Family and community doctors in the context of covid-19: approaches to integrated care

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Abstract:
The objective of this work was to perform a reflective analysis of family and community doctors' role, their approaches and needs in the context of COVID-19 pandemic in Primary Health Care. COVID-19 pandemic has a dynamic profile and has led to a great adaptation of professionals and health systems. Family and community physicians are responsible for providing specific health care, serving within a defined range, without distinction of age, sex, socioeconomic level to individuals, families and communities. Clinical care protocols based on scientific evidence help make decisions about patient care. Primary Health Care is the user's gateway to the system and is essential to control COVID-19 cases through preventive actions and health surveillance. The effect of COVID-19 on medical education is considerable, given the need to strengthen public health as competent human resources. A robust healthcare system is essential to provide quality responses to public emergencies. Primary Health Care has a great responsibility in this global pandemic challenge of COVID-19. Health promotion and disease prevention actions are essential, especially for risk groups. The family and community doctor is inserted in this context, being fundamental in the provision of care. The adaptation of the medical curriculum becomes urgent and necessary to respond to this challenge.
Keywords: Family and Community Medicine, Primary Health Care, COVID-19, medical education.

O médico de família e comunidade no contexto do covid-19: abordagens para o cuidado integrado

Resumo:
The water reuse has been a strategic tool to reduce pressure on water resources. There is no specific nationwide legislation in Brazil that addresses water quality standards for reuse. In this study 11 national and sub-national regulatory documents (legal, normative, and guidelines) were analyzed,both in relationto water reuse and water use. The objective is to compare the main water quality standards regarding the subject in order to add to the implementation and the enhancement of water reuse in Brazil. The study concluded that the analyzed documents present overlapping

standards and, in most cases, with very different values. In the subject of the use restriction or risk exposure for urban reuse, the different instruments evaluated there is a diversity in the conceptual premises. The specific Brazilian legislation addressing water reuse presents very restrictive standards, which can be barriers to the implementation of effective reuse in the country. The specific water quality standard for reuse must be consistent with the country's socioeconomic reality, primarily presenting the microbiological indicators of the effluent and the quality parameters that represent it. Risk assessment must be addressed in order to provides basis for the limits determined as microbiological standards.
Palavras-chave: Medicina de Família e Comunidade, Atenção Primária à Saúde, COVID-19, educação médica.

Médicos de familia y comunitarios en el contexto del covid-19: enfoques de atención integrada

Resumen:
El objetivo fue analizar el papel de los médicos de familia y de la comunidad en el contexto de la pandemia de COVID-19 en la Atención Primaria de Salud. Un análisis reflexivo de los enfoques de los médicos de familia y de la comunidad a las necesidades provocadas por la pandemia de COVID-19 en la Atención Primaria de Salud. Se llevó a cabo la atención La pandemia COVID-19 tiene un perfil dinámico y conduce a una gran adaptación de los profesionales y los sistemas de salud. Los médicos de familia y comunitarios son responsables de brindar atención médica específica, atendiendo dentro de un rango definido, sin perjuicio de la edad, el sexo, el nivel socioeconómico de las personas, familias y comunidades. Los protocolos de atención clínica basados en evidencia científica ayudan a tomar decisiones sobre la atención del paciente. La Atención Primaria de Salud es la puerta de entrada del usuario al sistema y es fundamental en el control de los casos de COVID-19 mediante acciones preventivas y vigilancia sanitaria. El efecto del COVID-19 en la educación médica es considerable, dada la necesidad de fortalecer la salud pública como recurso humano competente. Un sistema de salud robusto es esencial para brindar respuestas de calidad a las emergencias públicas. La Atención Primaria de Salud tiene una gran responsabilidad en este desafío pandémico global del COVID-19, las acciones de promoción de la salud y prevención de enfermedades son fundamentales, especialmente para los grupos de riesgo. El médico de familia y comunitario se inserta en este contexto, siendo fundamental en la prestación de cuidados. La adaptación del currículo médico se vuelve urgente y necesaria para responder a este desafío.
Palabras clave: Medicina Familiar y Comunitaria, Atención Primaria de Salud, COVID-19, educación médica.

INTRODUCTION

The World Health Organization (WHO) declared the coronavirus disease 2019 (COVID-19) outbreak, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), to be a pandemic on March 12, 2020 (WHO, 2020). Taking steps to prevent the transmission of COVID-19 virus is of utmost importance. Treating people and communities as key actors in the production of their health and well-being is critical for understanding and responding to the complexities of the context. Currently, there is a growing need and interest in the role of primary care in public health activities, especially those aimed at

promoting health. In general, the health system is and will be in constant change, implying the implementation of the FP roles and responsibilities (LI, 2020).

These facts pose a challenge for policymakers looking for measures to protect populations. Notably, a renaissance in primary health care is essential to provide health for all, including the most vulnerable ones. Primary health care (PHC) is defined as the first level of contact for the population with the health care system. The family physician (FP) is responsible for providing health services within a defined range, without any distinction of age, sex, and socioeconomic status to the individuals, families, and communities (GRYTTEN; SORENSEN, 2009; POLAK *et al.,* 2016).

Health promotion is described as a planned measure that provides not only health, but also ethical and moral views as the pursuit of holistic goals, equity, voluntarism, and empowerment (WHO, 2018a). Comprehensive generalist physicians (commonly called family physicians (FP) or family doctors) play a central role in PHC-oriented health systems with effective primary care. It permits early intervention in the community and maximizes cost efficiency, as well as providing benefits to populations who would otherwise need to seek care away from their communities (COSTELLO *et al.,* 2009; MASH *et al.,* 2015).

Examination of factors that influence the transmission of COVID-19 also provides insights into future prevention work against similar infectious diseases. The major role of the FP in health promotion is at the individual level, involving screening for risk factors and disease, as well as providing early treatment, advice, counseling, and referral (PARIKH *et al.,* 2019). Primary care physicians can further broaden their impact by assuming roles at the organizational levels, both in the community and government (e.g., as an active member of an organization). The FP is an integral part of a network of health care providers, and they are trained to collaborate as team members as well as team leaders (ROSSER, 2006).

The Realising the Potential of Primary Health Care report shows reviews of the provision of healthcare as they seek to draw lessons from the COVID-19 pandemic. PHC services are critical to making health systems more resilient to situations of crisis, more proactive in detecting early signs of epidemics, and more prepared to act earlier in response to surges in demand for services (OECD, 2020).

The current COVID-19 pandemic is unprecedented. Rose (2020) describes some important points about the need to review the education of future doctors in a global emergency scenario. The medical education environment is cross-generational, thus the culture of professionalism and altruism must be redefined taking into consideration the effects of potential actions (ROSE, 2020).

In Brazil, PHC healthcare as the coordinating force for care is still a distant reality. However, it is possible to list some of the possible contributions by FP to the development of PHC and the Unified National Health System (Sistema Único de Saúde - SUS). Consolidation and improvement of residencies in Family and Community Medicine were performed as an important increment in places since the implementation of More Doctors program (4,700 new places in the last three years); new legal framework for regulating interdisciplinary health work; core body of knowledge and practices characterized by person-centered care (COELHO NETO; ANTUNES; OLIVEIRA, 2019).

FP, CARE CONTINUITY, AND THE PHC SYNERGISTIC COMPONENTS

The FP is an integral part of a network of healthcare providers and they are trained to collaborate. It is important to implement programs aimed at financial investments in order to increase the number of these professionals, since such increase and the role of the FP are associated with a reduction in mortality (BASU *et al.,* 2019). Barbara Starfield (2005) indicated that primary care contributed to preventing illness and death, being associated with more equitable health distribution among populations. Therefore, the health-promoting value of primary care contributed a lot in the healthcare system (STARFIELD; SHI; MACINKO, 2005).

COVID-19 situation is rapidly changing, varying geographically, and affecting communities. Health policy often dictates clinical care protocols and helps physicians make evidence-based decisions about patient care. Kamerow (2020) described "Covid-19: Don't forget the impact on US family physicians" on dramatic changes in practice that emerged

very quickly, without much prior preparation, and even clear guidance has come from authorities (KAMEROW, 2020).

Recognition that PHC is an effective organizing element of health systems is evident and abundant in the scientific literature (GOODYEAR-SMITH; VAN WEEL, 2017). There must be adequate indicators to measure health-system strengthening to achieve the proposed Sustainable Development Goal 3: "ensure healthy lives and promote well-being for all at all ages" (KIDD *et al.,* 2015).

For that matter, PHC has three inter-related and synergistic components (WHO, 2018b): 1. Meeting people's health needs, 2. Systematically addressing the broader determinants of health, and 3. Empowering individuals, families, and communities to optimize their health. Additionally, by strengthening the community and peripheral health facility level, PHC contributes to building resilience, which is critical for withstanding shocks to the health system and ensuring the continued delivery of essential health services.

Kluge *et al* (2018) declared that investments in PHC are necessary for health systems to improve health outcomes. It is imperative the creation of health policies to operationalize the Declaration of Astana vision of PHC into complete plans and projects applicable to the specific context of each country based on the best available evidence (KLUGE *et al.,* 2018). In the Astana context, people should be given both the knowledge and skills necessary to maintain their health and increase control over it (JUNGO; ANKER; WILDISEN, 2020).

Increasingly, people want and expect to have some voice in planning health priorities as well as in how these priorities are implemented in their community. These components highlight the essential roles of people together with communities as active participants, through three broad, necessary expressions: as advocates for multisectoral policies that generate action for health; as co-developers of health and social services; as self-careers and caregivers (WHO, 2018b).

FP can contribute to the early detection of COVID-19 imports, prevention of subsequent transmission to risk areas, and encouragement of social distancing in local

communities. Social conditions affect the transmission of COVID-19 and the risk of serious complications (ROLLSTON; GALEA, 2020). Koplan et al defined global health: "an area for study, research, and practice that places a priority on improving health and achieving equity in health for all people worldwide" (KOPLAN *et al.,* 2009). FP is integral in addressing social determinants of health, as well as providing equitable care by advocating for marginalized and underserved populations (MARTIN *et al.,* 2018).

Adequate knowledge of effective PHC is increasingly based on teamwork. FP and health teams make a difference for the patient and their family, educating them so that they can have more autonomy in the care of their health and emphasis on health promotion. Primary care goes beyond services provided by primary care physicians to encompass other health professionals such as nurses, pharmacists, auxiliaries, and community health workers (WHO, 2018a). The health workforce is a key contributor to the performance and sustainability of the health system.

MEDICAL SCHOOL AND FAMILY PHYSICIANS: PRIMARY CARE CAREER CHOICE

The effect of COVID-19 on medical education could, therefore, be considerable. Epidemics and pandemics (eg, severe acute respiratory syndrome, H1N1 pandemic, Middle East respiratory syndrome, and Ebola) have highlighted the need to reinforce public health as human resources (eg, training in surveillance and epidemic response). As such, it is essential to prepare a robust system of PHC to provide quality responses to public emergencies.

The challenge for medical schools, in this scenario, is to properly consider all plausible alternatives and then choose the best ones to meet the population needs. Baker et al (2020) declared that governments, regulatory bodies, and medical schools have a responsibility to both current and future patients to ensure that our future doctors are sufficiently trained and supported to deliver essential patient care, even in crises (BAKER *et al.,* 2020).

It is necessary to develop training to ensure safe and quality service delivery at this level of health care. Meanwhile, the medical curriculum should be focused and responsive to local context and the populations served. In a recent publication by Le Floch *et al* (2019), as result of the skills and competencies needed in the practice of primary care, the participants mentioned the need for specific skills for diagnostic reasoning and for coping with uncertainty for communication and achieving a correct diagnosis (LE FLOCH *et al.,* 2019).

A fundamental strategy for people with COVID- 19 is given to an activity of primary care, such as access, the link between the service user and the health team, monitoring vulnerable families, following up on suspected and mild cases. This pandemic has become a serious threat to global health and continues to challenge healthcare systems, in particular PHC. A meta-analysis of Zhu *et al* (2020), with 55 unique retrospective studies involving 8697 patients with COVID-19, identified that the two major symptoms observed were fever (78.4%) and cough (58.3%). Other common symptoms included fatigue (34%), myalgia (21.9%), expectoration (23.7%), anorexia (22.9%), chest tightness (22.9%) and dyspnea (20.6%). Minor symptoms included nausea and vomiting (6.6%), diarrhea (8.2%), headache (11.3%), pharyngalgia (11.6%), shivering (15.2%) and rhinorrhea (7.3%) (ZHU *et al.,* 2020). The PHC addresses the main health problems in the community, providing preventive, curative, and rehabilitative services.

It is fundamental that there is reasoning, transformation and paradigm change in the implementation of policies to promote health aiming at population engagement and consequently, reducing the inequality in the access to quality service. Li & Zhu (2020) demonstrated that community engagement is the first line of defense in the battle against infectious diseases. Moreover, FP helps blocking the viral transmission in phase 1 by monitoring people at designated checkpoints, they also slow the increase of cases by treating patients and providing medical surveillance in the community in phase 2. In phase 3, they take care of the clinical and psychological well-being of patients and extend that to their families, so the whole community can return to normal life, as soon as possible (LI; ZHU, 2020). Greenhalgh *et al* (2020) address some guiding principles on how to choose between telephone and video appointments and how to conduct a "COVID query" consultation remotely (GREENHALGH; KOH; CAR, 2020).

The effects of coronavirus disease 2019 (COVID-19) may forever change how future physicians are educated. Using new media education, a crucial aspect presented at the European Health Forum, Gastein, Austria, on Oct 3–5, documented the need for new curricula, multi-professional settings, and more organizational support (THE LANCET, 2018).

PEDAGOGICAL PRACTICES AND TECHNOLOGY IN BRAZIL: INNOVATE IN THE CARE FOR COVID-19. WHERE ARE WE GOING?

In Brazil, Family Health Strategy (FHS) is still practiced predominantly in primary care in SUS and has become the proposed portal of entry into the system, and has now 42,000 basic health units, covering 72% of the country's territory (COELHO NETO; ANTUNES; OLIVEIRA, 2019). The FHS as a course, is a medical specialty that, in recent years, has invested in the consolidation of a core body of knowledge and practices characterized by person-centered care (rather than disease-centered), continuity, and management of individual and family treatment plans (COELHO NETO; ANTUNES; OLIVEIRA, 2019).

According to the editorial "The Astana Declaration: the future of primary health care?" many countries have a shortage of FP. Despite some innovations, such as new roles for nurses and pharmacists in primary care, it is necessary to offer more professional development and infrastructure support, including innovative technologies (THE LANCET, 2018). Community involvement, public participation, and health education are not new to the declaration, but empowerment and health literacy are now included, signaling a shift in our understanding of the public's role in PHC. The Astana declaration also involves patients by promoting the use of technological interventions, like digital health, which facilitate patient involvement and make medicine more patient-centered (JUNGO; ANKER; WILDISEN, 2020).

Innovation is a constant theme that runs throughout medical education to improve the teaching and learning experience for students. One of the ways to achieve this personalization of care can be through certain skills incorporated in the figure of the FHS

whose practice is anchored in the person-centered approach. This, in turn, points to the humanization and individualization of care provided to people in the process of becoming ill and contributes to effective PHC in the coordination of care (MARQUES, 2019).

Discussing teaching and learning strategy context is important to consider the environment in which students work, challenges affecting medical education as well as those affecting the wider community. In Brazil, given this social and public health demand, changes occur in medical training guided by the National Curriculum Guidelines. This training is contextualized in a pedagogical way through the Integration Teaching, Service, and Community Practices that explain the dynamics of the relationships between students, teachers, health professionals, and users of the public health system (PEIXOTO *et al.,* 2019). Home visits (HV) stood out as presenting the possibility for students to reflect on the social determinants of the health-disease process; develop communication skills; practice educational dialogue; practice linkages with the community; expand clinical reasoning; and contribute towards understanding to solve family problems (ROMANHOLI; CYRINO, 2012).

Although the recognition of the practice of health promotion in primary care is growing, the training of undergraduate students remains a challenge. However, there is much to be learned in times of pandemic that could be adapted for the future in higher education. It is uncertain whether students and trainees will reach all predefined competencies during and after the pandemic (AHMED; ALLAF; ELGHAZALY, 2020). For 10–15 years, medical faculties and training organizations have been implementing 'blended learning', using online training alongside traditional teaching activities. But many face-to-face activities remain, such as classroom teaching, small group sessions, skills training with or without simulated patients, and in clinical settings (ROSE, 2020). These activities are not always easy to replace, especially training in the authentic clinical workplace context.

Developing students' skills to enhance their learning with the use of technology should not be neglected. Effective learning using technology requires the many inter-related factors that include educators' experience, students' needs and previous experiences, available technology, learning content, instructional design to provide activities that enhance learning, and local context, including culture as well as available infrastructure resources (ZAHARIAS; POYLYMENAKOU, 2009). The alignment of these

important factors can be practically achieved by using a structured approach, such as the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) framework (PETERSON, 2003).

CONCLUSIONS

Notably, the Coronavirus disease 2019 emerged as a pandemic with no precedents in the past 100 years. And there were many deaths as infected people transmitted the virus worldwide. Seen this, it is quite important to the health system to predict risk groups and try to avoid them to get infected by the COVID-19. The PHC has a range of responsibilities at this challenge worldwide. Therefore, this service is the first place where patients should be surveyed and referenced to another level of medical evaluation when needed. Moreover, PHC must promote health through all the population registered at the health basic unit by making people aware about how the virus is transmitted and how they can avoid the infection during this pandemic. Also, one of the PHC principles is to prevent illness by health promotion, identifying COVID-19 symptoms precociously and establishing the necessary therapeutic strategy.

Therefore, the real importance of PHC can be seen by providing the population with knowledge about the COVID-19, preventing this infection, and identifying the symptoms to treat accordingly to the phase of the disease. Adding this, medical students have a great responsibility portion to promote health and prevent illness. So, the practice during the pandemic, as well as post-pandemic, will be a challenge not only due to the risk of being infected, but also because of the responsibility of having contact with the population to teach what the disease is like, its symptoms, and how to prevent it. Thus, we conclude that PHC, and all the team involved (family physician, nurse, community health worker, among others), is a health level with great responsibility during the pandemic, but also the health students inserted into those fields and with close contact to patients belonging or not to the risk group.

BIBLIOGRAPHIC REFERENCES

AHMED, H.; ALLAF, M.; ELGHAZALY, H. COVID-19 and medical education. **The Lancet Infectious Diseases**, v. 0, n. 0, 2020. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/32213335/ >. Acesso em 17de janeiro de 2021.

BAKER, D. M.; BHATIA, S.; BROWN, S.; CAMBRIDGE, W.; KAMARAJAH, S. K.; MCLEAN, K. A.; BRINDL, N.; LAPOLLA, P.; PÉREZ-AJATES, S.; RAUBENHEIMER, K.; XU, WILLIAM. Medical student involvement in the COVID-19 response. **The Lancet,** v. 395, p. 1254, 2020. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/32247322/>. Acesso em 17de janeiro de 2021.

BASU, S.; BERKOWITZ, S. A.; PHILLIPS, R. L.; BITTON, A.; LANDON, B. E.; PHILLIPS, R. S. Association of Primary Care Physician Supply with Population Mortality in the United States, 2005-2015. **JAMA Internal Medicine**, v. 179, n. 4, p. 506–514, abr. 2019. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/30776056/ >. Acesso em 17de fevereiro de 2021.

COELHO NETO, G. C.; ANTUNES, V. H.; OLIVEIRA, A. The practice of family and community medicine in Brazil: Context and perspectives. **Cadernos de Saude Publica**, v. 35, n. 1, 2019. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/30652813/ >. Acesso em 17de fevereiro de 2021.

COSTELLO, A. ABBAS, M.; ALLEN, A.; BALL, S.; BELL, S.; BELLAMY, R.; FRIEL, S.; GROCE, N.; JOHNSON, A.; KETT, M.; LEE, M.; LEVY, C.; MASLIN, M.; MCCOY, D.; MCGUIRE, B.; MONTGOMERY, H.; NAPIER, D.; PAGEL, C.; PATEL, J.; DE OLIVEIRA, J. A.; REDCLIFT, N.; REES, H.; ROGGER, D.; SCOTT, J.; STEPHENSON, J.; TWIGG, J.; WOLFF, J.; PATTERSON, C. Managing the health effects of climate change. Lancet and University College London Institute for Global Health Commission. **The Lancet**, v. 373, n. 9676, p. 1693–1733, maio 2009. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/19447250/ >. Acesso em 17de fevereiro de 2021.

GOODYEAR-SMITH, F.; VAN WEEL, C. Account for primary health care when indexing access and quality. **The Lancet Lancet Publishing Group**, v. 390, p. 205–6. jul. 2017. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/28528752/ >. Acesso em 20de fevereiro de 2021.

GREENHALGH, T.; KOH, G. C. H.; CAR, J. Covid-19: A remote assessment in primary care. **The BMJ**, v. 368, mar. 2020. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/32213507/ >. Acesso em 14 de fevereiro de 2021.

GRYTTEN, J.; SØRENSEN, R. J. Patient choice and access to primary physician services in Norway. Health Economics, **Policy and Law**, v. 4, n. 1, p. 11–27, 2009. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/19099615/ >. Acesso em 14 de fevereiro de 2021.

JUNGO, K. T.; ANKER, D.; WILDISEN, L. Astana declaration: a new pathway for primary health careInternational. **Journal of Public Health Springer**, p. 1–2, abr. 2020. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/32318780/ >. Acesso em 10 de fevereiro de 2021.

KAMEROW, D. Covid-19: Don't forget the impact on US family physicians. **The BMJ**,v. 268, mar. 2020. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/32217547/ >. Acesso em 10 de janeiro de 2021.

KIDD, M. R.; ANDERSON, M. I.; OBAZEE, E. M.; PRASAD, P. N.; PETTIGREW, L. M. The need for global primary care development indicators. **The Lancet**, v. 386, n. 9995, p. 737, ago. 2015. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/26333967/ >. Acesso em 05 de janeiro de 2021.

KLUGE, H.; KELLEY, E.; SWAMINATHAN, S.; YAMAMOTO, N.; FISSEHA, S.; THEODORAKIS, P. N.; KRISTENSEN, S.; ANDERSON, M.; MOSSIALOS, E. After Astana: building the economic case for increased investment in primary health care. **The Lancet**, v. 392, n. 10160, p. 2147–2152, nov. 2018. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/30420124/ >. Acesso em 07 de janeiro de 2021.

KOPLAN, J. P; BOND, T. C.; MERSON, M. H.; REDDY, K. S.; RODRIGUEZ, M. H.; SEWANKAMBO, N. K.; WASSERHEIT, J. N.; CONSORTIUM OF UNIVERSITIES FOR GLOBAL HEALTH EXECUTIVE BOARD. Towards a common definition

of global health. **The Lancet**, v. 373, n. 9679, p. 1993–1995, 2009. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/19493564/ >. Acesso em 30 de janeiro de 2021

LE FLOCH, B.; BASTIAENS, H.; LE RESTE, J. Y.; LINGNER, H.; HOFFMAN, R.; CZACHOWSKI, S.; ASSENOVA, R.; KOSKELA, T.H.; KLEMENC-KETIS, Z.; NABBE, P.; SOWINSKA, A.; MONTIER, T.; PEREMANS, L. Which positive factors give general practitioners job satisfaction and make general practice a rewarding career? A European multicentric qualitative research by the European general practice research network. **BMC Family Practice,** v. 20, n. 1, p. 96, ago. 2019. Disponível em: <https://bmcfampract.biomedcentral.com/articles/10.1186/s12875-019-0985-9 >. Acesso em 05 de janeiro de 2021

LI, D. K. T. Challenges and responsibilities of family doctors in the new global coronavirus outbreakFamily Medicine and Community Health. **BMJ Publishing Group**, fev. 2020. Disponível em: <https://pubmed.ncbi.nlm.nih.gov/32148740/ >. Acesso em 01 de fevereiro de 2021

LI, D. K. T.; ZHU, S. Contributions and challenges of general practitioners in China fighting against the novel coronavirus crisis. **Family Medicine and Community Health**, v. 8, n. 2, mar. 2020. Disponível em: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7103835/ >. Acesso em 01 de fevereiro de 2021

MARQUES, A. C. Do saber ao ser: reflexões sobre a formação do médico de família e comunidade em serviço territorial de base comunitária. **Revista Brasileira de Medicina de Família e Comunidade**, v. 14, n. 41, p. 1897, nov. 2019. Disponível em: < https://rbmfc.org.br/rbmfc/article/view/1897 >. Acesso em 20 de fevereiro de 2021

MARTIN, D.; MILLER. A. P.; QUESNEL-VALLÉE, A.; CARON, N. R.; VISSANDJÉE, B.; MARCHILDON, G. P. Canada's universal health-care system: achieving its potential. **The Lancet**, v. 391, n. 10131, p. 1718–1735, abr. 2018. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/26637305/ >. Acesso em 20 de fevereiro de 2021

MASH, R. ALMEIDA, M.; WONG, W. C.; KUMAR, R.; VON PRESSENTIN, K. B. The roles and training of primary care doctors: China, India, Brazil and South Africa. **Human Resources for Health**, v. 13, n. 1, dez. 2015. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/26637305/ >. Acesso em 05 de fevereiro de 2021

OECD. **Realising the Potential of Primary Health Care. Organization for Economic Cooperation and Development.** OECD Health Policy Studies. Paris. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/26637305/ >. Acesso em 11 de janeiro de 2021.

PARIKH, M. RAJENDRAN, I.; D'AMICO, S.; LUO, M.; GARDINER, P. Characteristics and Components of Medical Group Visits for Chronic Health Conditions: A Systematic Scoping Review. **Journal of Alternative and Complementary Medicine**, v. 25, n. 7, p. 683–698, jul. 2019. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/30945935/ >. Acesso em 10 de janeiro de 2021.

PEIXOTO, M. T.; JESUS, W. L. A.; CARVALHO, R. C. DE; ASSIS, M. M. A. Medical education in primary healthcare: A multiple-approach experience to teaching, service and community integration practices. **Interface: Communication, Health, Education**, v. 23, 2019. Disponível em: < https://doi.org/10.1590/Interface.170794 >. Acesso em 10 de janeiro de 2021.

PETERSON, C. Bringing ADDIE to Life: Instructional Design at Its Best. **Journal of Educational Multimedia and Hypermedia**, v. 12, n. 3, p. 227–241, 2003. Disponível em: < http://www.learntechlib.org/p/2074/ >. Acesso em 10 de janeiro de 2021.

POLAK, R.; SHANI, M.; DACEY, M.; TZUK-ONN, A.; DAGAN, I.; MALATSKEY, L. Family physicians prescribing lifestyle medicine: Feasibility of a national training programme. Postgraduate. **Medical Journal**, v. 92, n. 1088, p. 312–317, jun. 2016. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/26794133/ >. Acesso em 10 de março de 2021.

ROLLSTON, R.; GALEA, S. COVID-19 and the Social Determinants of Health. **American Journal of Health Promotion**, v. 34, n. 6, p. 687–689, jul. 2020. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/32551932/ >. Acesso em 11 de março de 2021.

ROMANHOLI, R. M. Z.; CYRINO, E. G. A visita domiciliar na formação de médicos: Da concepção ao desafio do fazer. **Interface: Communication, Health, Education**, v. 16, n. 42, p. 693–705, jul. 2012. Disponível em: < https://doi.org/10.1590/S1414-32832012000300009 >. Acesso em 24 de fevereiro de 2021.

ROSE, S. Medical Student Education in the Time of COVID-19. **JAMA**, mar. 2020. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/32232420/ >. Acesso em 24 de fevereiro de 2021.

ROSSER, W. Sustaining the 4 principles of family medicine in Canada**. Canadian family physician Medecin de famille canadien**, v. 52, n. 10, p. 1191–2, 1196–7, out. 2006. Disponível em: < https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1783599/ >. Acesso em 25 de janeiro de 2021.

STARFIELD, B.; SHI, L.; MACINKO, J. Contribution of primary care to health systems and health. **Milbank Quarterly**, v. 83, n. 3, p. 457–502, 2005. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/16202000/ >. Acesso em 15 de janeiro de 2021.

THE LANCET. The Astana Declaration: the future of primary health care? **The Lancet**, v. 392, n. 10156, p. 1369, out. 2018. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/30343840/ >. Acesso em 15 de janeiro de 2021.

WHO. **From Alma-Ata to Astana: Primary health care – reflecting on the past, transforming for the future (2018)**. Copenhagen, Denmark: World Health Organization, 2018a. Disponível em: <https://www.euro.who.int/en/health-topics/Health-systems/primary-health-care/publications/2018/from-alma-ata-to-astana-primary-health-care-reflecting-on-the-past,-transforming-for-the-future-2018>. Acesso em 25 de janeiro de 2021.

WHO. **A VISION FOR PRIMARY HEALTH CARE IN THE 21ST CENTURY.** Towards universal health coverage and the sustainable development goals. 2018. Disponível em: <https://apps.who.int/iris/handle/10665/328065. >. Acesso em 25 de janeiro de 2021.

WHO. **WHO Director-General's opening remarks at the Mission briefing on COVID-19** - 12 March 2020. Disponível em: <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-mission-briefing-on-covid-19---19-march-2020 >. Acesso em 25 de janeiro de 2021.

ZAHARIAS, P.; POYLYMENAKOU, A. Developing a usability evaluation method for e-learning applications: Beyond functional usability. **International Journal of Human-Computer Interaction**, v. 25, n. 1, p. 75–98, jan. 2009. Disponível em: < https://www.researchgate.net/publication/220302590_Developing_a_Usability_Evaluation_Method_for_e-Learning_Applications_Beyond_Functional_Usability >. Acesso em 15 de janeiro de 2021.

ZHU, J.; ZHONG, Z.; JI, P.; LI, H.; LI, B.; PANG, J.; ZHANG, J.; ZHAO, C. Clinicopathological characteristics of 8697 patients with COVID-19 in China: A meta-analysis. **Family Medicine and Community Health**, v. 8, n. 2, maio 2020. Disponível em: < https://pubmed.ncbi.nlm.nih.gov/32371463/ >. Acesso em 15 de janeiro de 2021.