Ben Yuk Fai Fong
William Chi Wai Wong *Editors*

Gaps and Actions in Health Improvement from Hong Kong and Beyond

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Foreword

Some 45 years ago, a globally shared dream of "health for all" was adopted in the Declaration of Alma-Ata. This ambitious book asks not only the question of why are we not yet there, but more importantly asks what else we have to do to get there. Along the way, the authors recognise the changing contexts, the evolving knowledge base and the lessons we have learned.

The adoption by world leaders of the 2030 Sustainable Development Agenda, and as part of the goal of Universal Health Coverage, reflects what the world has learned and how the world has changed. These updated global aspirations reflect our more recently articulated understanding of the social determinants of health as well as re-affirmation of primary health care as the foundation for good health and good health systems.

Our understanding of the social nature of ill-health and our own failings have been further reinforced by the COVID-19 pandemic. In all countries, we have seen existing health inequalities exacerbated, with the burden of ill-health falling on the disadvantaged or vulnerable population groups, since as the elderly, migrants or ethnic minorities, those in insecure employment. We have seen health activities and health care deferred, be it physical activity or non-communicable disease care. We have seen our gaps in health literacy and community engagement lead to vaccine hesitancy. We have come to recognise more clearly that there is no health without mental health. At the same time, we have seen digital health offers new possibilities for solving problems of access to care.

This volume offers insights about how the gaps in the health system can be filled and what it would take to ensure our actions for health improvement can be more successful. The book adopts both a life course approach to cover people across the life span as well as a continuum of care approach, ranging from primary prevention through structural interventions through to rehabilitation and palliation. There is focus on the macro-environment, such as cities, as well as micro settings, such as workplaces. The question of equity and the importance of culture and social environment are prominent before the reader.

I congratulate the editors for bringing together such a large partnership of authors and offering materials which are not only deeply relevant for Hong Kong and also holds lessons for the region and globally.

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Preface

The 1978 Alma-Ata Declaration of "Health For All by Year 2000" initiated by the World Health Organization mapped the road for primary health care as health is essential for all people and for human progress in terms of economic development and social justice. However, 45 years have gone and most societies and countries have yet achieved "health for all", despite so much has been changed in technology, disease pattern and population ageing in the world. It is timely to review what has been accomplished and identify the gaps in health improvements in the population. Everyone should work harder in promoting community health and improving service delivery. Development and implementation of "All for Health" strategies shall steer stakeholders in the right direction towards the amicable goals of universal health coverage. The book consists of four sections of review of "Health for All in 2000"; gaps and actions in Health Improvements; the All for Health Strategies; and Health in All Policies (HiAP). The chapters review and discuss the issues in a general coverage, illustrated by both Asian and international examples and research by the authors. Contributors are academics and practitioners from diversified professional backgrounds of medical, nursing, allied health, dietetics, social sciences, life sciences, education, business, administration and public policy. The contents serve as a reference to university studies in primary care, public health and related disciplines, and are also useful to policymakers, researchers, community and public health practitioners, health executives and interns.

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Ben Yuk Fai Fong
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Dr. William Chi Wai Wong is a Family Medicine Specialist as well as an educator and untiring advocate in Family Medicine and Primary Care. He has worked extensively in hospitals and local communities in the UK, Australia, China and Hong Kong for the last 25 years. In 2010, he joined the University of Hong Kong as Clinical Associate Professor, currently Chairperson & Chief of Research in the Department of Family Medicine and Primary Care with honorary consultant appointments in the Department of Family Medicine at HKU–Shenzhen Hospital and Hospital Authority of Hong Kong. A well-recognised world leader in Family Medicine, he is actively engaged with the WHO and WONCA—contributed to the Strategic and Technical Advisory Committee on HIV, Viral Hepatitis and Sexually Transmitted Infections as well as a number of WHO guidelines on HIV/ sexual health issues. He is the principal architect of the first *Primary Care Guideline on CHB Management in China (2021)* published by Chinese Medical Association. In 2014, he found the WONCA Health Equity Special Interest Group addressing the social dimension of health and ensuring equitable access to high-quality health services in primary care. With over 180 peer-reviewed publications, his contributions to research have led to international recognition with >60 invited lectures and as an editor of four academic/ general books on primary care.

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Part I
Review of "Health for all by 2000"

Chapter 1
Achievements in HFA2000 Since 1978

Carman K. M. Leung and Wang-Kin Chiu

Abstract Primary care is commonly considered the bottom layer of the healthcare system. In practice, it is the primary and first, as well as the continuing contact for people with healthcare providers who offer fundamental and comprehensive health and nursing care and interventions. Educational programmes are provided for the public to maintain health and prevent them from being ill. In 1978, the World Health Organization (WHO) and member countries declared "Health for all by the year 2000" (the HFA) in Alma-Ata, advocating that all citizens could not only reach the level of health defined by the WHO but also be economically productive in 2000. The project has been underway for more than four decades. While various governments have implemented a range of strategies and policies to accomplish the target, some have yielded substantial achievements. This chapter will discuss the HFA-related measurements in detail and review the achievements in various countries, as well as how to evaluate their performance and effectiveness for health improvement of the population.

Keywords Health for All · Primary health care · Health in All Policies · Water sanitation · Maternal and child health

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Background of Primary Health Care and Health for All Strategy

Primary health care (PHC) is a fundamental level of the healthcare system which provides a series of services including basic treatments and health education, to ensure people receive a high quality of comprehensive care (World Health Organization, 2021a). In the early years, there was no standard interpretation of the term PHC, so different norms exist in different countries (Donaldson et al., 1996; Kronenberg et al., 2017). Primary health care is defined by Starfield (1992) as "initial contact, accessibility, longitudinally, and comprehensiveness". McMurray and Clendon (2015) considered that PHC is a department that must collaborate with other departments, and physicians assist people in achieving health in a fair and equitable manner. Although the definition of PHC differs by nation, it is undeniable that it offers the community with holistic health care.

Until 1977, the 30th World Health Assembly advocated "Health for All by 2000" (HFA) as the key health target for governments and World Health Organization (WHO) in the future decades. In the following year, the World Health Organization and United Nations International Children's Emergency Fund (UNICEF) co-chaired the International Conference on Primary Health Care and issued the Alma-Ata Declaration (Declaration), which laid the framework for the development of primary health care. This declaration sets forth worldwide guidelines for the improvement and promotion of PHC (World Health Organization, 1978). It is made up of four dimensions and eight components. All of them enable countries to develop and implement primary healthcare measures from the beginning, such as disease prevention and control, mothers and children care, improving safe drinking water and basic sanitation facilities, or medical professionals providing diagnosis, treatment, and rehabilitation services, and to encourage research and development, technical support, and training through international exchange of information, gradually reaching the right to primary health care for all people (World Health Organization, 1978).

The strategy has been signed by a total of 134 member states and 67 international organisations. Given the inequities in health across countries, especially in developing countries, the declaration works to ensure and promote everybody's health as a fundamental human right and a universal social aim by the year 2000, so that everyone can live a socially and economically productive life without barriers to health (Fong et al., 2020; World Health Organization, 1978). Throughout the project, the World Health Organization performed frequent monitoring and evaluations of different nations to determine their performance (World Health Organization, 1993). Looking back, this strategy has been in place for over 40 years, and the aims of various elements of work have yielded specific outcomes in both developed and developing countries, allowing people to live healthier lives and receive better medical care.

Health in All Policies Since 1978

The spirit of Alma-Ata, encompassing the significance of efforts from different sectors for health promotion, was emphasised in the Ottawa Charter for Health Promotion (World Health Organization, 2012). The Ottawa conference was held in 1986 with over 200 participants, including various stakeholders such as politicians, academicians, health workers, and government representatives, coming from 38 countries to share and reflect on the experiences of health promotion, during which "healthy public policies" were identified as an important area for the promotion of health and well-being. The Alma-Ata Declaration in 1978 and the Ottawa Charter in 1986 formed the international roots for the principles of the "Health in All Policies" (HiAP) approach, emphasising the critical roles of sectors other than health in the achievement of health for all (Ståhl, 2018). According to the definition by WHO, Health in All Policies is an approach to systematically consider the health and health-system implications of decisions, with the objective of improving population health and health equity. Collectively, "Health in All Policies" is a term or slogan built on the rationale that health is influenced by a variety of factors beyond the direct control of the healthcare sector (Puska, 2007; World Health Organization, 2014). Examples include education, environments, and lifestyles, which are not only individual choices, but also in strong linkages with social, cultural, and economic determinants. In fact, these determinants are influenced not only by health services or health policies, but can also be affected positively or negatively by various policy areas and decisions made in other sectors. Based on the principles of Health in All Policies, the WHO global health promotion conferences continued the prior work initialised by the Alma-Ata Declaration to establish it as an approach for horizontal health policy on a global level.

The Finland Experience

The experience from Finland in the implementation of Health in All Policies has been reported (Ståhl, 2018). The Benchmarking System for Health Promotion Capacity Building has been introduced and utilised as a primary source of information for the progress monitoring and evaluation of Health in All Policies. While Health in All Policies was identified as an approach requiring long-term commitment and vision, the findings also suggested the importance of having data on health and health determinants, as well as analysing the linkages between health outcomes, health determinants, and policies across different areas, in order to achieve continuity and sustainability when implementing Health in All Policies and carrying out intersectoral work. In addition, the Finnish initiatives which involved different sectors and policies, such as nutrition interventions at the national level with policy changes in health, agriculture, and commerce sectors, have led to significant improvement in public health (Puska & Ståhl, 2010). Policy measures implemented in relation

to nutrition and public health included the introduction of comprehensive primary health care (health centres) in the 1970s for which the national public health law was designed with a major focus on prevention of diseases.

During the 1980s and 1990s, there had been legislations on salt labelling and contents. These measures were also in line with the global trend of increasing worldwide initiatives and interventions for reducing salt intake (Fong et al., 2021; Santos et al., 2021). Furthermore, during the 2000s, the Finnish initiatives also included the implementation of governmental policy programmes on healthy diet and physical activity. These efforts had led to intersectoral work in Finland which resulted in public health improvements and reduction in the mortality rate associated with cardiovascular diseases. For example, more than 90% of the population in the 1970s had the habit of using butter on bread while the percentage had dropped significantly to 5% in 2009 (Puska & Ståhl, 2010). The change was also accompanied with decreasing salt and fat intake, as well as increasing consumption of fruits and vegetables. The work in Finland not just brought about public health improvements, but also paved the way for the Health in All Policies programmes initiated in 2006 during the Finnish European Union (EU) presidency, with a policy-related strategy encompassing disease prevention and health promotion projects. The basic idea of considering health determinants influenced by different sectors such as education, environment, traffic, housing, and economy, are emphasised with an ultimate goal of improving evidence-based policymaking.

Community Engagement

Community involvement is a key component to achieving the goals of Health in All Policies. While healthy communities are essential to healthy living, promotion of good health and well-being in cities is complicated by the fact that they face unique challenges due to variations in economic bases, concentrated poverty, housing quality and resources, as well as exposure to different levels of environmental factors such as pollutions. Therefore, "healthy public policy", advocated by WHO since 1988, has been important for providing a broad framework to understand the factors contributing to both individual and population health while focusing on intersectoral work beyond the healthcare sector when making public policy. According to a recent survey, health officials of large cities identified "Health in All Policies" as a top priority (Hearne et al., 2015). In addition to Finland, since 2006, implementation of Health in All Policies has flourished in the United States (Wernham & Teutsch, 2015). Several major cities in the United States, including Seattle, Los Angeles, San Francisco, Boston, and Washington, have adopted the Health in All Policies approach and implemented programmes and activities focusing on health public policy. Moreover, a growing amount of research exploring the social, economic, and environmental influences on health and diseases further provides the rationales and paves the way for Health in All Policies. Examples of achievements include *Healthy People 2020* (Koh et al., 2014). For the first time, a broad set of indicators based

on different determinants such as availability of healthful food, income, as well as housing quality and affordability, has been included in establishing the targets and measures of federal government's 10-year national health improvement.

Training and Systems Thinking in HiAP

While Health in All Policies serves as a crucial framework for the promotion of public health and well-being, it should be noted that evidence-based guidelines for ethical policies are important for making effective policy decisions. Systematic efforts of experts with broad partnership are necessary for identifying and prioritising the items on the Health in All Policies agenda. Notably, implementation of intersectoral health policies is not easy. Improvement of health literacy of the public and policy-makers, supported with innovative uses of the media and technology, are essential for enhancing the understanding on health implications of policies (Ollila, 2011; Puska & Ståhl, 2010). Intersectoral collaborations are significant in the implementation of Health in All Policies. Therefore, Health in All Policies requires a multidisciplinary team for organisation and facilitation. Subject matter experts, professionals with scientific skills, communicators, teachers, researchers, academic and educational institutions are all having critical roles. It is noteworthy that the adoption of systems-thinking approaches is expected to facilitate college and community education for the promotion of population health and sustainable development (Chiu et al., 2022). Under these circumstances, new training programmes offering opportunities for intersectoral collaboration and education incorporated with a systems-thinking mindset are highly desirable for developing the essential skills.

Health in All Strategies

Safe Drinking Water and Basic Sanitation Facilities

Water is an extremely important substance for humans, based on the fact that the human body is about 70 percent composed of water. It promotes thermoregulation and serves as a transporter for nutrients to various parts of the body (Jéquier & Constant, 2010). Bodily functions cannot operate effectively if the body is dehydrated. Humans are unable to produce water and must obtain it from a variety of sources. Drinking water is the simplest method. Over seventy percent of water covers the surface of earth, however, less than three percent of freshwater resources are available, and most are brackish and undrinkable (Dinka, 2018; Youssef et al., 2014). As shown in a study that examined worldwide water consumption from the 1950s to the 1990s, it rose by around thrice. Water was more commonly spent in agriculture in the 1950s, while industrial and domestic water accounted for a minor proportion (Nishijima et al.,

2013). The demand for domestic water is rising as the world's population increases. Some countries with high levels of economic development, such as Saudi Arabia, the United States, and the United Arab Emirates, have begun to develop saltwater desalination technology to filter and purify seawater into domestic water in order to meet people's demand for fresh water (Islam et al., 2018).

It is a pity that some developing countries, such as South Africa, lack the required technologies to address the problem of water scarcity. As a result, they depend greatly on rainfall as a freshwater resource (Islam et al., 2018). Furthermore, as many countries' industries developed in the twentieth century, so their consumption of water rose (Nishijima et al., 2013). Simultaneously, a large amount of untreated sewage is dumped into the sea, which is one of the major causes of declining water quality (Flörke et al., 2013; Pandey, 2006). As a result of some developing countries' lack of sanitary facilities to improve water quality or the impact of climate change, they have the challenges accessing fresh drinking water (Pandey, 2006). Because of water contamination, humans do not have access to safe water for lengthy periods, less than half of the worldwide population had access to safe water or sanitation facilities (Nagpal & Radin, 2014). As a result of their usage of polluted water sources and shared sanitation facilities in filthy environments, people developed intestinal related diseases, like diarrhoea (Baker et al., 2016; Just et al., 2018).

Until 1978, one of the strategies in the HFA was to ensure that all people have access to safe water and basic sanitation (World Health Organization, 1978). They have implemented a battery of strategies to promote safe water and sanitation for more than a decade, including constructing water infrastructure, promoting health education, improving operation and maintenance, and enhancing international coordination and cooperation. Degree of accessibility is the most significant way for determining how many individuals have access to pure water resources. The proportion of families being accessible to sufficient water for drinking and disinfecting the immediate area around their homes is one measurement which was implemented (World Health Organization, 1981). According to the 1993 report, these actions enabled more than 1.5 billion people to have access to adequate and safe water sources, while nearly half of them also had acceptable sanitation (World Health Organization, 1993). Also, the Joint Monitoring Programme (JMP) on Water Supply, Sanitation, and Hygiene established by WHO and the UNICEF in 1990, has tracked progress towards global water and sanitation targets in which the major goal is to assist developing nations in developing national surveillance capabilities in order to inform regulators about the quality of the water and sanitation sector through annual reports (United Nations, 2015c). With just 61 percent of the world population having access to securely managed drinking water and less than 30 percent utilising safely managed sanitation services by 2000, the World Health Organization failed to reach the goal of providing safe water and basic sanitation to all according to the HFA's strategy (United Nations Children's Fund, & World Health Organization, 2019). Although HFA's strategy is no longer applicable, this goal is still being worked on because the United Nations General Assembly adopted the 2030 Agenda for Sustainable Development in 2015, which includes 17 Sustainable Development Goals (SDGs), the sixth of which is

"Clean Water and Sanitation", which not only aims to ensure safety water and sanitation for all human beings but also pay attention to the ecosystem, for example, water quality and wastewater (Sadoff et al., 2020; United Nations, 2015b).

Maternal and Child Health and Family Planning

Human development can be divided into five stages, each with its own set of nutritional requirements (Balasundaram & Avulakunta, 2021; Barnard, 2020). The nutritional status of young children is a significant consideration while analysing their physical growth and development (World Health Organization, 1981). Socioeconomic status is an indicator that measures their background, ability to obtain resources on a financial basis, and reputation in the community. Multiple research and articles consistently indicate that those in high socioeconomic status have fewer possibilities to be confronted with health risks. In contrast, those with lower socioeconomic status are more likely to suffer from diseases (Baker, 2014; Wang & Geng, 2019). One of the factors that impact health is dietary consumption. Low income is often correlated with poor dietary intake. They tend to buy relatively cheap yet nutritionally inadequate foods. Malnutrition among youngsters is the long-term consequence of insufficient consumption of healthy food. Developmental delays will occur concurrently (Anderson et al., 2021; Henry, 2019). Malnutrition is a major risk factor of heavy disease burden for populations in developing countries or third-world countries (Budzulak et al., 2022; Mullero, 2005). Sadly, the issue of malnutrition linked to poverty in developing countries is still existing and the major concern on population health is not yet resolved. Over 300,000 young children die each year as a result of malnutrition and lack of medical facilities (Mullero, 2005). The UN is still dedicated to improving the situation as it stands. Hence, they aim at zero hunger while attempting towards eliminating malnutrition as one of their Sustainable Development Goals (SDGs).

Indeed, one of the factors for the negative impact on health quality in developing countries is a lack of medical equipment. Women having pregnancy rates are significantly greater than in developed countries, due to their need for local children as a working population to support their families, as well as their poor levels of education and lack of contraception, which result in higher fertility rates (Nargund, 2009; World Health Organization, 1993). Unfortunately, despite their high fertility rate, the birth rate is low since over 99 percent of maternal fatalities occur in developing countries because many women have complications during pregnancy and birth with inadequate access to medical professionals (United Nations, 2008). Also, some pregnant women are treated only by people with no or little medical training during their pregnancy, and as a result, some of them suffer urinary tract infections, which can be harmful for pregnant women and newborns (Getaneh et al., 2021; World Health Organization, 1993).

The second WHO evaluation presented statistical data on prenatal care services delivered by trained personnel in both developing and developed countries between

1985 and 1991, following the release and implementation of the HFA strategy. The coverage rate in developing countries has increased from 50% to more than 60%. In developed countries, coverage had reached 99 percent (World Health Organization, 1993). An article discovered that women with higher education had later fertility rates in developed countries (Nargund, 2009). Some developing countries, such as Egypt, Guinea, and others, have implemented safe motherhood programmes and actions for pregnant women in order to improve maternal health services and increase knowledge about foetal care, based on the fact that improving mothers' education can improve birth rates, and reduce infant and child mortality (Cleland & Van Ginneken, 1988; Dursun et al., 2017; World Health Organization, 1993). An article has pointed out that the annual mortality rate for children under five fell below 10 million for the first time in 2006. It can be seen that education has a certain relationship with reducing child mortality (United Nations Children's Fund, 2007; Veneman, 2007).

Concluding Remarks

We cannot doubt that the HFA strategy had some positive impacts, especially in developing countries, notwithstanding the World Health Organization's failure to achieve the target of health for all in the year 2000. In order to improve medical care and living conditions and enable inhabitants to live with dignity, some governmental and non-governmental organisations have aided them. The task has not been completed while the HFA strategy has been successfully executed. Given the fact that 2 billion people would still lack safe drinking water until the year 2020, they may have to consume polluted water for their daily needs (World Health Organization, 2021b). The Sustainable Development Goals could be regarded as the HFA strategy's follow-up approach. A set of 17 measures to improve people's quality of life, the environment, and the economy were included in the "The 2030 Agenda for Sustainable Development" that the United Nations introduced in 2015. 193 United Nations member states at the time committed to achieve these aims. The UN Secretary General presents a report titled "SDG Progress Report" each year to evaluate the strategy's progression and effectiveness (United Nations, 2015a). As can be seen, the half-century primary objective for a better future for every life or economy on earth—remains the same irrespective of whether it is the HFA strategy or the SDGs.

References

Anderson, E., Wei, R., Liu, B., Plummer, R., Kelahan, H., Tamez, M., … & Mattei, J. (2021). Improving healthy food choices in low-income settings in the United States using behavioral economic-based adaptations to choice architecture. *Frontiers in Nutrition*, *8*, 734991. https://doi.org/10.3389/fnut.2021.734991

Baker, E. H. (2014). Socioeconomic status, definition. *The Wiley Blackwell Encyclopedia of Health, Illness, Behavior, and Society,* 2210–2214. https://doi.org/10.1002/9781118410868.wbehibs395

Baker, K. K., O'Reilly, C. E., Levine, M. M., Kotloff, K. L., Nataro, J. P., Ayers, T. L., ... & Mintz, E. D. (2016). Sanitation and hygiene-specific risk factors for moderate-to-severe diarrhea in young children in the global enteric multicenter study, 2007–2011: Case-control study. *PLoS Medicine*, *13*(5), Article e1002010. https://doi.org/10.1371/journal.pmed.1002010

Balasundaram, P., & Avulakunta, I. D. (2021). *Human growth and development*. In StatPearls. StatPearls Publishing, Treasure Island (FL); 2021. PMID: 33620844.

Barnard, N. D. (2020). *Nutritional requirements throughout the life cycle.* Nutrition Guide for Clinicians. https://nutritionguide.pcrm.org/nutritionguide/view/Nutrition_Guide_for_Clinicians/1342043/all/Nutritional_Requirements_throughout_the_Life_Cycle

Budzulak, J., Majewska, K. A., & Kędzia, A. (2022). Malnutrition as the cause of growth retardation among children in developed countries. *Annals of Agricultural and Environmental Medicine*, *29*(3), 336. https://doi.org/10.26444/aaem/148010

Cleland, J. G., & Van Ginneken, J. K. (1988). Maternal education and child survival in developing countries: The search for pathways of influence. *Social Science & Medicine, 27*(12), 1357–1368. https://doi.org/10.1016/0277-9536(88)90201-8

Chiu, W. K., Fong, B. Y., & Ho, W. Y. (2022). The importance of environmental sustainability for healthy ageing and the incorporation of systems thinking in education for a sustainable environment. *Asia Pacific Journal of Health Management*, *17*(1), 84–89. https://doi.org/10.24083/apjhm.v17i1.1589

Dinka, M. O. (2018). Safe drinking water: Concepts, benefits, principles and standards. In M. Glavan (Ed.), *Water challenges of an urbanizing world* (pp. 163–181). Intechopen. https://doi.org/10.5772/intechopen.71352

Donaldson, M. S., Yordy, K. D., Lohr, K. N., & Vanselow, N. A. (1996). *Primary care: America's health in a new era.* The National Academies Press. https://doi.org/10.17226/5152

Dursun, B., Cesur, R., & Kelly, I. R. (2017). The value of mandating maternal education in a developing country. *National Bureau of Economic Research Working Paper*. https://doi.org/10.3386/w23492

Flörke, M., Kynast, E., Bärlund, I., Eisner, S., Wimmer, F., & Alcamo, J. (2013). Domestic and industrial water uses of the past 60 years as a mirror of socio-economic development: A global simulation study. *Global Environmental Change, 23*(1), 144–156. https://doi.org/10.1016/j.gloenvcha.2012.10.018

Fong, B. Y. F., Chiu, W. K., Chan, W. F., & Lam, T. Y. (2021). A review study of a green diet and healthy ageing. *International Journal of Environmental Research and Public Health*, *18*(15), Article 8024. https://doi.org/10.3390/ijerph18158024

Fong, B. Y. F., Law, V. T. S., & Lee, A. (2020). *Primary care revisited: Interdisciplinary perspectives for a new era.* Springer. https://doi.org/10.1007/978-981-15-2521-6

Getaneh, T., Negesse, A., Dessie, G., Desta, M., & Tigabu, A. (2021). Prevalence of urinary tract infection and its associated factors among pregnant women in Ethiopia: A systematic review and meta-analysis. *BioMed Research International*, *2021*, Article 6551526. https://doi.org/10.1155/2021/6551526

Hearne, S., Castrucci, B. C., Leider, J. P., Rhoades, E. K., Russo, P., & Bass, V. (2015). The future of urban health: Needs, barriers, opportunities, and policy advancement at large urban health departments. *Journal of Public Health Management and Practice, 21*(1), S4–S13. https://doi.org/10.1097/PHH.0000000000000166

Henry, C. J. (2019). What children eat in developing countries: Diet in the etiology of undernutrition? *Nurturing a Healthy Generation of Children: Research Gaps and Opportunities, 91*, 43–53. https://doi.org/10.1159/000493693

Islam, M. S., Sultana, A., Saadat, A. H. M., Shammi, M., & Uddin, M. K. (2018). Desalination technologies for developing countries: A review. *Journal of Scientific Research, 10*(1), 77–97. https://doi.org/10.3329/jsr.v10i1.33179

Jéquier, E., & Constant, F. (2010). Water as an essential nutrient: The physiological basis of hydration. *European Journal of Clinical Nutrition, 64*(2), 115–123. https://doi.org/10.1038/ejcn.2009.111

Just, M. R., Carden, S. W., Li, S., Baker, K. K., Gambhir, M., & Fung, I. C. H. (2018). The impact of shared sanitation facilities on diarrheal diseases with and without an environmental reservoir: A modeling study. *Pathogens and Global Health, 112*(4), 195–202. https://doi.org/10.1080/20477724.2018.1478927

Koh, H. K., Blakey, C. R., & Roper, A. Y. (2014). Healthy People 2020: A report card on the health of the nation. *JAMA, 311*(24), 2475–2476. https://doi.org/10.1001/jama.2014.6446

Kronenberg, C., Doran, T., Goddard, M., Kendrick, T., Gilbody, S., Dare, C. R., Aylott, L., & Jacobs, R. (2017). Identifying primary care quality indicators for people with serious mental illness: A systematic review. *British Journal of General Practice, 67*(661), e519–e530. https://doi.org/10.3399/bjgp17X691721.

McMurray, A., & Clendon, J. (2015). *Community health and wellness: Primary health care in practice* (5th ed.). Churchill Livingstone/Elsevier.

Mullero, K. (2005). Malnutrition and health in developing countries. *Canadian Medical Association Journal, 173*(3), 279–286. https://doi.org/10.1503/cmaj.050342

Nagpal, T., & Radin, M. (2014). Water and sanitation for all. *The SAIS Review of International Affairs, 34*(2), 83–91. https://doi.org/10.1353/sais.2014.0029

Nargund, G. (2009). Declining birth rate in developed countries: A radical policy re-think is required. *Facts, Views & Vision in ObGyn, 1*(3), 191–193. https://fvvo.eu/assets/67/05-Nargund.pdf

Nishijima, S., Eckroad, S., Marian, A., Choi, K., Kim, W. S., Terai, M., … & Izumi, M. (2013). Superconductivity and the environment: A roadmap. *Superconductor Science and Technology*, *26*(11), Article 113001. https://doi.org/10.1088/0953-2048/26/11/113001

Ollila, E. (2011). Health in all policies: From rhetoric to action. *Scandinavian Journal of Public Health, 39*(6), 11–18. https://doi.org/10.1177/1403494810379895

Pandey, S. (2006). Water pollution and health. *Kathmandu University Medical Journal*, *4*(13), 128–134. http://www.kumj.com.np/issue/13/128-134.pdf

Puska, P. (2007). Health in all policies. *European Journal of Public Health, 17*(4), 328. https://doi.org/10.1093/eurpub/ckm048

Puska, P., & Ståhl, T. (2010). Health in all policies—the Finnish initiative: Background, principles, and current issues. *Annual Review of Public Health, 31*, 315–328. https://doi.org/10.1146/annurev.publhealth.012809.103658

Sadoff, C. W., Borgomeo, E., & Uhlenbrook, S. (2020). Rethinking water for SDG 6. *Nature Sustainability, 3*(5), 346–347. https://doi.org/10.1038/s41893-020-0530-9

Santos, J. A., Tekle, D., Rosewarne, E., Flexner, N., Cobb, L., Al-Jawaldeh, A., … & Trieu, K. (2021). A systematic review of salt reduction initiatives around the world: A midterm evaluation of progress towards the 2025 global non-communicable diseases salt reduction target. *Advances in Nutrition*, *12*(5), 1768-1780. https://doi.org/10.1093/advances/nmab008

Ståhl, T. (2018). Health in all policies: From rhetoric to implementation and evaluation—the finnish experience. *Scandinavian Journal of Public Health, 46*(20), 38–46. https://doi.org/10.1177/1403494817743895

Starfield, B. (1992). *Primary care: Concept, evaluation, and policy*. Oxford University Press.

United Nations. (2008, September 19). *Nearly all maternal deaths occur in developing countries, UNICEF report finds.* https://news.un.org/en/story/2008/09/273572-nearly-all-maternal-deaths-occur-developing-countries-unicef-report-finds

United Nations. (2015a). *The United Nations World water development report 2015a—Water for a sustainable world*. https://unesdoc.unesco.org/ark:/48223/pf0000231823

United Nations. (2015b). *Transforming our world: The 2030 agenda for sustainable development*. https://sdgs.un.org/2030agenda

United Nations. (2015c). *WHO/UNICEF Joint monitoring program for water supply and sanitation (JMP)—2015c Update.* https://washdata.org/sites/default/files/2022-03/jmp-2022-regional-snapshot-Africa.pdf

United Nations Children's Fund. (2007). *The state of the world's children 2008: Child survival*. https://www.unicef.org/media/84861/file/SOWC-2008.pdf

United Nations Children's Fund, & World Health Organization. (2019). *Progress on drinking water, sanitation and hygiene 2000–2017: Special focus on inequalities.* https://www.unicef.org/media/55276/file/Progress%20on%20drinking%20water,%20sanitation%20and%20hygiene%202019%20.pdf

Veneman, A. M. (2007). Education is key to reducing child mortality: The link between maternal health and education. *UN chronicle*, *44*(4), 33–34. https://doi.org/10.18356/8ba72cc6-en

Wang, J., & Geng, L. (2019). Effects of socioeconomic status on physical and psychological health: Lifestyle as a mediator. *International Journal of Environmental Research and Public Health, 16*(2), 281. https://doi.org/10.3390/ijerph16020281

Wernham, A., & Teutsch, S. M. (2015). Health in all policies for big cities. *Journal of Public Health Management and Practice, 21*(1), S56–S65. https://doi.org/10.1097/PHH.0000000000000130

World Health Organization. (1993). *Implementation of the global strategy for health for all by the year 2000, second evaluation: Eight report on the world health situation. v. 7, Western Pacific Region.* https://apps.who.int/iris/handle/10665/206943

World Health Organization. (1978). *Primary health care: Report of the International Conference on primary health care, Alma-Ata, USSR, 6–12 September 1978 / jointly sponsored by the World Health Organization and the United Nations Children's Fund*. https://apps.who.int/iris/handle/10665/39228

World Health Organization. (1981). *Development of indicators for monitoring progress towards health for all by the year 2000.* World Health Organization.

World Health Organization. (2012). *Ottawa charter for health promotion.* https://www.who.int/publications/i/item/ottawa-charter-for-health-promotion

World Health Organization. (2014). *Health in all policies: Helsinki statement. Framework for country action.* https://www.who.int/publications/i/item/9789241506908

World Health Organization. (2021a). *Primary health care: Overview*. https://www.who.int/health-topics/primary-health-care#tab=tab_1

World Health Organization. (2021b). *Progress on household drinking water, sanitation and hygiene 2000–2020: Five years into the SDGs.* https://www.who.int/publications/i/item/9789240030848

Youssef, P. G., Al-Dadah, R. K., & Mahmoud, S. M. (2014). Comparative analysis of desalination technologies. *Energy Procedia, 61*, 2604–2607. https://doi.org/10.1016/j.egypro.2014.12.258

Chapter 2
Implementation of Sustainable Development Goal 3 Since 2015

Tommy K. C. Ng

Abstract Health for all is a vital strategy that aims to close the health gaps within countries. People with lower socioeconomic status are more likely to have poorer health while those who are in the higher socioeconomic status have better health. Rural and urban populations have unequal healthcare utilisation, leading to health disparity in the community. It is important to minimise such gaps and inequity in any country to achieve the goal of health for all. The sustainable development goal (SDG) 3 aims to ensure healthy lives and promote well-being for all at all ages. Targets of SDG 3 set the objectives to improve and optimise the health in a country by reducing mortality rate of non-communicable diseases and achieving universal health coverage. The ultimate purpose of these targets is to attain health for all. This chapter will introduce SDG 3 and overview the impacts of implementation of SDG 3 in Demark, Hong Kong and South Africa. The impacts of implementation of SDG 3 targets will be evaluated by reviewing the literatures.

Keywords Sustainability Development Goal 3 · Health inequality · Health disparity · Universal health coverage

Introduction

Health is a fundamental human right for everyone in the world and it is directly related to the right of living a standard life and the right to attain standards of physical and mental health (McHale, 2010). Ensuring health for all people is a fundamental need around the world, irrespective of age, income level, race or gender. To achieve the concept of health for all, the United Nations had developed and adopted 17 Sustainable Development Goals (SDGs) with more than 165 targets in 2015 (United Nations, 2015). The SDGs pursue a world free of hunger or poverty, but should be achieved

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with equitable and universal access of education and healthcare, as well as affordable, clean, and sustainable energy, water and sanitation. The SDGs are accepted by and applicable to all member states of the United Nations, including developed and developing countries, and the targets are expected to be fully implemented by 2030, so SDGs can demonstrate an enormous impact to the world. Ensuring healthy lives and promoting well-being for all of all ages is the main objective of Sustainable Development Goal 3 (SDG 3) (World Health Organization, 2017). SDG 3 has thirteen targets with specific indicators in reducing the global maternal mortality ratio, ending the epidemics of AIDS, tuberculosis, and other communicable diseases, reducing mortality from non-communicable diseases, and achieving universal health coverage. Apart from targeting physical health, promoting mental health and well-being is one of the targets of SDG 3. To achieve the targets of SDG 3, it is suggested to reduce the maternal mortality, incidence of some communicable diseases, suicide mortality rate, mortality rate attributed to cardiovascular disease, cancer, diabetes or respiratory disease, and enhance the coverage of essential health services. This chapter reviews the implementation of SDG 3 in different countries and evaluate the effectiveness and impacts of implementation since 2015.

Implementation of SDG 3 in Different Countries and Cities

Denmark

Denmark, one of the Nordic countries, provides an easy and equal access to healthcare. The Danish healthcare system has become almost entirely tax-funded by renovating hospitals, reducing acute hospitals and expansion of outpatient care (Schmidt et al., 2019). Based on the targets of SDG 3, Denmark has developed the Danish indicators and suggestions to achieve the targets (Statistics Denmark and the 2030-Panel, 2020). To fight communicable diseases, the Danish indicators focus on the number of hospital-acquired infections and the proportion of deaths that can be attributed to influenza. Hospital-acquired infections are associated with extended hospital stays and increased morbidity and mortality (Condell et al., 2016). In 2017, the Central Unit for Infectious Hygiene in Denmark released the first National Infection Hygiene Guidelines on general precautions in the healthcare sector, for managing hospital-acquired infections (Central Enhed for Infektionshygiejne, 2017). The guidelines highlight the importance of infection control, including hand hygiene, handling of utensils, management of patient excretion and other general precautions. In addition, urinary tract infection is one of the most prevalent hospital-acquired infections in Denmark (Condell et al., 2016; Gregersen et al., 2021), and so the Central Unit for Infectious Hygiene published a guideline about prevention of urinary tract infection for healthcare professional in 2019 (Central Enhed for Infektionshygiejne, 2019). It demonstrates that national guidelines for the prevention and management of communicable diseases have attributed to achieving the targets of SDG 3.