Overcoming vaccine hesitancy: An effective vaccine communication 'standard operating procedure' for pharmacists

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Abstract

South Africa's Expanded Programme on Immunisation (EPI) coverage has been on a downward trend in recent years, contributing to outbreaks of vaccine-preventable diseases such as measles. While vaccine hesitancy is not a new phenomenon, its recognition as a major public health threat gained widespread recognition in the 21st century and was further exacerbated by the COVID-19 pandemic. In order to achieve the targets of Immunisation Agenda 2030 it is essential to address vaccine hesitancy through effective communication and behaviour change interventions. While pharmacists can play a critical role in engaging hesitant individuals, a clear understanding of the drivers of vaccination behaviour and the factors underlying declining vaccine confidence is necessary. This article proposes a practical, evidence-informed vaccine communication standard operating procedure to support South African pharmacists in their daily practice.

Keywords: vaccine hesitancy, vaccine communication, standard operating procedure

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Introduction

A 2024 study published in The Lancet found that between 1974 and 2023 (50 years), 154 million lives were saved by vaccinations against 14 pathogens targeted by the World Health Organization's (WHO) Expanded Programme on Immunisation (EPI).[1] This equates to 6 lives per minute being saved every day for 50 years, an astonishing achievement that is currently being undermined by widespread misinformation/disinformation leading to vaccine hesitancy. As a result, the world is not on track for reaching the WHO Immunisation Agenda 2030 (IA2030) goals, with vaccine coverage rates falling globally, placing millions at risk.[2] For example, global measles cases have surged because of low vaccine coverage, including in the United States of America (USA) and Europe, with measles predicted to become endemic in the USA if this declining trend in vaccine coverage continues.[3] Similarly, in South Africa EPI coverage has been on a downward trend for several years, resulting in outbreaks of vaccine-preventable diseases (VPDs) such as measles, rubella, diphtheria and pertussis.[4-6]

The vaccine hesitancy phenomenon

Vaccine hesitancy is an age-old phenomenon, originating after the cowpox vaccine against smallpox was invented in the late 18th century, and resurfacing after a fraudulent 1998 publication falsely claimed that the measles-mumps-rubella vaccine (MMR) caused autism.[7] While this article was subsequently retracted and the false claim thoroughly refuted by many subsequent studies, widespread media attention at that time resulted in continuous circulation that was later considerably amplified by the advent of social media.[7] Currently, anti-vaccination misinformation/disinformation social media campaigns are either directed against vaccines in general or target specific vaccines, while the vaccine misinformation/disinformation infodemic accompanying the coronavirus disease 2019 (COVID-19) pandemic has undermined trust in all EPI vaccines.[8]

Although vaccine hesitancy has existed for more than 250 years, it gained widespread recognition as a major public health threat only in the 21st century, being defined in 2014 by the WHO Strategic Advisory Group of Experts (SAGE) working group on vaccine hesitancy as a 'delay in acceptance or refusal of vaccination despite availability of vaccination services,'[9] and declared by the WHO as one of the top 10 threats to global health in 2019.[10] In terms of intervention design, a more helpful definition was coined in 2022 to exclude vaccine refusal and vaccine confidence, describing vaccine hesitancy as 'a state of indecision and uncertainty about vaccination before a decision is made to act (or not act)' (Figure 1).[10] This recognises vaccine denial as an unmodifiable fanatical state, whereas in essence, vaccine hesitancy as a state of being undecided about whether or not to vaccinate is open to behaviour change interventions. In order to achieve IA2030 goals, it is crucial to address widespread vaccine misinformation/disinformation leading to distrust of public health institutions as the major driver of vaccine hesitancy.[2] However, this is not something that will happen overnight, so right now, what can the South African pharmacist do to prepare themselves for effectively communicating with vaccine hesitant clients?

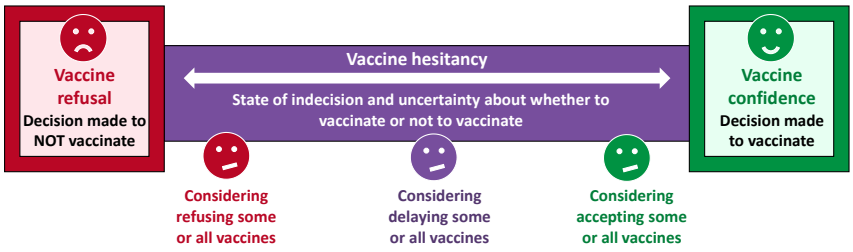


Figure 1: Spectrum of vaccine hesitancy

Preparation for effective communication with vaccine hesitant clients

Understand the drivers of vaccination behaviour

The drivers of vaccination behaviours are sometimes framed as the 3Cs: Confidence (in effectiveness, safety, the health system, policy makers), Complacency (perceived low risk of acquiring VPDs) and Constraints (barriers to accessing vaccination services, including time, place, language, and cultural contexts). They can also be framed as the 5Cs, when in addition to the 3Cs, Collective responsibility (understanding the value of vaccination for creating herd immunity) and Calculation (seeking information weighing the benefits and risks of vaccination) are also included (Figure 2).[11]

In addition, a qualitative evidence synthesis of global studies conducted by South African scientists, has suggested that these drivers are processed differently according to an individual's own worldview, following two potential pathways towards vaccine acceptance, namely 'neoliberal logic' and 'social exclusion'.[12] Neoliberals, who are mainly from high-income countries, believe they must assess their own health-related risks and make their own health-related decisions,[12] which conflicts with the concept of a 'social contract' where everyone is called upon to contribute towards herd immunity. In contrast, those experiencing social exclusion (i.e., economically, socially or politically), mainly from low- and middle-income countries, may lack trust in the government and may feel alienated, resentful, frustrated and demotivated.[12] Both of these pathways may lead to vaccine hesitancy or vaccine refusal, with neoliberals potentially being strongly influenced by misinformation leading them to reject vaccination based on their own faulty risk-benefit analysis, while the socially excluded may reject vaccination based on distrust of health authorities.

Understand how and why vaccine confidence is on the decline

The infodemic accompanying the COVID-19 pandemic, plus the often clumsy and sometimes inappropriate pandemic responses by many governments throughout the world, has severely eroded global public trust in vaccines in general, including in South Africa.[8,13] When South Africa started rolling out the COVID-19 vaccine in early 2021, it was eagerly anticipated by > 70% of adults who were planning to get vaccinated.[14] However, by January 2023 only 50% of South Africans had been vaccinated.[15] In 2023, the United Nations Children's Fund (UNICEF) reported a 30% decline in confidence in childhood vaccines in South Africa, with only 62% of South Africans being confident that vaccines are important for children.[13] Also in 2023, only 34% and 57% of South African adults respectively, were confident that the next pandemic would be handled better than the COVID-19 pandemic, and would be willing to be vaccinated against the disease causing the next pandemic.[8] Another 2023 study reported that 71% of South African adults' vaccination behaviours were found to fit the 2014 WHO SAGE definition of 'a delay in acceptance or refusal of vaccines despite the availability of vaccination services'.[9] While the COVID-19 pandemic ended in May 2023, the passage of time has not improved vaccine confidence, with a survey conducted in late 2024 finding that only 63% of all South African adults and 55% of South Africans aged 18–34 respectively, would give their children all recommended vaccines.[16] Unfortunately, many South African healthcare workers (HCWs) also fell prey to COVID-19 vaccine misinformation. For example, a survey conducted amongst Cape Town HCWs at the time the vaccine was being rolled out, 48% of whom were degreed healthcare professionals, reported that 41% would either refuse or hesitate to be vaccinated.[17]

Understand the reasons why some people may be vaccine hesitant

A study on vaccine sentiment expressed on South African social media platforms before the COVID-19 pandemic, reported that

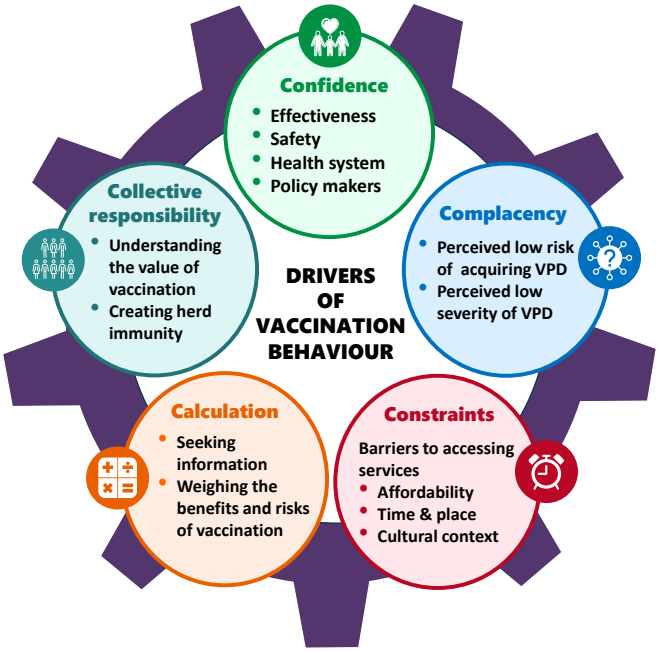


Figure 2: Drivers of vaccination behaviour

negative sentiments expressed vaccine safety concerns (including the beliefs that vaccines contain toxins that damage the brain/immune system/reproductive system; or cause cancer or death; and too many vaccines received simultaneously overwhelm the immune system); the belief that vaccines are not effective; belief in conspiracy theories (including being used as 'germ warfare' to 'depopulate the world'; and that the vaccine industry is solely profit-driven); and philosophical/religious objections (including vaccine ingredients that conflict with religious beliefs; vegans' objections to the use of animal products in vaccines; and mandatory vaccination, which does not exist in South Africa, being a violation of human rights).[18] In March 2021, while COVID-19 vaccines were being rolled out to HCWs in South Africa, the South African Medical Research Council reviewed all South African COVID-19-related surveys.[19] Similar to the pre-COVID-19 era, concerns about side effects, lack of effectiveness and conspiracy theories were reported. However, safety concerns included the newness of the vaccine, the speed at which it was developed and lack of trust in the government to ensure safety; while conspiracy theories included that COVID-19 is man-made and linked to 5G. Many respondents were opposed to vaccination in general, and many felt that they were at low risk for COVID-19.[19]

Standard operating procedure (SOP) for effective vaccine communication in practice

While this SOP targets pharmacists who are authorised vaccinators, all pharmacists can use this guide for effective vaccine communication (Figure 3).

Presumptive approach to initiating a conversation

Research has shown that when initiating vaccine conversations, the 'presumptive approach' is strongly associated with vaccine acceptance.[20-22] This approach assumes that the client is accepting of vaccination, and uses language such as 'I see that Lebo is now 6 weeks old, so today we are going to administer the vaccines scheduled for 6 weeks of age'. In contrast, using the 'participatory approach' or 'elective approach', as if you expect vaccination to be a shared decision between you and your client, is strongly associated with vaccine delay or refusal.[20-22] For example, if you say 'I see that Lebo is now 6 weeks old. Should we vaccinate her with the vaccines scheduled for 6 weeks of age today?' Lebo's caregiver may assume that you are not so sure about the value of vaccination and may rather want to either postpone or refuse vaccination.

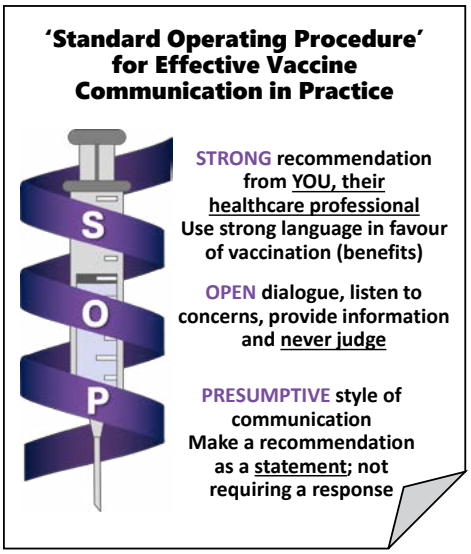


Figure 3: 'Standard Operating Procedure' for effective vaccine communication in practice

Open dialogue, listening and sharing information

When clients lack confidence in vaccines or perceive that vaccine side-effects are a greater risk to themselves/their children than the disease itself, they may decline vaccination. In this scenario, your immediate response should be what has been termed 'humble inquiry and compassionate listening'.[23] This response is supported by evidence from research on an intervention known as 'motivational interviewing,' the first steps of which are to enter into a trustful relationship with your client where they feel free to share their views without fearing judgement, allowing you to gain an understanding of exactly why they don't want to vaccinate themselves/their children.[24]

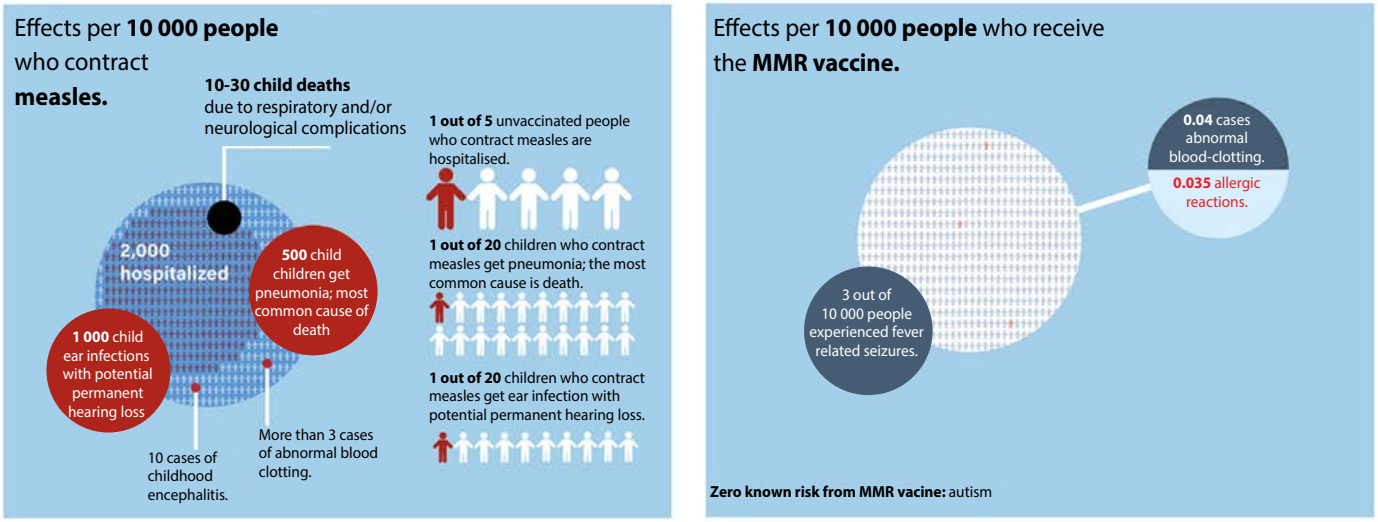
The next step is to offer information,[24] bearing in mind that transparency in providing information about the risk-benefit balance of vaccines shows respect for your client's autonomy[24] and builds trust.[26,27] While the emphasis should be on communicating scientific evidence and consensus on vaccine safety and effectiveness, acknowledging uncertainty and risk is also important for building trust and reducing vaccine hesitancy.[25-27] In addition, explaining the risks of the disease versus the risks of vaccine side effects with graphical aids as illustrated in Figure 4, has been shown to increase vaccine acceptance.[28] However, avoid fear-mongering or scare tactics, such as describing or showing photos of children with VPDs, as this may backfire and increase vaccine hesitancy.[26]

When debunking misinformation, use language that is easily understood by lay people, and avoid jargon and scientific terms.[29] Care must be taken to avoid strengthening belief in misinformation by needlessly repeating it, and always end the explanation with the fact; stating the fact at the end makes it easier to remember.[29]

Strong recommendation for vaccination

Furthermore, research has shown that strongly recommending vaccination is strongly associated with subsequent vaccine acceptance.[20-22] Also, communication emphasising the personal benefits of vaccination is strongly associated with vaccine acceptance.[26,27,30] In this regard, sharing your own personal stories of yourself or your family members being fully vaccinated and healthy, can be very powerful.[23,29]

Finally, while the above approach is highly likely to result in a happy ending, with your client accepting vaccination, if in the end your client is still reluctant to vaccinate, you need to respect



Comparing the risk of 10 000 children acquiring measles (left) versus receiving the measles-mumps-rubella (MMR) vaccine. A new original figure modified from.[9] Artwork by Fahim Akbar.[28]

Figure 4: Example of a graphical aid to explain VPD risks versus vaccine side effects risks[28]

their decision and leave the door open. This builds further trust, allowing the vaccination discussion to continue during future consultations.[24]

Conclusion

To recap, vaccine hesitancy, described as 'a state of indecision and uncertainty about vaccination before a decision is made to act (or not act),' is a major threat to global public health because it has resulted in a downward trend in vaccine coverage, resulting in VPD outbreaks. Understanding the drivers of vaccination behaviour, how and why vaccine confidence is on the decline and the reasons why people are vaccine hesitant, is important for communication and behaviour change interventions. Effective vaccine communication in practice should be based on three main principles: Initiate the vaccination conversation using the presumptive approach; provide a strong recommendation for vaccination highlighting personal benefits; and maintain open dialogue, listen, provide information and be non-judgemental. These principles have been summarised in Figure 3 and can be remembered as the SOP: Strong recommendation, Open dialogue and Presumptive approach.

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