Chapter 12
Human Discourses in Action: Community Health Workers’ Contribution to Health Security and Pandemic Preparedness

Moumita Mondal

Abstract Ensuring healthy lives and promoting well-being at all ages is essential to sustainable development. Health emergencies, such as the increasing frequency of different non-communicable and communicable diseases, like the COVID-19, pose a global risk and have shown the critical need for preparedness. Community health workers have traditionally been used to improve community health initiatives, manage the risk of infectious diseases, and fill the healthcare system gap by extending health services to the last people. They can act as community-level educators and mobilizers, contributing to surveillance, monitoring, and healthcare referral systems. The present study discusses why developing countries like India should utilize community health workers’ services to ensure the universal health of the Sustainable Development Goals-3, which seeks to improve community-level resilience against non-communicable and communicable diseases, notably the present pandemic.

Keywords Community health worker · COVID-19 · Pandemic · Universal health care system · SDG · Resilient

12.1 Introduction

A common proverb says, ‘health is wealth.’ However, millions have no access to basic health care facilities globally. Health should be considered as one of the fundamental rights of the human being. Health does not mean the absence of disease or frailty, but it is a state of complete physical, mental, and social well-being (Alma-Ata declaration 1978).¹ The promotion and protection of people’s health are essential to sustain economic and social development and contribute to a better quality of life and world

¹The Declaration of Alma-Ata was first international Conference on Primary Health Care which was held in Alma-Ata, USSR, 6–12 September 1978. Available under the URL: https://www.unicef.org/about/history/files/Alma_Ata_conference_1978_report.pdf. Accessed on 10 August 2020.
peace. Primary health care facilities are essential, especially in developing regions, for social justice attainment as part of development.

The declaration of Alma-Ata formally adopted primary health care (PHC) as the means for providing a comprehensive universal and affordable health care service for all countries (Hall and Taylor 2003). Primary health care services’ significant objectives are the prevention of illness and promoting good health among all. Primary health care addresses health care in the community, providing promotive, preventive, curative, rehabilitative services accordingly.

Safe, people-centered, and integrated health services are critical for moving toward universal health coverage. According to WHO, people-centered care should ensure reaching the last person with a basic healthcare facility. It includes attention to people’s health in their communities. Community health workers play a crucial role in shaping health policy and health services in remote areas. WHO supports countries in moving toward universal health coverage by improving their health service delivery system’s efficiency and effectiveness. Primary health care is an interface between the basic healthcare system and common people. In developing countries, a large group of people stays out of the healthcare system. They cannot access basic healthcare facilities. To reach the marginal group of people, the primary health care system is a useful tool.

A primary healthcare system is inclusive in nature and interconnected with different people, institutions, and actions. Scientifically sound primary health care systems ensure universal health care accessible to all in a community. Primary Health Care is an approach to health beyond the traditional health care system that focuses on ‘health equity producing’ social policy. Health is an integrated part of society. Primary health care helps to minimize the negative impact of social inequalities on health.

Primary Health Care System cannot achieve its full potentiality without the participation of Community Health Workers (CHWs). Communities in remote areas may have difficulties in accessing basic health services. This problem is more in low-income countries where improvised governance, lack of accountability in the health-care system, and poor healthcare accessibility are general features. Recruitment of health workers from the community may ease the accessibility of the community. So, a well-structured health system with a strong workforce is crucial to improve primary health care. A large number of Community Health Workers with shorter training can be transformed into human resources. They can provide a wide range of health-related services and assistance to the community by creating a bridge between the health service system and communities. The formal health system supports the CHWs with their shorter training period than professional health workers. So, they can be called the instant and super flexible health workforce, which can be stretched out at emergency times.

Disease patterns have been changing due to the changing environment and lifestyle. Moreover, premature death has increased due to the increase of communicable and non-communicable diseases (Global status report on non-communicable diseases, 2010). Non-communicable diseases (NCDs), such as heart disease, stroke, cancer, chronic respiratory diseases, and diabetes, are the leading cause of mortality in
the world. These non-communicable diseases are mostly overlooked in low-income countries (Gowshall and Taylor-Robinson 2018). The number of patients with these NCDs is increasing in those countries at an alarming rate. These NCDs are taking the form of an invisible epidemic that passively influences the vicious cycle of poverty in underdeveloped countries. Non-communicable diseases need long-term care and support from the healthcare system. An organized and robust primary health care integrated with secondary and tertiary care levels may reduce diseases’ burden. Community health workers can be recruited to monitor and monitor non-communicable diseases so that emergency cases can be referred to as the next level of care. Surveillance and record-keeping of the diseased people help countries have the information they need to fight epidemics. They are fundamental pillars of public health.

Community health workers are known as different names in different countries; in India, they are known as ASHA (Accredited Social Health Activist), family welfare assistant (FWA) in Bangladesh. They shoulder the implementation of the government’s health-related policies at the ground level. Their persistent efforts have helped to run universal vaccination successfully and improve mother and child health in developing countries. They are also prime health workers in different health-related programs, e.g., malaria and dengue eradication programs, TB eradication programs, diarrhea eradication programs, etc. In this global pandemic situation, community health workers have been working tirelessly as frontline workers. The workers visit houses and advice symptomatic patients to stay isolated and check their status every day. Ground-level surveillance has become possible for this workforce.

The pandemic has put the most prominent question before the policymakers while they will start to rethink health structure. Health-related disasters are comparatively undermined in international dialogue. Disaster and ‘disaster risk,’ which are unexpected events implying serious health, economic, and political threats, pose challenges to any country’s development process. It requires special consideration and management skills beyond routine procedures to minimize the country’s negative impact on Gross Domestic Production (GDP). Large-scale communicable diseases outbreak (like the present COVID-19 pandemic) represent such a disaster (Boyce and Katz 2019). Importantly, these communicable disease outbreaks are frequent, and this is usual. So global leaders need to rethink resilience building against those diseases. A huge trained workforce is urgently needed to cope up with the situation. Community health workers can be deployed for that purpose. On the other hand, growing numbers of non-communicable diseases are subjects of significant concern worldwide. Children also have a greater likelihood of facing fatalities from non-communicable diseases (such as rheumatic heart disease, type-1 diabetes, asthma, etc.) if comprehensive care for disease prevention is not provided. According to WHO’s projection, the total annual number of deaths from non-communicable diseases will increase to 55 million by 2030 if no intervention occurs against these diseases (Global status report on non-communicable diseases, 2010).

The Alma-Ata declaration (1978), for the first time, considered the importance of the community health workers for ‘universal health coverage’ achievement. The Alma-Ata declaration is committed to achieving comprehensive primary health care
and emphasizes CHWs as the cornerstone of this effort. The conference recommended that the governments prioritize the full utilization of human resources by defining the technical role, supportive skills, and attitudes required for each category of health workers according to the functions that need to be carried out to ensure effective primary health care. They should be trained and retrained based on the area’s problem as they can play a more significant role in providing primary health care. Primary health care is to be most effective if it employs means that are understood and accepted by the community and applied by the community health workers at a cost the community and the country can afford.

Health did not get important in disaster risk reduction-related conferences until Sendai Framework for Disaster Risk Reduction (SFDRR 2015) was held. The need to focus more on people’s health and livelihoods gave birth to Sendai Framework for Disaster Risk Reduction (Opemo 2020). The Hyogo Framework (2005–2015) recommended integrating disaster risk reduction into the health sector and emphasized on hospital-centric treatment systems. Community people’s engagement in the health system was not mentioned there. The Sendai Framework has encouraged the national health system’s resilience building by integrating disaster risk management into primary, secondary, and tertiary health care at the local level. The Sendai Framework (2015) emphasized promoting and training the community health group in disaster risk reduction approaches in health programs. Health is a fundamental resource that enables the human being to cope with an adverse environment. Basic preparedness in health structure can reduce the intensity of the outbreak effectively. Risk is always associated with disasters, so resilience capacity building is important to minimize the risk. A disaster such as a pandemic causes illness of a large number of people within a shorter time that causes an acute shortage of human resources and tremendous pressure on health institutions to serve the patients. Resilience building against the epidemics or pandemic is possible by scientific perspective with a humanitarian approach.

The 2030 agenda for sustainable development goals was aimed to end poverty and lead the world toward prosperity and opportunity. Sustainable development goals talk about equality and responsibilities over the environment, economy, and society beyond the border. Discrimination, in terms of resource distribution, is a major hindrance to sustainable development goals. Billions of people worldwide shared

---

2Sendai Framework for Disaster Risk Reduction is an international document which was adopted by UN member states between 14 and 18 March 2015 at the world conference on Disaster Risk Reduction held in Sendai, Japan. Available under the URL: https://www.preventionweb.net/files/43291_sendaiframeworkfordrr.pdf. Accessed on 15 July 2020.

3Global Action Plan for The Prevention and Control of Noncommunicable Diseases (2013–2020). Available under the URL: https://apps.who.int/iris/bitstream/handle/10665/94384/9789241506236_eng.pdf?jsessionid=933C6568A5B68EE1CDF7348590B19ABE?sequence=1. Accessed on 10 September 2020.

4UN system task team on the post—2015 UN Development Agenda; (review of the contribution of the MDG Agenda to foster development: Lessons for the post—2015 UN development agenda); March 2012. Available under the URL: https://sustainabledevelopment.un.org/content/documents/843taskteam.pdf. Accessed on 31 August 2020.
their hope for a better future. For a better future, 17 goals were adopted by the global leaders in 2015. The third goal of SDGs ensures healthy lives and promotes well-being for all ages. Target 3.8 of Sustainable Development Goals (SDGs 2015) speaks for ‘universal health coverage’ and ‘health security’ and encourages to build up a strong health workforce, especially for developing nations. World nations must need to ensure public health at an affordable cost to achieve the targets. Financial crises associated with weak health systems jeopardize other SDGs (Mackey et al. 2018). Health is essential for achieving other goals, such as poverty and hunger eradication, inclusive and sustainable economic growth. Indeed, many of the goals are interrelated with health. Outbreaks of any kind of epidemic or pandemic may challenge the achievement of the goals. Development is a continuous and inclusive process. Any uncertainty may slow down the process of development.  

12.2 Pandemic and Health: Communicable Disease and Non-communicable Diseases

The pandemic is an extraordinary situation, while the fast-spreading of diseases occurs across a wide geographic area over a shorter period. Pandemic affects society, economy, and the polity of the region negatively. A considerable number of people also get affected at the time of the pandemic. It is basically a ‘health emergency’ when special attention in health care is required to overcome the situation. But a healthcare system without prior preparedness cannot be able to handle the pandemic situation. Most of the time, pandemic concepts are associated with communicable or very fast-spreading diseases. On the contrary, non-communicable diseases which are non-infectious in nature but alarming levels of these disease occurrences are a matter of concern nowadays.

‘Communicable diseases’ are caused by microorganisms (e.g., viruses, bacteria, parasites, etc.) that quickly spread from one person to another through the air, water, blood, or contaminated fomites, etc. (WHO, Regional Office for Africa 2020). Sometimes insects play an important role in the transmission of these diseases (WHO, Regional Office for Africa 2020). Surveillance and immediately reporting of cases are important in communicable disease management as communicable diseases take the form of pandemic quickly, if not managed properly. Sustainable development goal-3, specifically target 3.3, concerns infectious diseases. A large number of people from low-income and lower-middle-income countries are suffering from diseases like AIDS, tuberculosis, malaria, and neglected tropical diseases and waterborne diseases, including other communicable diseases. Collectively, these diseases accounted for an estimated 4.3 million deaths in 2016.  

---

5See: Sustainable Development Goals were adopted by UNGA on 25 September 2015; UNO. Available under the URL: https://sdgs.un.org. Accessed on 15 July 2020.

6For details, view the World Health Statistics 2019, Available under the URL: https://apps.who.int/iris/bitstream/handle/10665/324835/9789241565707-eng.pdf. Accessed on 24 September 2020.
Now we are living in the era of globalization when integration and free movement has increased. We need to depend on and interconnect with each other for daily livings. An uninterrupted movement of people and goods among different regions, high population density due to urbanization, and the exploitation of natural resources increase the transmission of communicable diseases. Hygienic practices and precautionary measures can check communicable disease transmission only.

On the other hand, non-communicable diseases proliferate, especially in developing countries, due to changing lifestyles and environments. The burden of non-communicable diseases results in the backwardness of socio-economic conditions in those countries (Global status report on non-communicable diseases, 2010). People are compelled to expense more for health care instead of better lives. High expenditure for non-communicable diseases’ treatment is considered as a threat to poverty reduction efforts in developing nations. Unless serious action is taken to address these diseases timely, the burden of non-communicable diseases (NCDs) will reach the levels beyond all stakeholders’ capacity to manage.

Non-communicable diseases (NCDs), such as cardiovascular diseases, cancer, diabetes, and chronic respiratory diseases, are the leading global causes of death and are responsible for just over 70% of death worldwide. These non-communicable diseases (NCDs) share key modifiable behavioural risk factors like consumption of tobacco and alcohol, unhealthy diet (a diet high in saturated fat and trans fat, low intake of fruits and vegetables), and physical inactivity, leading to overweight and obesity, high blood pressure, and ultimately disease (Non-communicable diseases progress monitor 2020) (see Footnote 8). They continue to be an important public health challenge in all countries, including low- and middle-income countries where more than three-quarters of NCD deaths occur.

The magnitude of the epidemic due to non-communicable diseases has been rising in recent times though the diseases are preventable to a great extent. Surveillance and preventable measures against these diseases are essential components in health care to reverse these diseases’ advances. NCD risk factors are spread throughout society, and they often begin early in life and continue through adulthood. Both prevention and treatment interventions are necessary to decline the rate of NCDs cases (Global status report on non-communicable diseases, 2010). Achievement of this goal is also possible for low-income countries through the primary health care system reform. Improvement in health care system performance should be implemented to improve NCD control outcomes. As increasing NCDs tends to impact the development process of developing countries negatively; therefore, those countries should prioritize NCDs prevention and control efforts. Community health workers can be deployed in surveillance and primary treatment intervention of NCD patients.

---

7Global status report on noncommunicable diseases 2010. Available under the URL: https://apps.who.int/iris/bitstream/handle/10665/44579/9789240686458_eng.pdf?sequence=1. Accessed on 19 September 2020.

8Noncommunicable diseases progress monitor 2020. Available under the URL: https://www.who.int/publications/i/item/ncd-progress-monitor-2020. Accessed on 24 September 2020.
12.3 Pandemic and Community Health Worker

Pandemic is an emergency health situation, while a significant proportion of the population gets affected over a wide geographical area. Suddenly demand for healthcare workers increases due to pandemic as the number of patients hikes in a shorter period. We have seen that most advanced countries in the healthcare system also have disrupted due to the outbreak of COVID-19. So for developing countries, it is a difficult challenge. There is always a considerable deficit in the actual demand and availability of trained health workers in developing countries. It becomes more challenging to cope with the situation for low-income countries at the time of outbreaks.

Pandemic affects the health workers not only physically but also psychologically. They get frequent contact with the infected persons that raises their vulnerability to communicable diseases. The shortage of healthcare equipment and trained health workers creates tremendous work pressure on the existing workforce that causes physical as well as psychological stress on them.

In most countries, most physicians and pharmacists in the health workforce are male, while female health workers dominate in the nursing and midwifery workforce. The Labour Force Surveys (LFS) data from 57 countries confirm this trend (Fig. 12.1). Women’s representation in the health workforce has increased in developing countries, too, as the primary health system has been fueled up through community health workers recruitment in those countries. In most countries, including the Indian subcontinent, community health workers are basically all women’s health workforce. In pandemic situations, they face biases and violence in their work field as well as in domestic spaces. The community health workers are deployed to field visits where they often get assaulted by the locals. On the other side, they also face social restrictions from their neighbors (sometimes from inside the family) as they have a higher chance of infection during field visits.

Community Health Workers deliver essential preventive, promotive, and limited curative primary health care services to the community normally. However, at the pandemic, they are tasked to perform several activities related to the health crisis and their mandated works. Amidst this pandemic, they have ensured expecting and new mothers and child health in India (Boniol et al. 2019).

Communicable diseases can result in pandemic very quickly. So, early awareness creation and contact tracing are important to prevent the spread of diseases. If information spreads faster than the disease, then pandemic may be prevented. We live in a time when misinformation and lack of understanding can have devastating consequences in low-income communities. Here community health workers experience connecting people and spreading information are very much useful. The community health workers are able to influence community through sharing insights and field experiences with local decision-makers, providing advice and helping people to access primary health care services (Kane et al. 2016).

---

9View details at: https://www.who.int/mediacentre/news/releases/2013/health-workforce-shortage/en/. Accessed on 30 July 2020.
Developing nations are struggling to mitigate the basic needs of their people. Awareness of sanitation and hygienic practices are rare in those countries. However, these are fundamental requirements to battle against communicable diseases. So, to educate the people, community health workers may play an important role. They serve like community messengers who inform locals about where to access for Covid-19 testing in this pandemic or health services or vaccination, etc. Their outreach skill is very useful for contact tracing in the pandemic time.

Outbreaks cannot be prevented from occurring, but they can be instrumental in more quickly containing these health threats by reporting sentinel cases. It is estimated that up to $750 million economic losses per year could be avoided through CHW scale-up, considering community health workers’ potential capabilities in containing public health emergencies (Dahn et al. 2015). The SFDRR has recommended public and private investment in training the community health workers to mitigate disease outbreaks risk.

So, an emerging consensus among global health leaders is that building stronger health delivery systems, with special emphasis on community-based primary health care, will be required in the future to ensure adequate preparedness against future epidemics and universal health coverage (Dahn et al. 2015). Community health workers should be integrated with the existing health system infrastructure for better functioning.
World Health Organization organized the Global Conference on Primary Health Care in Astana, Kazakhstan, in October 2018. The conference endorsed a new declaration emphasizing the crucial functions of primary health care around the world (Global Conference on Primary Health Care, 25–26 October 2018, Astana, Kazakhstan). It aims to refocus efforts on primary health care to ensure that everyone can enjoy the highest possible attainable standard of health. Community health workers were recognized as vital to achieving that goal.

12.4 Importance of Health in Sustainable Development Goals

Sustainable Development Goals were adopted on 25 September 2015 by the UN General Assembly, where 17 goals and 169 associated targets were taken for a better and more sustainable future (Table 12.1). We cannot aim to achieve just one goal as they are all interconnected. There must be an integration in their achievement to transform the world. These goals are aimed to be achieved by 2030 and need multi-stakeholder involvement for implementation.\(^\text{10}\) For that, an integrated insight is essential for holistic progress in multiple goals. It aims to end inequality in resource distribution and establish justice and a sustainable environment in both developed and developing countries.

Health is closely linked to the other 16 goals of sustainable development, and is dependent on the their achievements (Bueno de Mesquita et al. 2018). Sustainable development goal 3 speaks to ensure healthy lives and promote well-being for all ages, including the commitment to ending the epidemics of AIDS, TB, Malaria, and other communicable diseases by 2030. More specifically, to achieve targets 3.1 and 3.2, the security of essential nutrients, safe drinking water, affordable, effective medicines, and universal vaccination is required for all.\(^\text{11}\) To fight against communicable and non-communicable diseases, the spread of awareness is important, and it is possible through education, empowerment, and collaboration at different levels only. The member states must ensure access to health services by introducing affordable essential medicine and vaccine for all and providing protection against catastrophic health expenditure to achieve target 3.8 of sustainable development goals.

Obstacles in management and financial hardships are generally associated with weak health systems. Inadequate financing mechanisms intensify inequities and injustice in health, which ultimately jeopardizes the achievement of other SDGs. For instance, according to the Global Status Report on non-communicable diseases 2010, almost 100 million people have pushed into poverty annually because of catastrophic health expenditure. More than half of the world’s population is hardly able to access essential health services. Globally increasing non-communicable diseases

\(^\text{10}\) Available at the URL: [https://sustainabledevelopment.un.org/partnerships/about.](https://sustainabledevelopment.un.org/partnerships/about)

\(^\text{11}\) Available under the URL: [https://www.who.int/sdg/targets/en/.](https://www.who.int/sdg/targets/en/) Accessed on 30 September 2020.
### Table 12.1 A glimpse on the Sustainable Development Goals

| Goal | Description |
|------|-------------|
| 1    | End poverty in all its forms everywhere |
| 2    | End hunger, achieve food security and improved nutrition, and promote sustainable agriculture |
| 3    | Ensure healthy lives and promote well-being for all at all ages |
| 4    | Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all |
| 5    | Achieve gender equality and empower all women and girls |
| 6    | Ensure availability and sustainable management of water and sanitation for all |
| 7    | Ensure access to affordable, reliable, sustainable, and modern energy for all |
| 8    | Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all |
| 9    | Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation |
| 10   | Reduce inequality within and among countries |
| 11   | Make cities and human settlements inclusive, safe, resilient, and sustainable |
| 12   | Ensure sustainable consumption and production patterns |
| 13   | Take urgent action to combat climate change and its impacts |
| 14   | Conserve and sustainably use the oceans, seas, and marine resources for sustainable development |
| 15   | Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss |
| 16   | Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels |
| 17   | Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development |

**Source** UNDP’s sustainable development report (2019)

which need long-term treatment and high medication costs result in a catastrophic expenditure.

Therefore, universal health coverage could contribute to achieving the SDGs by producing equitable and sustainable health outcomes. Gaps in promising governance compound many health disparities between people with different socioeconomic statuses. For instance, poor people are more vulnerable to access to health services, medication, and information. Corruption in the system enhances their vulnerability. In addition, factors such as ethnicity, gender, age, disability, and location can further exacerbate these health disparities. Hence, it is essential for tracking indicators that measure the health of vulnerable groups. Monitoring the status of equitable access to health care could also illuminate the status of human rights and social equality within the states. Those people not receiving adequate health services are probably also disadvantaged in other social aspects. A better understanding of factors contributing to access to health services will help shape policies to attain SDG-3 and
support the achievement of other SDGs such as attaining gender equality, reducing poverty, and improving education (Table 12.2).

Some health-related targets outside of the SDG-3, which are equally essential to ensure healthy lives and promote well-being for all, are mentioned below:

- **Target 2.2**: ending of all forms of malnutrition and ensure the nutrition needs of adolescent girls, pregnant and lactating women, and older persons.
- **Target 6.1**: ensure universal and equitable access to safe and affordable drinking water for everyone
- **Target 6.2**: ending of open defecation and ensure access to adequate and equitable sanitation and hygiene for everyone
- **Target 11.6**: reduction of the adverse per capita environmental impact of cities.

| Table 12.2 Sustainable Development Goal 3 and associated targets |
|---------------------------------------------------------------|
| Goal 3. Ensure healthy lives and promote well-being for all at all ages by 2030 |

- **3.1** Reduction of the global maternal mortality ratio to less than 70 per 100,000 live births
- **3.2** End preventable deaths of newborns and children under 5 years of age. It aims to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births
- **3.3** End the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
- **3.4** Reduce by one-third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being
- **3.5** Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol
- **3.6** Halve the number of global deaths and injuries from road traffic accidents
- **3.7** Ensure universal access to sexual and reproductive healthcare services, including for family planning, information and education, and the integration of reproductive health into national strategies and programs
- **3.8** Achieve universal health coverage, including financial risk protection, access to quality essential healthcare services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all
- **3.9** Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination
- **3.a** Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries
- **3.b** Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health
- **3.c** Substantially increase health financing and the recruitment, development, training, and retention of the health workforce in developing countries
- **3.d** Strengthen the early warning and risk reduction capacity of all countries, particularly in developing nations for management of national and global health risks

*Source* UNDP’s sustainable development report (2019)
• **Target 13.1**: strengthen resilience and adaptive capacity to increasing climate-related hazards and natural disasters in all countries

• **Target 16.1**: reduction in violence and related death rates across the globe

### 12.5 Community Health Workers in Achievements of Sustainable Development Goals

The task force of community health workers has played a significant role in reducing maternal and child mortality rates in different developing countries, including India. A successful universal vaccination program, implemented by the community health workers, helped India to be a polio-free nation (How India Managed to Defeat Polio, BBC NEWS, 13 January 2014). As they are part of the community, they have an easy reach to the community, which can be useful for universal health coverage. Basic rights of health for the remotest people can be ensured by community health workers’ engagement as well as they can assist trained nurses and doctors at the time of health emergencies.

In India, more than 0.9 million ASHA workers have been designated to assist with the healthcare system as frontline warriors (Jain D. 2020). They reach up to the grassroot level of society with healthcare services. Several states have tasked ASHA workers to visit door to door, collect information about recent travel history of people and support home quarantine as per requirement. ASHAs are also involved in promoting safe practices among the community, e.g., frequent handwashing, maintaining social distancing, practicing good respiratory hygiene, etc. (Jain 2020).

This pandemic is a reminder that the hospital-centered health structure is fragile before communicable diseases. Policymakers have to rethink in different ways for the next pandemic preparedness. Institution-based treatments are not adequate due to limited beds and must be replaced by community-centered care (Nacoti et al. 2020). Treatment at the time of pandemic is required for the entire population. So those patients who could not access or did not get a chance to admit in the bed will be deprived of their right to health. It is against the concept of universal health coverage.

On the other hand, hospitals become the hotspot of communicable diseases as infected patients rapidly populate them. It causes transmission of disease to uninfected persons. This kind of disaster could be averted only by a massive deployment of outreach services of health care, which is only possible by implementing community-centered health care services. Home care and mobile clinics also avoid unnecessary movements and relax pressure from hospitals (Nacoti et al. 2020).

For nurses and doctors, it is hardly possible to provide services outside of institutions. And most of the developing nations are suffering from a shortage of doctors and nurses. So, in this context, community health workers can be the most useful human resources as they can visit each household in their area. They can provide home-based clinical care by providing early medicines according to symptoms of patients. A broad surveillance system can be created with the community health workers and local people (Nacoti et al. 2020). This approach limits hospitalization, thereby
decreasing contagion, and protecting patients and health care workers (Nacoti et al. 2020).

WHO has declared deep concern about the spread and severity of the Corona Pandemic at the present time and about the alarming infection level. Strong actions are taken by countries to slow down the infection rate. However, it is difficult to believe that people will follow the health instructions and cooperate with officials to break the disease chain in developing countries like India. So, despite 68 days of lockdown and 3 months unlock period with regulations, total cases and death toll raised more than 3.5 million and more than 62 thousand, respectively, at the end of August in India. The health system has just collapsed. Now leaders are also suggesting home-based care for mildly ill Covid-19 patients.

12.6 Health-Related SDGs Achievement and Pandemic

Universal access to good quality health care services for good health and well-being without facing financial hardship got priority in Sustainable Development Goals, 2015. Before the pandemic started, uneven progress was there. However, the pandemic has disrupted the implementation of many SDGs, including health as well. Vaccines are considered as a powerful tool of public health but the pandemic has turned back remarkable progress on vaccination. The crisis has affected all segments of the population; it has engulfed all sectors of economy; it has reached all areas of the world. Not surprisingly, it is affecting the world’s poorest and most vulnerable people the most. More than half (53%) of the 129 countries where data were available reported either moderate-to-severe disruptions or a total suspension of childhood vaccination services for arising pandemic situation during March–April 2020 (see Footnote 10).

Sustainable development goal report 2020 says that essential health services covered about one-third to one half of the global population in 2017, estimated to be between 2.5 billion and 3.7 billion of the global population. In contrast, only 12–27% of the population in low-income countries were fully covered by the essential health services that year. If current trends continue, only 39–63% of the global population will be covered by such services by 2030, which is far from the target, and disparity in health care will remain. The pandemic has a higher risk of exclusion for the vulnerable population. Now it is a challenge for global leaders to continue essential health services coverage at the rate of the pre-pandemic era.

As COVID-19 continues to spread, many health facilities are closed or provide only limited services on an emergency basis due to limited health infrastructure. What is more, many women and girls choose to skip important medical check-ups for fear of contracting the virus. Also, the global supply chain disruptions may lead to shortages of contraceptives. As a result, tens of millions of women may not be able to access contraceptive services, resulting in millions of unintended pregnancies.

In developing countries, the need for public health is neglected very much. Governments of the countries are reluctant to fund adequately in the health care system. This
inadequate infrastructure and inadequate investment cause high morbidity and the fast-spreading of communicable diseases. Communicable diseases can be prevented from forming pandemic by breaking the chain at the proper time. Millions of the world are dying from preventable disease conditions each year without getting the treatment and care due to poor health infrastructure. Now this pandemic has created an extraordinary situation where extra burden has disrupted the essential health services. Keeping this in mind, our governments have to plan for the long term and revise their allocation in the health budget.

Until the end of 2019, advances in many health areas continued, but the progress rate was not sufficient to meet most Goal 3 targets (sustainable development goal report 2020). The COVID-19 pandemic is throwing progress even further off track. Now people are afraid to visit the healthcare institutions for check-ups, vaccinations, and even for urgent medical care, which could have potentially fatal consequences and threatens to reverse decades of improvements in health outcomes.

Childhood immunization efforts have been interrupted due to the COVID-19 crisis globally. Since March 2020, routine childhood immunization services have been disrupted on a scale not seen since the inception of the Expanded Programme on Immunization in the 1970s (sustainable development goal report 2020). Prevention and treatment services for non-communicable diseases have been severely disrupted since the COVID-19 pandemic began. The health care system of low-income countries is mostly affected by this pandemic. Many people are deprived of the basic health services and medicines they need. COVID-related interruptions in health care could cause a spike in illness and deaths from other communicable diseases like malaria, tuberculosis, etc.

According to the Sustainable Development Goals report 2020, due to COVID-19 pandemic, progress in the malaria eradication program has stalled after many years of impressive reductions in malaria’s global burden (Fig. 12.2). The world is not on a trajectory to achieve the SDG target of ending malaria. Worse yet, malaria prevention services could be disrupted by the spread of COVID-19 in malaria-endemic countries, mostly developing countries. Recent modeling shows that the cancelation of prevention campaigns and severe disruptions in treatment in sub-Saharan Africa could lead to a 23% increase in cases and a cent percent increase in deaths by the end of 2020 (compared with a 2018 baseline) (sustainable development goal report 2020).

The sustainable development goals report, 2020 also apprehends more. COVID-19 pandemic if leads to a 25% global reduction in expected tuberculosis detection for three months, there would be a realistic possibility of a 13% rise in tuberculosis deaths (given, the levels of disruption being observed in multiple countries remain constant). This would bring the world back to the tuberculosis mortality levels of five years ago. Due to COVID-19, many regions face temporary suspension of community-based activities in neglected tropical diseases management, which may erode gains won by years of hard work and investment.

As Covid-19 has interrupted the basic essential health services, marginalized people have been mostly deprived of essential public healthcare services. To achieve universal health coverage by 2030, governments have to accelerate investment in the
Fig. 12.2 Sustainable Development Goals Report 2020 (Source UNO 2020 [sustainable development goals report, 2020. UNO. Available under the URL: https://unstats.un.org/sdgs/report/2020/The-Sustainable-Development-Goals-Report-2020.pdf. Accessed on 16 September 2020])
health sector and make the healthcare system affordable and accessible for all. Income cut due to Covid-19 prevention purpose lockdown has forced many families to curb their expenditure on health, as well as this pandemic has highlighted the shortage of medical personnel worldwide. GDP of developing countries and the reluctance of government do not allow large investment in human resource development. So, for the countries where the health system is unable to cope with the surge of demand, the community health workers may be an effective alternative solution for this purpose. They can provide basic health care needs to a wider population based on their short-term training.

12.7 Preparedness for Health-Related Disaster

Disasters are unpredictable and inevitable events on the earth that cause serious disruption to human lives, resource management, and the environment over a short or long period. Disaster can have a natural origin (geological, hydrometeorological, and biological) as well as human-induced (environmental degradation and technological hazards). We can’t stop the disasters from occurring, but our preparedness can reduce people’s vulnerability against disasters. Large-scale infectious disease outbreaks or pandemics represent one manifestation of such events. Importantly, it should be a matter of concern that these diseases’ outbreaks are increasing in frequency (Smith et al. 2014). This decade has witnessed the outbreaks of swine flu, Middle East Respiratory Syndrome, Nipah, Ebola, Cholera, Zika, yellow fever, rift valley fever in different parts of the globe as an epidemic. To handle the situation and ensure medical assistance for all patients, a well-built public health care system is required. This public health care system acts as a firewall to reduce the community spread of diseases and relieve the healthcare system’s unsustainable pressure.

The threat to life and property is everywhere in the world in any form. Any new disease outbreak can occur at any time and take the form of disaster if we can’t build up the capacity to resist it. Healthcare infrastructure in most of the countries is not sufficiently strong to combat the situation. This will increase the vulnerability of the population if they are not well prepared. Vulnerability is the state of being exposed to the possibility of being attacked or affected (Fig. 12.3). Vulnerability is defined in

![Fig. 12.3 Relation of threat, vulnerability, and risk for any disaster (Source Prepared by the author)]
the Hyogo Framework for Action (2005–2015) as: ‘The conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards’. Risk is the result of threats and vulnerability. A more vulnerable population to any disease can be exploited easily. So, to cope with the situation, capacity building is important, which means empowering the local people with information, training, and equipment to build up resilience in the community. For that, prior investment and proper planning in the health sector from the community level is required. The involvement of grassroots level people in capacity building is more useful to combat the situation.

The Hyogo Framework (2005–2015) and Sendai Framework for Disaster Risk Reduction (SFDRR 2015) gave importance to build up robust disaster preparedness for effective response at all levels. SFDRR prioritized resilience building through supporting and training community health groups for disaster risk reduction. Resilience is considered as the ability to accommodate, resist, and recover from the effects of disasters. SFDRR had recommended the implementation of International Health Regulations (IHR 2005) of WHO. It spoke for strengthening national preparedness, surveillance, and response capacities that were suggested for public health management and preventing the international spread of diseases. Timely surveillance and preparedness enable communities to build up resilience against the pandemic. Community health workers are an important asset in the capacity building and preparedness (Chatterjee 2020) as they have a wide reach within the community.

Since adopting the Sendai Framework, the WHO has encouraged the member countries to strengthen its approach to Health Emergencies and Disaster Risk Management (Table 12.3). The General Programme of Work 13 for 2019–2023 recognizes that ‘the world faces threats from high-impact health emergencies (epidemics, pandemics, conflicts, natural and technological disasters) and the emergence of antimicrobial resistance’ (WHO 2018).

In the context of health emergencies, the WHO promise to:

work with the Member States and partners to increase all-hazards health emergency detection and risk management capacities across all phases of risk prevention and detection, emergency preparedness, response and recovery through the implementation of the IHR (2005) and the Sendai Framework for Disaster Risk Reduction. (WHO 2018)

The Health EDRM Framework aims to strengthen resistance capacity within and beyond the health sector. It confronts the health impacts of all types of emergencies and disasters and efforts collaboratively to reduce future events’ health risks (Wright et al. 2020).

---

12 Hyogo Framework for Action 2005–2015, was the global blueprint for disaster reduction effort which was held on 18–22 January 2005, Kobe, Hyogo, Japan. Available under the URL: https://www.preventionweb.net/files/1037_hyogoframeworkforactionenglish.pdf. Accessed on 31 August 2020.

13 International Health Regulations, 2005 are not limited to specific diseases but apply to new and ever changing public health risks.
Table 12.3  Functions and Components of the World Health Organization’s Health Emergency and Disaster Risk Management Framework

| Component                                                                 | Description                                                                 |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Policies, strategies, and legislation                                     | Define the structures, roles, and responsibilities of governments and other actors for Health EDRM; Includes strategies for strengthening Health EDRM capacities |
| Planning and coordination                                                | Emphasize effective coordination mechanisms for planning and operations for Health EDRM |
| Human resources                                                           | Include planning for staffing, education, and training across the spectrum of Health EDRM capacities at all levels and personnel’s occupational health and safety |
| Financial resources                                                       | Support the implementation of Health EDRM activities, capacity development, and contingency funding for emergency response and recovery |
| Information and knowledge management                                      | Include risk assessment, surveillance, early warning, information management, technical guidance, and research |
| Risk communications                                                       | Recognize that communicating effectively is critical for health and other sectors, government authorities, the media, and the general public |
| Health infrastructure and logistics                                       | Focus on safe, sustainable, secure, and prepared health facilities, critical infrastructure (e.g., water, power), and logistics and supply systems to support Health EDRM |
| Health and related services                                               | Recognize the wide range of healthcare services and related measures for Health EDRM |
| Community capacities                                                      | Focus on strengthening local health workforce capacities and inclusive community-centered planning and action |
| Monitoring and evaluation                                                 | Include processes to monitor progress toward meeting Health EDRM objectives, including monitoring risks and capacities and evaluating the implementation of strategies, related programs, and activities |

Source (WHO 2019: x–xi)\(^a\)

\(^a\)World Health Organization. Disease Outbreak News Website. Available under the URL: http://www.who.int/csr/don/archive/year/2018/en/. Accessed on 12 July 2020

12.8 Conclusion

Health is growing as a core dimension of sustainable development. So, resilience building in the health system and ensuring health security on a global level is a necessity of the time. The shortage of trained nurses and doctors is a fundamental problem of the developing countries’ health structure, which is a constraint of universal health coverage. It cannot be solved overnight. Even in this pandemic situation, many high-income countries have been suffering from a shortage of trained health personnel. So, these countries can try to minimize the health care gap by decentralizing the healthcare system. Investment in community health workers could be a significant step in this perspective. Strong and formalized Community Health Workers (CHW) can provide primary care that is effective for life-saving, increase easy access to health care, and keep health care affordable. The CHW systems deliver a positive economic return and help in women empowerment. Overall they are cost-effective solutions for the governments.
Covid-19 pandemic is a whistleblower to humankind regarding the necessity of a robust health care system that can provide essential services protecting against emerging epidemics. Policymakers have to prioritize the preventive aspects, e.g., awareness creation by CHWs of health care could reduce diseases’ burden. However, they are not a remedy for all health-related problems. There are many flaws in these workgroups. Still, their effectiveness in the health system cannot be ignored. They took an important role in the 2015 Ebola outbreak management in west Africa. Their involvement should be applauded globally for their incredible role in improving public health security and pandemic preparedness.

References

Boniol M, McIsaac M, Xu L, Wuliji T, Diallo K, Campbell J (2019) Gender equity in the health workforce: analysis of 104 countries; WHO. https://apps.who.int/iris/bitstream/handle/10665/311314/WHO-HIS-HWF-Gender-WP1-2019.1-eng.pdf?ua=1

Boyce MR, Katz R (2019) Community health workers and pandemic preparedness: current and prospective roles

Bueno de Mesquita J, Thomas R, Havkist W, Hoddy R, Larasati A, et al (2018) Monitoring the sustainable development goals through human right accountability reviews. Bull World Health Organ 96(9):627–633 (Sept 1)

Chatterjee PK (2020) Community Preparedness for COVID-19 and Frontline Health Workers in Chhattisgarh. Downloaded free from http://www.ijph.in on Wednesday, July 15, 2020, IP: 157.43.223.241

Dahn B, Perry H, Maeda A, Palazuelos D (2015) Strengthening primary health care through community health workers: investment case and financing recommendations, WHO, July 2015. https://doi.org/10.13140/RG.2.1.4865.0086

Declaration of Alma-Ata: International Conference on Primary Health Care, Alma-Ata, USSR, 6–12 September 1978. Available from: https://www.paho.org/English/DD/PIN/alma-ata_declaration.htm

Gowshall M, Taylor-Robinson SD (2018) The increasing prevalence of non-communicable diseases in low-middle income countries: the view from Malawi

Hall J, Taylor R (2003) Health for all beyond 2000: the demise of the Alma-Ata Declaration and primary health care in developing countries. Med J 178(1):17–20. https://doi.org/10.5694/j.1326-5377.2003.tb05033.x

https://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-primary-care-policy-center/Publications_PDFs/E91.pdf

Jain D (2020) Time to bring some hope to ASHA workers fighting corona virus at frontline, 2 April 2020. outlookindia.com

Kane S, Kok M, Ornel H, Otiso L, Sidat M, Namakhoma I, Nasir S, Gelech D, Rashid S, Taegtmeyer M, Theobald S, Koning K (2016) Limits and opportunities to community health worker empowerment: a multi-country comparative study. https://doi.org/10.1016/j.socscimed.2016.07.019

Mackey TK, Vianb A, Kohler J (2018) The sustainable development goals as a framework to combat health-sector corruption. Bull World Health Organ 96:634–643. http://dx.doi.org/10.2471/BLT.18.209502

Nacoti M, Ciocca A, Guipponi A, Barambillasca P, Lussana F (2020) At the epicentre of the Covid-19 pandemic and Humanitarian Crisis in Italy: changing Perspectives on Preparation and Mitigation. https://doi.org/10.1056/cat.20.0080
Non-communicable diseases progress monitor 2020. Available from: https://apps.who.int/iris/bitstream/handle/10665/330805/9789240000490eng.pdf?sequence=1&isAllowed=y

Opemo D (2020) Integrating disaster risk reduction and adaptation to Covid-19 in Kenya. Int J Med Sci Health Res 4(03). ISSN: 2581-3366

Smith KF, Goldberg M, Rosenthal S, Carlson L, Chen J, Chen C, et al (2014) Global rise in human infectious disease outbreaks. J R Soc Interface

WHO Director-General addresses the Executive Board. Geneva: World Health Organization; 2018. Available from: http://www.who.int/dg/speeches/2018/world-health-day/en/

WHO Regional Office for Africa (2020) Available under the https://www.afro.who.int/health-topics/communicable-diseases. Accessed on 24 September 2020

Wright N, Fagan L, Lapitan JM, Kayano R, Abrahams J, Huda Q, Murray V (2020) Health emergency and disaster risk management: five years into implementation of the Sendai. Framework. https://doi.org/10.1007/s13753-020-00274-x

Moumita Mondal is an Assistant Professor, Department of Geography at Rammohan College, Kolkata, since 2017. She completed her Post-Graduation in Geography from the University of Calcutta in 2014. Her area of interest is climatology, social geography, and medical geography.