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Tackling missed opportunities for vaccination in a new era of immunisation

The launch of the Immunisation Agenda 2030 (IA2030) marks the beginning of a new era for accelerating immunisation progress globally. In many ways, the COVID-19 pandemic, with its far-reaching disruption of routine immunisation services, marks a turning point in this transition. The Editors aptly reflect on this important transition and the lessons learned in the past decades.¹

Importantly, the Editorial identifies the growing challenges of vaccine hesitancy, misinformation, inequitable access, political inaction, and commercial interest protection as priority issues to be tackled in the new IA2030 era. In addition to these challenges, we make a case for the prioritisation of missed opportunities for vaccination. A missed opportunity for vaccination refers to any contact with health-care services by an individual who is eligible for vaccination, which does not result in the person receiving either one or both of the vaccine doses for which they are eligible.²

Global immunisation coverage has undeniably stalled below the targets of the Global Vaccine Action Plan.³ Progress has been further slowed by the disruption to routine immunisation services worldwide as a result of the COVID-19 pandemic.⁴ The prevalence of missed opportunities for vaccination varies within and between countries, reaching 89% in some settings.² Thus, addressing missed opportunities for vaccination has become imperative for attaining unmet aspirations in the Global Vaccine Action Plan and for providing catch-up vaccinations to undo the pandemic's damage on immunisation progress. In line with its fourth strategic priority, fulfilling IA2030's vision will require a sound understanding of the burden of missed opportunities for vaccination and its multidimensional determinants at national and sub-national

levels, instituting context-appropriate remedial measures, and periodically monitoring progress and adapting corrective interventions.

We declare no competing interests.

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- 1 The Lancet. 2021: the beginning of a new era of immunisations? *Lancet* 2021; **397**: 1519.
- 2 WHO. Methodology for the assessment of missed opportunities for vaccination. Geneva: World Health Organization, 2017.
- 3 Nnaji CA, Owoyemi AJ, Amaechi UA, et al. Taking stock of global immunisation coverage progress: the gains, the losses and the journey ahead. *Int Health* 2020; published online Jan 11. <https://doi.org/10.1093/inthealth/ihz120>.
- 4 WHO. At least 80 million children under one at risk of diseases such as diphtheria, measles and polio as COVID-19 disrupts routine vaccination efforts, warn Gavi, WHO and UNICEF. May 22, 2020. <https://www.who.int/news/item/22-05-2020-at-least-80-million-children-under-one-at-risk-of-diseases-such-as-diphtheria-measles-and-polio-as-covid-19-disrupts-routine-vaccination-efforts-warn-gavi-who-and-unicef> (accessed April 27, 2021).

The Beirut Port explosion: injury trends from a mass survey of emergency admissions

On Aug 4, 2020, 1807 h, one of the most powerful non-nuclear explosions in history rocked Beirut, the capital city of Lebanon, with a population of 2 million. The Beirut Port ammonium nitrate explosion (BPANE) happened when a fire set off 2700 tons of ammonium nitrate, which had been stored inside the port for 6 years. Soon after the explosion, we surveyed all patient admissions to emergency departments to analyse the pattern of injuries caused by the explosion.

We followed the tenets of the Declaration of Helsinki. Retrospectively, private and public hospitals located within 88.2 km of the port of Beirut were contacted. 1 week after the explosion, a research proposal and data request were emailed to emergency department directors (appendix). Data received were anonymous, were for within 54 h of the blast, and included the number of registered (or estimated) emergency department admissions, hospital admissions, surgeries done in the operating room, intensive care unit (ICU) admissions, and the number of fatalities at admission to emergency department or during hospitalisation. The study received institutional review board approval in nine centres that supplied the data for admissions to hospital.

33 private medical institutions and nine public hospitals participated in the study (appendix), representing more than 95% of the workforce of operative hospitals in the studied region. 5591 emergency department admissions were registered in 35 hospitals, and 3052 emergency department admissions were estimated in seven hospitals, yielding a total of 8643 patients admitted to emergency departments in 42 hospitals. Overcrowding of emergency department facilities started 2 h after the blast, with a predominance of relatively minor, non-critical soft tissue injuries. 1056 (12.2%) of 8643 patients were admitted to hospital; of these, 156 (2%) were initially admitted to the ICU, and 534 (6%) were initially taken to the operating room. 93 deaths were reported in hospitals within 54 h of the blast: 37 people were pronounced dead on arrival, and 56 (1% of emergency department admissions) died after admission to the emergency department. A month after the blast, the official number of blast-related fatalities exceeded 200. The 346 surgeries done in 13 centres included fracture repair (127 [37%]), tendon repair (68 [20%]), suturing of corneal scleral lacerations (50 [14%]),



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For the IA2030 see <https://www.who.int/teams/immunization-vaccines-and-biologicals/strategies/ia2030>

See Online for appendix

For the Global Vaccine Action Plan see <https://www.who.int/teams/immunization-vaccines-and-biologicals/strategies/global-vaccine-action-plan>



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