

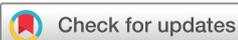
COVID-19 and non-communicable diseases in the Eastern Mediterranean Region: the need for a syndemics approach to data reporting and healthcare delivery

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As of 30 April 2021, the Eastern Mediterranean Region (EMR), home to nearly 700 million people across 22 diverse countries, has reported 9 109 162 confirmed cases of COVID-19 and 182 654 cumulative deaths since the beginning of the pandemic.¹ Pandemic response in the EMR is complicated by compromised healthcare systems, prolonged conflicts and humanitarian crisis, and suboptimal reporting and transparency in many countries of the region.² Consequently, COVID-19 incidence rates have been uneven, fluctuating from less than 1000 confirmed cases per million population in Sudan, Syria, Somalia and Yemen to more than 40 000 confirmed cases per million population in Lebanon, Qatar and Bahrain. Up to this point in the pandemic, the five countries hardest hit with cumulative COVID-19 deaths per capita have been Lebanon, Iran, Tunisia, Palestine and Jordan and with the highest overall cumulative deaths have been Iran, Iraq, Pakistan, Egypt and Morocco.³

In tandem, as the COVID-19 pandemic disrupts the delivery of health services, the EMR has been reported to have the highest average disruption with 75% of essential health services (EHS) being compromised in 13 countries.⁴ Existing healthcare infrastructures in the EMR have been repurposed to respond to the pandemic, with many of the disruptions affecting services designed for the management, treatment and care of non-communicable diseases (NCDs). More than 40% of countries reported partial or full disruption to hypertension and diabetes management, cancer treatment, asthma services, rehabilitation services and palliative care. This is despite official reporting that continuity of NCD services is included as essential services in national COVID-19 strategic preparedness

Summary box

- ▶ As elsewhere, health services designed for the management and treatment of non-communicable diseases (NCDs) have been repurposed to respond to COVID-19 in many countries of the Eastern Mediterranean Region (EMR).
- ▶ Many countries of the EMR are distinctly challenged by compromised healthcare systems, prolonged political unrest, conflict and humanitarian crisis, poor vital registration systems, suboptimal reporting and dearth in publicly available data.
- ▶ COVID-19 and NCDs are a syndemic—their synergistic relationship leaves people living with NCDs at a higher risk of developing severe COVID-19 complications, and patients who recover from COVID-19 are more likely to develop long-term chronic conditions.
- ▶ In the EMR, it is now more imperative than ever to recognise the interconnectedness of communicable diseases and NCDs, build stronger public health systems to achieve universal health coverage and establish reliable surveillance systems.
- ▶ Working long-term and recognising how COVID-19 and NCDs are syndemically interlocked conditions may be the first step towards developing the nuanced approaches that are needed to more comprehensively protect society's vulnerable populations.

and response plans.⁵ The United Nations Development Programme's NCD COVID-19 Vulnerability Index—designed to assess countries' COVID-19 vulnerability due to the underlying prevalence of NCDs and NCD risk factors—reports that 15 of 22 countries in the EMR rank above the global average. Even as vaccines for COVID-19 roll out globally, inoculating the vast majority of the world's population will be a global health imperative for some time to come, and a short-term end to the pandemic remains out of reach. In the interim, priorities and practices left

unchanged, NCD care will continue to suffer in the region and beyond.⁶

In recent commentaries,^{7,8} COVID-19 and NCDs have increasingly been referred to as a syndemic—defined by Singer *et al* as socially determined and co-occurring diseases that interact to produce disease clusters.⁹ The synergism between COVID-19 and NCDs is double-sided.¹⁰ On the one hand, existing NCDs, such as cardiovascular disease, diabetes mellitus, cancer and chronic obstructive pulmonary disease, have been shown to cause higher risk of complications, higher likelihood of need of intensive care unit admissions, and poorer prognosis and increased mortality among patients with COVID-19.¹¹ On the other hand, patients who survive COVID-19 are likely to develop or have further entrenched long-term chronic conditions.¹²

More fundamentally, a syndemics approach emphasises how disease clusters are socially, economically and politically determined. As Maani *et al* note, health and wellness compromised by social inequalities in pre-pandemic times became and will continue to be reflected in poor health outcomes associated with NCDs throughout the course of the pandemic going forward.¹³ Social determinants of NCDs, such as loss of livelihood, poor nutrition and psychological distress, will only continue to increase with growing global inequalities and poverty, which are further exacerbated by the economic impact of COVID-19 pandemic control measures.¹³ Mendenhall¹⁴ emphasises that context matters in syndemics. In some places, the pandemic has exposed the fragility of NCD care and weaknesses in the way health systems are funded and organised.¹⁴ This is particularly important for forcibly displaced persons and refugees and for resource-scarce communities and reflects, in turn, the extreme impact of poverty, on the one hand, and privilege, on the other, in determining exposure and shielding from transmission. The EMR is such a context. To take one example among many, mortality among Palestinian refugees in Lebanon has been reported to be three times higher than the Lebanese population, a finding attributed to pre-existing conditions such as pulmonary and cardiac diseases, all against a background of poverty and overcrowding.¹⁵

These factors will become even more challenging in the future as health systems in many countries run out of funding for the spillover effect of the NCD-COVID-19 syndemic on public health. Although the global vaccination programme for COVID-19 is underway, the pursuit of a solely biomedical response to this syndemic will continue to fall short of expectations so long as it does not address the social and economic determinants of disease and the nuanced interactions between COVID-19 and NCDs. Despite this, disproportionately less attention has been paid in the global pandemic response to the challenges that NCDs pose. This has included, and not been exceptional to, the EMR.

Even before the COVID-19 pandemic, reduction in premature NCD mortality rates experienced a global slowdown in the past decade.¹⁶ During the pandemic

response, funding and human resources have further shifted to cater specifically for the emergency, prioritising care for patients with COVID-19 over many other diseases, including NCDs.¹² Hospital and clinic staff, including physicians from specialties that are not related to infectious diseases, as well as epidemiologists and nurses, have been redeployed to serve in emergency departments and intensive care to care for patients with COVID-19.¹² Furthermore, lockdown measures in most countries have disrupted continuity of care for patients with NCDs and postponement of routine medical appointments and tests affecting healthcare service access and availability to people with NCDs.⁵ Restrictions to mobility due to lockdown measures have limited access to preventive and control services.¹² This has resulted in diminishing returns of earlier investments towards achieving Sustainable Development Goals (SDGs) in reducing premature mortality from NCDs by one-third by 2030.¹⁷ Such a 'covidisation' of care will likely lead to unintended long-term consequences, even as the COVID-19 pandemic subsides.

The pandemic has increased our awareness of the several endemic concerns to the EMR. It has also emphasised key areas for reform, the resolution of which is long overdue.

First, it is now more imperative than ever before to build stronger public health systems to achieve universal health coverage (UHC) and ensure *all* people are able to receive the spectrum of health services they need—promotion, prevention, treatment, rehabilitation and palliation.¹⁸ The COVID-19 pandemic is a striking reminder of the interconnectedness of UHC and health emergencies, of the need to invest more towards achieving a target 3-8 of the United Nations SDGs where 'no one is left behind'.

Second, the lack of reliable surveillance system for monitoring and control and the dearth in publicly available data have made building data infrastructures by regional governments vital going forward.¹⁹ Many health information systems are currently weak and do not capture NCD service utilisation and outcomes.²⁰ It is impossible to appropriately plan disease outbreak response strategies without reliable, disaggregated, transparent and openly accessible data, and an extensive health database to track baseline measures of NCD burdens integrated into larger surveillance systems needs to be escalated to a regional strategic priority.^{18,21} Even where data are available, it is not often sufficiently used to inform policy responses to the pandemic. As recommended in WHO guidance on maintaining EHS, countries should be able to identify key EHS and strengthen their monitoring.²²

Third, more accurate attribution of the contributory causes to the underlying cause of death is urgently needed to allow reporting of data that would substantiate the interconnectedness of COVID-19 and NCDs. At the moment, deaths due to NCDs are often miscounted as caused by COVID-19 only, furthering the deprioritisation of NCDs on the global agenda. Adopting a syndemics approach to cause of death structure will require that both COVID-19 and NCDs contributing to death are

