populations. While this relatively narrow scope did not include definitions and descriptions from gray literature sources, such as government documents and technical reports, it was important for us to understand how CHCs are defined or described in the context of research and theory development. However, the concept definition we present here may be used as a starting point for further concept development with inclusion of additional data points and comparisons in other contexts. Comparison and refinement of our concept definition may be achieved through more robust and formal systematic reviews that include multiple literature sources focused on CHCs. Further, the resulting attributes and antecedents from our concept analysis provide an appreciation of the complexities inherent to developing an ideal model of a CHC and provides a foundation for future directions in knowledge development related to the design, implementation, and evaluation of a model CHC.

Our literature search and review affirm that a primary goal of a CHC is to enhance individual, community, and population health outcomes and well-being through a combination of community engagement, community-oriented health programs, and primary care services aligned with the principles of primary health care. These core activities enhance health outcomes through actions that: (a) employ a variety of health promotion and illness prevention strategies; (b) address the needs and goals of the community it serves; (c) attend to the social determinants of health that impact health outcomes; and (d) are an efficient and cost-effective approach to delivery of services within a broader healthcare system.<sup>11,30,33,50</sup> The attributes and antecedents we identified may help inform development of a conceptual model and theoretical underpinnings to guide further explorations of the efficacy and health outcomes for CHCs.

## Conclusion

Our literature review and work in this concept analysis has illuminated many of the complexities associated with understanding CHC as a concept. We discovered that, although the term CHC is often used in our daily practice, the diverse ways in which the term was loosely used and/or defined was not evident until we closely examined the literature. As well, we had not appreciated the many defining characteristics of CHCs or the interconnected nature of CHCs to other constructs (eg, principles of primary health care and social determinants of health). Although being limited to English language literature, our rigorous review of

available sources revealed that CHCs are increasingly being utilized as an integral component of healthcare systems in countries on most continents, and is a focus of evaluation, research, and policymaking.

In using Walker and Avant's<sup>15</sup> structured approach to systematically analyze the literature we gained a deeper understanding of the attributes, antecedents, and consequences of a CHC to inform our own work on evaluation frameworks for services and outcomes of CHCs. By delineating these core characteristics of CHCs and offering a concept definition for CHC, our concept analysis serves to advance the work of health researchers, policy makers, and healthcare leaders in fostering better health outcomes for communities through CHCs.

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### Author Contributions

This study was conceived by DAN and LKB who also contributed to planning of the search strategy. All 3 authors participated in screening of titles and abstracts, and full-text articles. DAN and ICS conducted data extraction, and all 3 authors participated in data interpretation. DAN was lead writer of the manuscript, and all 3 authors reviewed, edited, and approved the final manuscript.

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