Elsevier has created a Monkeypox Information Center in response to the declared public health emergency of international concern, with free information in English on the monkeypox virus. The Monkeypox Information Center is hosted on Elsevier Connect, the company's public news and information website.

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those occurring after COVID-19-related myocarditis in non-vaccinated people.

Finally, Kracalik and colleagues present novel data on post-myocarditis scarring, defined by the presence of late gadolinium enhancement, and residual oedema on cardiac MRI. In 151 patients with cardiac MRI, late gadolinium enhancement was observed in 71 (47%) patients and inflammation or oedema in 22 (15%) patients—rates that exceed the rate of cardiac symptoms. For comparison, in a series of 190 patients (median age 33 years, 82% male) with acute myocarditis and preserved left ventricular ejection fraction,[11] cardiac MRI after 6 months showed scarring defined by the presence of late gadolinium enhancement in 164 (86%) individuals and oedema in 31 (16%) individuals.

These data help to resolve the dilemma between vaccination and no vaccination: health-care providers and individuals should be reassured by the high rate of cardiac recovery in mRNA COVID-19 vaccine-related myocarditis. Nonetheless, the psychosocial burden after a myocarditis diagnosis remains substantial and has been under-recognised. The value of vaccination in protecting against SARS-CoV-2-associated acute myocarditis and in lowering the risk of hospitalisation after SARS-CoV-2 exposure has been shown.[10] Kracalik and colleagues should be applauded because they, to our knowledge, are the first to explore in detail the quality of life and impact of psychological symptoms in young patients after acute myocarditis. Future prospective studies of myocarditis should also include patient-reported outcomes to capture the full illness spectrum.

EA has received a grant from the Italian Ministry of Health (GR-2019–12368506), and is a consultant for Kiniksa and Cytokinetics. LTC has served as a consultant for Moderna, receives grant funding from the National Institutes of Health, consults for Bristol Myers Squibb, Kiniksa, Moderna, and CardiolRX, and is a board member of Stromal Therapeutics.

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The monkeypox outbreak: risks to children and pregnant women

As of July 21, 2022, WHO has reported 15 734 laboratory-confirmed monkeypox infections, including children, in 75 countries across five continents.[1] The unprecedented widespread geographical distribution of this poxvirus shows the risk for a potential public health emergency of international concern. These laboratory-confirmed monkeypox infections are more than double the total number of cases than in the previous situation report published 2 weeks earlier on July 9, 2022, emphasising the sustained transmission of the monkeypox virus. However, these reported figures are likely to be an underestimation of the actual number of infections due to inadequate clinical recognition of monkeypox virus infection and the long incubation period of the virus (5–21 days). Current estimates of disease burden reflect the situation from previous weeks, and the actual number of infected individuals could exceed 30 000.

The potential for sustained human-to-human transmission of the monkeypox virus was previously believed to be low. The re-emergence in 2022 suggests


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Published **Online**
August 1, 2022
https://doi.org/10.1016/S2352-4642(22)00223-1

improved transmissibility, possibly enabled by an improved viral adaptation to the human host and promoted by the increased exposure of an immunologically naive population to orthopoxviruses. In the coming months, with increased travel by a population previously constrained by COVID-19 restrictions and forthcoming events that include substantial gatherings of people, the current monkeypox virus outbreak could rapidly become uncontrolled, especially as its clinical presentation appears to be more subtle than previous descriptions.[1] Although clinical outcomes seem to be favourable, with only three deaths reported in Africa,[1] the current outbreak has mostly affected healthy adults at low risk of complications. However, with increasing case numbers, vulnerable populations, such as people who are immunocompromised, children, and pregnant women, could become infected. Epidemiological data from previous monkeypox outbreaks in Africa suggest that the secondary attack rate could be as high as 12·3% among smallpox-unvaccinated household contacts of individuals with monkeypox, particularly affecting children younger than 15 years.[2]

Compared with healthy adults, complications are more frequent in children and people who are immunocompromised, with an increased risk of bacterial superinfection, sepsis, keratitis, respiratory complications due to pharyngeal abscess and pneumonia, or encephalitis.[2,3] Previous monkeypox outbreaks have reported increased mortality and hospitalisation rates in children, even in high-income countries, such as the USA, in which the only two severe presentations during the 2003 outbreak were observed in the paediatric population.[4]

Although information regarding the effects of monkeypox infection in pregnant women is scarce, vertical transmission of monkeypox has been associated with fetal demise and congenital infection.[5] By analogy with smallpox infection, the disease is expected to be more severe in pregnant women than in healthy individuals who are not pregnant, particularly during their third trimester.[6]

All available smallpox vaccines offer good protection against monkeypox infection and can be used for pre-exposure or postexposure prophylaxis. A reduced rate of secondary attack is observed in previously vaccinated household contacts of individuals with monkeypox.[2] In Canada and the USA, the Modified vaccinia Ankara vaccine (MVA-BN; Bavarian Nordic, Denmark) is licensed for both smallpox and monkeypox prevention among adults. In Europe, where MVA-BN is known as IMVANEX, the vaccine has only received authorisation for use against smallpox. This third-generation vaccine offers a better safety profile than previous versions of the vaccine due to a non-replicating agent that restricts the risk of dissemination and contagiousness of the vaccine agent, which is particularly useful for people who are immunocompromised. Vaccination will be crucial in future control of monkeypox outbreaks and potentially other emerging or re-emerging orthopoxviruses.

Unfortunately, as seen during the COVID-19 pandemic, vaccine acceptance remains challenging. It is therefore urgent for health systems to prepare and educate communities with straightforward, simple, and factual information, as doing so will be crucial to protect pregnant women, children, and other individuals who are at risk of infection. Unlike the COVID-19 pandemic, for which novel vaccines against SARS-CoV-2 had to be developed, data regarding the safety and efficacy of smallpox vaccines have been available for decades, including data in vulnerable populations. Several randomised controlled trials have shown the safety of MVA-BN among patients with HIV with or without AIDS.[7] Furthermore, although scarce, data regarding this non-replicating vaccine in pregnant women are reassuring; animal studies have also shown no increased risk of fetal malformations.[8] A modified version of MVA-BN was safely used as a vector encoding Ebola proteins in a randomised controlled trial of children aged 1–17 years, thus emphasising its potential future use in this population.[9]

How the current monkeypox outbreak will evolve and the extent of its effects on public health are still unclear. Nevertheless, how can the unabated emergence and re-emergence of monkeypox be explained after more than 40 years of effective vaccinal control of orthopoxvirus infections? Anticipatory guidance is required, and public health efforts focused on protecting vulnerable populations, especially people who are immunocompromised, pregnant women, and children, should be widely implemented.

We declare no competing interests.

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Capturing adolescent realities in the global data revolution

The 2030 Agenda for Sustainable Development's call to leave no one behind has brought a renewed focus on vulnerable populations historically overlooked by researchers and policy makers. Key to this inclusive mission is generating "data which is high quality, accessible, timely, reliable and disaggregated by income, sex, age, race, ethnicity, migration status, disability and geographic location".[1] Halfway to the endpoint of the Agenda 2030, tracking of the Sustainable Development Goals (SDG) has revealed substantial gaps in data on adolescence, despite increasing recognition that the ages of 10–19 years are a crucial life stage for accelerating progress against poverty, inequity, and discrimination.[2,3] We outline challenges in generating robust adolescent-specific SDG data and identify approaches that can deliver the age-disaggregated and sex-disaggregated data that are crucial to tailoring policies and interventions to improve adolescent wellbeing across domains.

The minimal focus on adolescents in the SDGs is disproportionate both to their share of the global population (16%; 1·3 billion) and to the cognitive, emotional, and social importance of the second decade of life.[4] Fewer than 10% of the 231 SDG indicators explicitly require disaggregation of data by age, which has left critical gaps, especially regarding the health needs of adolescents and their opportunities to express voice and agency. Young adolescents (10–14 years) are particularly overlooked within SDG data.[5] Data collection efforts usually use a wide youth age range of 10–24 years or put adolescents into broad child age bands (0–17 years), which risks overlooking issues specific to adolescents. This is problematic because physiological, cognitive, and socioemotional development progresses rapidly during adolescence (especially early adolescence, because of the onset of puberty). Intra-adolescent age differences are also pronounced for risk behaviours; for example, sexual activity and substance use are most prevalent in older adolescents.[6] Despite calls for globally standardised age-disaggregated health data[6] to shed light on adolescent lives and increase comparability across contexts, these standards have yet to be implemented universally.

If the SDGs are to drive tangible change in the lives of adolescents, alternative data collection methods must be integrated into SDG reporting to make priority concerns visible and should include approaches that ask adolescents directly about their experiences, opinions, and beliefs on sensitive topics, such as sexual violence, child marriage, female genital mutilation or cutting, and their experience of gender-responsive curricula and teaching in schools.[7] We highlight data collection tools that give insights into the lives of adolescents but rarely feature in the UN SDG Indicator Database:

Longitudinal studies, including those that blend quantitative, qualitative, and mixed methods data, can provide insight into the social and structural determinants of adolescent wellbeing over time and identify what type of policies and programmes work to support adolescents at distinct developmental

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Published **Online**
August 10, 2022
https://doi.org/10.1016/S2352-4642(22)00222-X