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EDITORIAL TITLE: Addressing the anti-vaccination threat to public health

Vaccination is one of the most important and effective public health interventions.[1,2] One vaccine impact study estimated that vaccination for ten pathogens across 112 countries between 2000-2030 would avert nearly a 100 million deaths.[2] Another study of the impact of the Expanded Programme on Immunization (EPI) estimated that in the half century since its launch in 1974 the programme averted 146 million deaths among children younger than 5 years.[3] With vaccination, a child younger than 10 years is 40% more likely to survive to their next birthday.[3]

Concerningly, vaccination progress worldwide has stagnated. The COVID-19 pandemic led to decreases in coverage for several EPI childhood vaccine programmes, leaving many children at risk of these vaccine-preventable diseases. Vaccine misinformation and hesitancy have been identified as key barriers to vaccine coverage.[4] Despite decades of evidence of the effectiveness and safety of vaccination, as well as medical and scientific consensus of its benefits, there is growing anti-vaccination sentiment.

Reasons for vaccine hesitancy are complex and context dependent - how people feel about vaccination is influenced by social, cultural, economic, historical and political factors.[5] Anti-vaccination on the other hand is driven by “anti-vaccine” activism and is also increasingly politicized by actors with ideological and political agenda.[5] The reach and impact of anti-vaccine messaging is enhanced by social media, and Internet search engines can compound exposures to negative vaccine sentiment. Anti-vaccination activists, who perceive themselves as health crusaders and experts, skilfully use social media to create and amplify a belief system that counters and reframes mainstream health information.[6]

The proliferation of anti-vaccination sentiment issue is no longer a trivial matter affecting just a small segment of the population with extreme views whose actions only affect the few. Moreover, it is increasingly wrapped up with conspiracy theories, identity politics, anti-Science and far-right political extremism, and proponents are often further radicalised by algorithm-based digital echo chambers.[7,8] It is especially worrying now when anti-vaccination views are echoed in the corridors of political power and regressive vaccine policies are instigated which have a direct impact on the many. The resurgence of vaccine preventable infections in those communities that follow may not be easily contained.

The question then is how public health systems respond to this challenge. Current approaches focus on addressing confidence, complacency and convenience factors, such as through enhancing information provision, training health workers to promote vaccination, and implementing organisational level interventions to improve accessibility to vaccinations.[1] Public health efforts should be prioritised to reach the underserved, and those who are uncertain and may be persuadable, instead of those with die-hard anti-vaccination beliefs. However, whilst helpful, whether these measures will suffice is questionable especially considering the burgeoning anti-vaccination sentiment and infodemic of misinformation.

Public health could engage more actively in online vaccination discussions using psychological research on persuasion and unmasking the techniques and tactics used by anti-vaccination advocates (Dube). Debunking and fact-checking misinformation on social media is another option that can be effective at reducing misperceptions.[9] Another approach may be to try to immunize the public to misinformation by pre-bunking and “pre-emptively forewarning and exposing people to weakened doses of misinformation to cultivate cognitive resistance against

future misinformation”.[10] Regardless of the approach taken, a key ingredient for any response will be the need to strengthen public trust in vaccination programmes – in the past resistance to vaccination campaigns often had roots in real shortcomings of the actions of public authorities.[5]

Can public health continue to ignore the highly vocal, visible and increasingly influential anti-vaccination movement? The contagion of anti-vaccination sentiment spread worldwide could undermine decades of hard work to protect populations and endanger not just the most vulnerable but also whole communities. Once established, anti-vaccination beliefs may be difficult to root out. With decreasing levels of population immunity, infections, outbreaks, and tragically preventable deaths, will become more common. The increased incidence of these once rare infections will leave a long-lasting legacy of consequences including disease and disability. It is time for public health to mobilise health systems and communities against this clear and present danger for which a more muscular response is needed.

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CONFLICTS OF INTEREST:

AL is an employee of the UK Health Security Agency. The views expressed are those of the author and not necessarily those of the UKHSA.

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