

Community Health Centres: Operationalizing the Declaration of Astana on Primary Health Care

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ABSTRACT: Community Health Centres (CHCs) are community-oriented primary care (COPC) organizations that deliver health and social services through interprofessional teams, addressing the specific health and social needs of individuals, families and local communities. CHCs involve members of the community in planning and programming, and they employ a multi-sector approach to address social determinants of health. CHCs currently exist in dozens of countries around the world but there remains limited comparative information nor policy/planning guidance across jurisdictions for use by stakeholders wishing to implement and support CHCs. Insights from CHCs in numerous countries help increase understanding of the comprehensive CHC approach and how CHCs provide countries and non-governmental organizations a model to operationalize primary health care as articulated in the Declaration of Astana on Primary Health Care and to achieve sustainable developments goals.

METHODS: Incremental purposive sampling based on the domain-experience of the authors, supplemented by descriptive information, and practice- and policy-relevant information.

INTRODUCTION

The earliest known Community Health Centre projects date back to the 1920s, in China and Canada, and to the 1930s and 1940s in England and South Africa (1).

The first known Community Health Centre project – the Beijing First Health Demonstration Station, in China – was established in 1925 in association with the Peking Union Medical College for research and training of public health professionals, medical students and midwives, and to provide general health services to the local population of 45,000 (2).

In 1926, Mount Carmel Clinic was established in Winnipeg, Canada to meet the needs of Jewish immigrants who had been invited to provide labour for the city's bustling economy but were subsequently being systematically excluded from many health services and opportunities in the city (3).

In the 1930s, British family physician, Dr. William Pickles, worked with a multi-disciplinary team in Wensleydale, England to gather community-level health data, develop community health diagnoses, and implement interventions that addressed community-level social determinants health.

In the 1940s, Drs. Sidney and Emily Kark established the Pholela Health Centre in rural South Africa where they and colleagues applied a systematic approach to individual and population health which they coined as "community-oriented primary care" (4).

CHCs began to flourish more broadly around the world beginning in the 1960s and are now found in dozens of countries, and across all continents (5).

In 2013, the International Federation of Community Health Centres (IFCHC) was established to foster global knowledge-exchange among CHCs and to increase

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access to CHCs globally. IFCHC's operating definition of "Community Health Centre" includes five core attributes:

- interprofessional, team-based primary care
- integration of primary care with other health services, health promotion, and social/community services
- action on social determinants of health through inter-sectoral services and cooperation
- ongoing engagement of community members in health and planning of health and social services
- having responsibility for a defined local population, either geographical or by population group(s).

A list of cross-cutting characteristics of CHCs is provided as *Table 1*. Nonetheless, there remains a lack of comparative information and evidence regarding CHCs around the world as well as policy and planning guidance for stakeholders wishing to implement CHCs.

This article aims to increase awareness regarding core characteristics of CHCs and the integrated approach to care and wellbeing. Case studies are employed to describe aspects of the historical and social contexts in which CHCs are situated, as well as aspects of their funding, staffing, and services/programs.

The article also provides governments, health authorities and civil society groups with considerations for planning and implementation of CHCs (*Table 2*) at "micro", "meso" and "macro" levels.

And, the article presents Community Health Centres as a powerful model through which countries and non-governmental organizations can operationalize the global vision and commitments on primary health care articulated in the 2018 Declaration of Astana on Primary Health Care which has been ratified by UN member states around the world (6).

Table 1: Cross-cutting characteristics of Community Health Centres

- Historical background in societal and health care transitions;
- Focus on accessibility with special attention for vulnerable and marginalized groups;
- Accountability for services to a defined population, usually based on a geographical catchment area;
- A comprehensive person-centered approach, integrating primary care with: chronic care and other forms of frontline care (dental, vision, mental health, etc); health promotion and community participation; and various social services;
- An inter-professional team with available providers including family physicians, nurses, social workers, nutritionists, health promoters, dentists, physiotherapists, community health workers, community pharmacists, and others;
- Focus on upstream causes of ill-health, addressing social and environmental determinants of health, through intersectoral action involving housing, education, migration, and other sectors;
- Demonstrated positive results in terms of quality, outcomes, cost-effectiveness and sustainability;
- Often a front-runner in introduction of innovation and involved as role-model in health professional education with emphasis on collaborative care;
- Contributing to social cohesion and solidarity in communities.

CHCs IN ACTION TODAY: CASE STUDIES

Seven case studies of individual CHCs and national CHC networks are provided from Australia, Belgium, Canada, China, Slovenia, South Africa, and United States. They have been selected to reflect a diversity of geographical, political, and social/health system contexts. Four of the World Health Organization's (WHO) six global regions are represented.

1. Australia

In Australia, CHCs are called "Community Health Services" and date largely to establishment of the community health program, in 1973, by Prime Minister Gough Whitlam's federal government. This coincided

closely with implementation of Australia's universal healthcare system (1975 - 1984). The Whitlam Government was defeated in 1975 and the community health program was ultimately dismantled, leaving Australia's states to develop their own approaches to primary care, largely in isolation from each other.

Victoria State was the only state to maintain a comprehensive network of community health services. Many of the CHCs which formed this system emerged from the social activism of the early 1970s. To this day, CHCs in Victoria have maintained a strong culture of service and community activism.

Today, CHCs are found throughout Victoria and, to a lesser extent in other states such as New South Wales and Queensland. They deliver primary care, human services and community-based health programs to meet local community needs. Embedded in local communities, these community health services have a unique understanding of the communities they serve, informing their ability to develop localised responses to diverse social and health issues.

In Victoria, where most of Australia's CHCs are located, there are currently 85 such organizations. Thirty of these are independently governed and managed ("third sector" organizations) and 55 are part of rural or metropolitan health services, all governed by the Health Services Act 1988. The community health services (ie, CHCs) sector provides an incredibly valuable community platform and provides services in almost every community in the state of Victoria.

Community health services pride themselves on being accessible to all, including the most vulnerable and isolated people who may have nowhere else to turn. They also play the crucial role of filling gaps left by the broader health system and bridge the gap between the acute and primary care sectors. They are also unique in their ability to leverage both state and federal funding streams, amplifying the overall impact of public investment.

In addition to primary care services, CHCs throughout Australia are major providers of a range of health, social and human services including drug and alcohol, disability, dental, post-acute care, home and community care, mental health services and community rehabilitation. They have a unique understanding of the communities they serve, delivering localised responses to diverse social and health issues. This includes universal access to services as well as targeted services for vulnerable population groups, filling many gaps left by the broader health system.

The CHCs sector in Victoria is worth more than AUD 1 billion per year out of a total state health budget of AUD 19 billion. CHCs in Victoria have been referred to as 'platform providers' of both health and social services, meaning that it is common for them to deliver up to 30 different services/programs through up to 60 different funding streams. They receive funding from a range of programs across the Victorian Department of Health & Human Services, with the single largest portion coming through global funding from the state's Community Health Program.

CHCs are also able to leverage federal funding streams, amplifying public investment. CHCs thus facilitate a broad range of both state and national initiatives that holistically address their clients' needs (7). Among CHCs throughout Australia, there is also a large network of Aboriginal-controlled CHCs "by and for" Australia's indigenous communities.

2. Belgium

CHCs in Belgium date back to the 1970s, inspired by the social solidarity movements of 1968. In both Francophone and Flemish regions of Belgium, creation of CHCs was led by a cross-section of progressive health care providers and civic groups. In the Francophone region of Belgium, CHCs are known as "maisons médicales" and in the Flemish region as "Wijkgezondheidscentra".

Today, over 170 CHCs across Belgium provide care and support to 4% percent of the Belgian population. Research has documented strong performance by CHCs in: accessibility, especially for vulnerable groups; illness prevention; health promotion; appropriate antibiotic prescription; health screenings; and other quality indicators (8).

CHC Botermarkt was established in 1978, in Ghent's Ledeberg neighbourhood, one of the most impoverished in Belgium at that time. The CHC implemented COPC and initiated consultations and home visits, by inter-professional teams, to address psycho-social needs.

In the early 1980s, the CHC's family physicians, nurses and social workers identified poverty as a core determinant of health and put poverty on the agenda of local authorities. They convened a multi-sector partnership including care providers, schools, police, social institutions, informal care givers, and civil society organizations/groups, to address the upstream causes of ill health.

Through this partnership, core health challenges were identified: poor physical conditions of youth; traffic safety; epidemics of lice and scabies; poor oral health; and multi-morbidity (9). The CHC collected and analysed health and social data through primary care visits, leading to "community diagnoses" and appropriate care and social interventions (10).

Engaging and giving "a voice" to diverse groups and residents in the community has become increasingly important. Over the past 20 years, the population served by CHC Botermarkt has diversified from 25 to 107

nationalities of origin (on 1.3 km²). With social violence, fragmentation, and ethnic tensions becoming greater threats across Europe, it is more important than ever to have strong, community-oriented responses at the level of primary care based on social solidarity (11).

3. Canada

Responsibility for planning and funding services in Canada's universal healthcare system is divided between federal and provincial/territorial governments. Despite the gradual expansion of team-based primary care across Canada there is still a tendency for governments to fund highly-medicalized models of primary care where care providers are isolated from other social sectors and do not actively address social determinants of health (12).

There are also significant gaps in coverage at the level of primary care (e.g., prescription medications, dental care, vision care) as these services are typically excluded from universal coverage. This has a disproportionate and compounding impact on Canadians who are vulnerable due to low-income, precarious employment and housing, food insecurity, and other social inequities.

Against this backdrop, over 200 CHCs across Canada provide a more comprehensive range of integrated health and social services. CHCs in Canada are multi-sector organizations which, like CHCs in Australia, act as "platform providers" leveraging funding from multiple levels of government, foundations, and donors.

79% of CHCs in Canada deliver services and programs in at least 5 sectors including healthcare, housing, education, seniors services, immigration/settlement, and other sectors (13). They also fill gaps in health services coverage for many residents of Canada (e.g., access to affordable dental care and mental health services).

Research has documented the benefit of CHCs in Canada compared to other models of primary care: higher satisfaction scores among patients (14); superior management of chronic disease (15); better results in reducing hospital emergency room visits (16); and other benefits.

CHCs are in urban, rural, remote and Indigenous communities, however, access varies significantly by province/territory. The province of Ontario has made the greatest progress to date in implementing CHCs, where a network of over 100 CHCs receive core, global funding from the province's Ministry of Health and Long-Term Care. They provide wrap-around services and programs

to about 4% of the province's population in urban, suburban and rural/remote communities.

South Riverdale Community Health Centre, in Toronto, is one of these CHCs in Ontario. Since its creation, in 1976, South Riverdale CHC has applied a COPC approach. Environmental advocacy has always been a key component and the CHC has successfully: lobbied local government to clean land contaminated by toxic industrial waste and remove asbestos from schools; advanced perinatal health through improved air and water quality; and other actions.

South Riverdale CHC has also grown a globally-recognized Harm Reduction program which includes needle distribution, a supervised consumption service for injecting drug users, and a Hepatitis C program. All of these harm reduction programs and services have a diverse staff composition, including people who are currently or have been substance users.

4. China

China has a three-tier health care delivery system in both rural and urban areas. Community Health Centers (CHCs) are the second tier of the health system, comprised of "township health centers" in rural areas and "community health centers" in urban cities. First tier health organizations are smaller village clinics and community health stations. Third tier organizations are county hospitals in rural area and municipal hospitals in urban cities.

CHCs provide comprehensive primary health care to people in the local community including health education, preventive care, diagnosis and treatment of common diseases, technical support to village clinics and community health stations, and referral of patients to hospitals. Most CHCs throughout China are publicly-owned and operated. The federal government has established one CHC for each rural area/population area of roughly 50,000 people, and for population clusters of 30,000-100,000 people in urban centres (17).

As of 2017, there were over 45,000 CHCs throughout China as follows:

- 37,000 township health centers, which provided 23.9% of total outpatient care services and 15.6% of total inpatient care for population of China; and
- 8,530 urban community health centers, which combined with health stations provided 16.5% of total outpatient care services and 1.5% of total inpatient care for population of China.

Over the past decade, CHCs have been a key priority for implementing health system reform in China. Important progress has been made, but several challenges must still be addressed, including recruitment and retention of qualified health professionals and improving quality of services across China.

5. Slovenia

Ljubljana Community Health Centre, in Slovenia's capital city, was established in 1967 based on the wholistic vision of Andrija Štampar for primary health care (18). Today, Ljubljana CHC is the largest Community Health Centre in Slovenia with 16 service points, 1,600 employees, and more than 350,000 patients.

In addition to primary care, the CHC delivers national health promotion programmes and develops local health promotion programs for partners in the region. In 2016, for example, they developed the "Upright Posture Programme" for primary school children.

Ljubljana CHC also organizes and implements public awareness campaigns focused on various diseases and determinants of health. Each year, different thematic days are organised by the CHC and people are educated on risk factors, preventive behaviours and supports that are available in the community.

For instance, the CHC has implemented an ongoing public awareness campaign about effective use of antibiotics. Ljubljana CHC's client population now has the lowest prevalence of prescribed antibiotics throughout the country.

The CHC has a number of innovative services:

- *Chronic care wrap-around program* where patients are counselled on care options, with emphasis non-pharmacological options. All are listed in the CHC's register, and prevalence rates are tracked to inform population-level planning (19,20).
- *Home care nursing program* for individuals with physical disabilities and for frail seniors to prevent falls, malnutrition and social isolation.
- *Migrant care program* through two service sites dedicated to culturally-appropriate care and support for migrants and the local Roma population.

Ljubljana CHC continues to strive toward innovation in other areas: telemedicine, genetic testing (21), continuous quality/safety improvement, research, and peaceful mediation of local disputes.

6. South Africa

In 1939, Drs Sydney and Emily Kark set out to pilot a service model for the planned National Health Services under the liberal government of General Jan Smuts. In the rural village of Pholela, in Kwa-Zulu Natal province, they established Pholela Health Centre to serve the local population of 30,000. Primary care was delivered from a house converted into a clinic, through a clinical team with strong task-shifting involving nurses, medical aides and physicians.

The CHC applied a COPC approach. Community Health Workers (CHWs) were deployed to do screening and health assessments in the community and diverse community stakeholders were engaged in development of health promotion services. The CHC's work was informed by robust data collection and analysis (22).

Pholela CHC attracted a lot of attention and, by 1948, more than 40 CHCs had been set up across South Africa. Unfortunately, the National Party took power in 1948 and introduced *apartheid* shortly thereafter. The Karks fled South Africa for Israel in the 1950s and during the apartheid era CHCs and COPC withered in South Africa.

The post-apartheid government of South Africa implemented District Health Services with what they called "CHCs" as a key feature. However, these co-called CHCs are in fact narrow, biomedical services that do not truly reflect the CHC model of COPC.

In contrast, Chiawelo Community Practice (CCP) was set up in 2013, in a small section of Chiawelo CHC (one of five CHCs within Soweto, Johannesburg) as a model to reclaim COPC and the true CHC model. It serves a community of ±22,000 people and is staffed by a part-time family physician, a clinical associate, two intern doctors rotating weekly, and 20 CHWs who work under the guidance of a junior nurse team leader.

The CCP team delivers people-centred care to ±1,000 patients per month. Promising outcomes have been documented: lower wait times than at the general CHC; reduced rates of avoidable utilisation; high satisfaction rates among patients; and, a high compliance rate (83%) with national standards of chronic care.

Drawing from local data, local stakeholders are highly engaged in supporting a growing intersectoral health promotion programme. The centre's CHWs have set up five health clubs in the community with ±150 elderly chronic patients involved in daily exercise, diet, and social sessions to combat social isolation.

CCP has renewed COPC in South Africa. Students rotating through CCP are motivated to re-consider some negative perceptions of primary care and family medicine, and CCP is also influencing national policy: COPC is being explored as the core model in design of the new primary health care capitation contract under South Africa's National Health Insurance System (23).

7. United States

The origins of CHCs in the U.S. are found in the country's civil rights movement and President Lyndon Johnson's War on Poverty initiative of the 1960s, where they were deployed as vehicles for working with poor and disenfranchised communities. Family physicians Jack Geiger (who had interned with the Karks in South Africa) and Count Gibson, led development of the earliest CHCs, in rural Mississippi and Boston.

Today, their legacy is found in more than 11,000 communities across the U.S., where more than 1300 CHCs provide linguistically and culturally responsive care and support to over 28 million Americans, including:

- 1 out of every 9 U.S. children
- 1 out of every 3 American living in poverty
- 1 of every 5 rural U.S. residents (24).

Across the U.S., CHCs care for 1.3 million homeless individuals, 80% of the estimated homeless population (25). CHCs also provide care and support to almost 1 million migrant and seasonal farmworkers, one-third of the country's estimated total farmworker population. And, CHCs serve close to 3.4 million residents of public housing, between 50% & 100% of all public housing residents in the U.S (26).

The majority of people served by CHCs in the U.S. experience social factors that put them at higher risk for poor health. Located predominantly in inner city and rural communities that other providers have avoided,

CONCLUSION AND DISCUSSION

Community Health Centres integrate resources at a community level, bringing together team-based care with health promotion activities and upstream supports that mitigate the impact of poverty, precarious housing, social violence and other social inequities that impact health.

By integrating services with community capacity building, upstream programs, and advocacy for healthy

CHCs deliver high-quality care, with exceptional cost-effectiveness and efficiency, reducing health disparities, and saving money for public and private payers

CHCs have served as innovators in addressing costly chronic illness and the root causes of poor health, partnering with other providers and organizations to apply bold community-based solutions – such as food banks, community gardens, affordable housing and job training, and integrating behavioural health and oral health with primary care.

The core strength of the CHC model rests on its key features: each CHC is firmly grounded in its local community, governed by patient-majority boards of directors that ensure a focus on the community's most pressing health and social needs; they occupy the most opportune place in health care – at the entry point, where preventive care and management of chronic conditions, can yield better outcomes and system savings; and, they make care accessible to everyone, regardless of ability to pay.

CHCs in the U.S. have high standards for performance and accountability – leading the prestigious U.S. National Academy of Medicine to recommend CHCs as models of primary health care. CHCs consistently outpace national averages and outperform other models of primary care in the U.S. in providing preventive services, reducing chronic disease, achieving patient satisfaction, and reducing health system costs (27).

In addition to their health and health system impact, CHCs in the U.S. are also major economic engines. They generate of \$54 billion in total economic activity through the country, per year. They provide direct employment of over 220,000 full time jobs each year and another 180,000 in indirect jobs per year created in the local communities they serve ²⁸

public policy, CHCs put into practice at an operational level what the Declaration of Astana on Primary Health Care proposes in theory. Moreover, they do so from a multi-sector approach, bridging areas of activity that are most often planned and funded in isolation from each other by governments.

Further implementation of CHCs by governments and non-governmental agencies around the world is essential

if we wish to move beyond the theoretical framework of the Astana Declaration toward action at the level of actual services and programs. Building on global momentum gained during the Global Conference on Primary Health Care, in Astana, the World Health Organization, governments, and global partners like IFCHC (ifchc.org) can achieve high value and impact by supporting scale-up of CHCs.

Despite their relative successes globally, CHCs in most jurisdictions are affected by constraining factors that impede their further development and impact. Among these factors are:

- the continued dominance of highly medicalized models of frontline services (primary care alone, not “primary health care”), typically via individual practitioners;

- the lack of intersectoral policy-making and planning by governments;
- gaps in data collection and evaluation of primary health care, both at the level of the overall health system and in connection to other sectors such as housing, social security, justice, and education;
- opposition to change from entrenched interests such as health professional associations (most commonly medical associations) and industry groups (insurance, pharmaceutical, etc).

These challenges, along with successes in mitigating and overcoming them in countries around the world are important topics for further study in order to guide further implementation and expansion of CHCs globally.

| Table 2: Lessons and guidance for countries wanting to implement Community Health Centres |
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| Micro-level |
| <ul style="list-style-type: none"> • Facilitate inter-professional teams at community level; • Create clear accountability between team of providers and a defined population (empanelment); • Create appropriate referral-systems (gate-keeping at level of primary care team); • Integrate primary care services with public and community health services (e.g. health promotion, prevention, and social services) and strengthen community involvement; |
| Meso-level |
| <ul style="list-style-type: none"> • Create “Primary Care Zones”, that are accountable for 100,000-250,000 people (or less in rural/remote areas), and that provide actions to support Community Health Centres and other inter-professional primary care teams in these zones, with involvement of local authorities; • Support data collection and participation in international systems such as International Classification of Primary Care-2 (ICPC-2) and International Classification of Functioning, Disability and Health (ICF), to facilitate community/population level diagnoses and appropriate service planning; • Integrate primary care, public health services and social care; • Innovate in health professional education to induce more inter-professional cooperation and more integration of PHC, public health services and social care |
| Macro-level |
| <ul style="list-style-type: none"> • Increase investment in primary health care; • Support dialogue and planning across sectors (healthcare, housing, employment, social services, etc) to enable integrated planning and funding of Community Health Centres as primary health care (PHC) organizations aligned with WHO vision; • Create appropriate financing mechanisms e.g. “integrated risk-adjusted capitation” or “global funding” to ensure appropriate care based on patients’ health and social complexity and to reduce barriers to team-based care; • Provide universal health coverage (UHC) with no financial thresholds, and little or no out-of-pocket payment by patients. • Align secondary and tertiary care with PHC, so they can support PHC organizations and teams; • Address social determinants of health at macro-level and reduce income inequality; • Develop research on social determinants of health (SDH), community participation in PHC, and health equity; • Support participation in international exchanges and creation of “learning communities” on CHCs. |

REFERENCES

- 1 Wolfe S (2018). "Tracing the Early Origins of CHCs". *Vistas*, June 2018, International Federation of Community Health Centres. (<http://www.ifchc.org/tracing-the-early-origins-of-community-health-centres>, accessed 13 Oct 2018)
- 2 Bu L, Fee E (2008). "John B. Grant International Statesman of Public Health". *Am J Public Health*. 2008 April; 98(4): 628–629.
- 3 Ross AG (1998). *Clinic with a Heart: The Story of Mount Carmel Clinic*. Rinella Printers. Winnipeg, MB, 1998.
- 4 Tollman SM (1994). "The Pholela Health Centre: the origins of community-oriented primary health care (COPC). An appreciation of the work of Sidney and Emily Kark." *South African Medical Journal*. 1994 Oct;84(10):653-8.
- 5 International Federation of CHCs (2017). *Report of findings from the 2017 IFCHC Global Survey of CHCs*. (<http://www.ifchc.org/research/2017survey>, accessed 20 May 2018)
- 6 World Health Organization (2019). Global Conference on Primary Health Care. *Declaration of Astana on Primary Health Care*. 25-26 October 2018. Astana, Kazakhstan.
- 7 Victorian Auditor General's Office (2018). *Community Health Program: Independent assurance report to Parliament*; PP no 397, Session 2014–18, June 2018.
- 8 Annemans L, Closon MC, Heymans I, Lagasse R et al. *Comparison of cost and quality of two financing systems for Primary Care in Belgium*. Brussels, Federal Knowledge Centre for Health Care (KCE); 2007. KCE report 85A (D/2008/10.273/49). (https://kce.fgov.be/sites/default/files/page_documents/d20081027349_0.pdf, accessed 17 June 2018)
- 9 Willems S, Vanobbergen J, Martens L, De Maeseneer J. "The independent impact of household- and neighborhood-based social determinants on early childhood caries. A cross-sectional study of inner city children". *Fam Community Health* 2005;28(2):168-75.
- 10 Rhyne R, Bogue R, Kukulka G, Fulmer H. (Eds.) *Community-oriented Primary Care: Health Care for the 21st Century*. Washington, DC: American Public Health Association, 1998.
- 11 De Maeseneer J. *Family Medicine and Primary Care at the Crossroads of Societal Change*. Leuven, LannooCampus Publishers, 2017. ISBN 978 94 014 446 0.
- 12 Peckham A, Ho J, Marchildon GP. (2018). Policy innovations in primary care across Canada. Toronto: North American Observatory on Health Systems and Policies. Rapid Review (No. 1).
- 13 Canadian Association of Community Health Centres (2016). *Report of 2016 Organizational Survey of CHCs*. (<https://www.cachc.ca/2016survey>, accessed 16 May 2018)
- 14 Conference Board of Canada (2014). *Final Report: An External Evaluation of the Family Health Team (FHT) Initiative*. Ottawa, 2014.
- 15 Russell G, Dahrouge S, Hogg W, Geneau R, Muldoon L, Tuna M (2010). "Managing Chronic Disease in Ontario Primary Care: The Impact of Organizational Factors". *Annals of Family Medicine*. 7(4):309-318
- 16 Glazier RH, Zagorski BM, Rayner J (2012) *Comparison of Primary Care Models in Ontario by Demographics, Case Mix and Emergency Department Use, 2008/09 to 2009/10*. Institute for Clinical Evaluative Sciences. Toronto, May 2012.
- 17 World Health Organization (2015). "People's Republic of China: Health System Review". *Health Systems in Transition* Vol. 5 No. 7, 2015.
- 18 Stampar A. "Public health center". *Nar Zdrav*. 1954; 10(11): 327-30.
- 19 Klement-Ketiš Z, Poplas-Susič A. "Are characteristics of team members important for quality management of chronic patients at primary care level?" *Journal of clinical nursing*. Dec. 2017, vol. 26, iss. 23/24, str. 5025-5032. (<http://onlinelibrary.wiley.com/doi/10.1111/jocn.14002/epdf>, accessed 8 June 2018)
- 20 Klement-Ketiš Z, Švab I, Poplas-Susič. "Implementing quality indicators for diabetes and hypertension in family medicine in Slovenia". *Zdravstveno varstvo: Slovenian journal of public health*. [Tiskana izd.], 2017, letn. 56, št. 4, str. 211-219. <https://www.degruyter.com/downloadpdf/j/sjph.2017.56.issue-4/sjph-2017-0029/sjph-2017-0029.pdf>, accessed 9 June 2018)
- 21 Depolli M, Avbelj V, Trobec R, Kališnik JM, Tadej K, Poplas Susič A et al. "PCARD platform for mHealth monitoring". *Informatica: an international journal of computing and informatics*, ISSN 0350-5596, 2016, vol. 40, no. 1, str. 117-123. [COBISS.SI-ID 29438247]
- 22 Kautzkyi K, Tollman SM (2008). *A Perspective on Primary Health Care in South Africa*. School of Public Health, University of Witwatersrand, 2008.
- 23 Moosa S (2018). *Report on Chiawelo Community Practice*. Johannesburg Health District and University of Witwatersrand Department of Family Medicine, January 2018.
- 24 U.S. National Association of Community Health Centers (2019a). *Community Health Centers Chartbook, 2019*. (<http://www.nachc.org/wp-content/uploads/2019/01/Community-Health-Center-Chartbook-FINAL-1.28.19.pdf>, accessed 28 March 2019)
- 25 U.S. Department of Housing and Urban Development Office of Policy Development and Research (2015). *Worst Case Housing Needs*. Report to Congress, 2015. Washington, D.C.
- 26 U.S. National Association of Community Health Centers (2019a). Op cite.

²⁷ U.S. National Association of Community Health Centers (2019a). Op cite.

²⁸ U.S. National Association of Community Health Centers (2019b). *Community Health Centers as Economic Engines*. (http://www.nachc.org/wp-content/uploads/2019/03/NACHC_Eco-Impact-Infographic_FINAL.pdf, accessed 28 March 2019)