

Summary WHO SAGE conclusions and recommendations on Vaccine Hesitancy

Vaccine hesitancy is a complex and rapidly changing global problem that requires ongoing monitoring. WHO definition of vaccine hesitancy:

Vaccine hesitancy refers to delay in acceptance or refusal of vaccines despite availability of vaccination services. Vaccine hesitancy is complex and context specific varying across time, place and vaccines. It includes factors such as complacency, convenience and confidence.

Understanding hesitancy

Addressing vaccine hesitancy within a country and/or subgroup requires an understanding of the magnitude and setting of the problem, diagnosis of the root causes, tailored evidence-based strategies to address the causes, monitoring and evaluation to determine the impact of the intervention and whether vaccine acceptance has improved, and ongoing monitoring for possible recurrence of the problem.

When addressing vaccine hesitancy, it must be noted that there are many determinants of vaccine hesitancy. WHO grouped these determinants into contextual, individual and group influences and vaccine/vaccination specific issues. (See Table 1) Countries need to adequately assess which underlying determinant(s) is the factor driving vaccine hesitancy in their setting.

Resources for assessing and addressing hesitancy

A compendium of survey questions to assess the underlying determinant of vaccine hesitancy was developed by the SAGE Working Group, though the need remains for countries to validate these questions in low, middle and high income settings¹. If doing so, findings should be shared to help inform future development of such tools.



One of other potentially promising tools is the WHO EUR Guide to Tailoring Immunization Program (TIP). The TIP framework helps to a) Identify and prioritize vaccine hesitant populations and subgroups, b) Diagnose the demand and supply-side barriers to vaccination in these populations, c) Design evidence-informed responses to vaccine hesitancy appropriate to the setting, context and hesitant population². This framework is currently being adapted for global use.

There is no single intervention strategy that addresses all instances of vaccine hesitancy. Based on the Systematic Review of Strategies to Address Vaccine Hesitancy, the most effective interventions addressing the outcome of vaccination uptake are multi-component interventions versus single-component. These interventions should be dialogue-based and directly targeted at the unvaccinated or under-vaccinated populations and the specific populations (e.g., local community, HCW).

¹ http://www.who.int/immunization/sage/meetings/2014/october/2_SAGE_Appendices_Background_final.pdf?ua=1

² http://www.euro.who.int/_data/assets/pdf_file/0003/187347/The-Guide-to-Tailoring-Immunization-Programmes-TIP.pdf

The interventions should address the specific determinants underlying vaccine hesitancy. Strategies may include:

- Engagement of religious or other influential leaders to promote vaccination in the community
- Social mobilisation
- Mass media
- Improving convenience and access to vaccination
- Mandating vaccinations / sanctions for non-vaccination
- Employing reminder and follow-up
- Communications training for HCW
- Non-financial incentives
- Aim to increase knowledge, awareness about vaccination

Considerations for countries

Immunization programs need to incorporate the ones that fit their setting and resources into their program in order to support vaccine uptake.

Countries need to take into consideration that in low vaccine uptake situations, where lack of available services is the major factor impairing adequate vaccination coverage, vaccine hesitancy can be present but is not the priority to address and should not be the focus of their resources.

Countries should incorporate a plan to measure and address vaccine hesitancy into their country's immunization program as part of good program practices, using and validating the compendium of potential vaccine hesitancy survey questions as one of other possible tools as this facilitates inter-country comparisons. Countries should further undertake education and training of health care workers to empower these to address vaccine hesitancy issues in patients and parents. In addition, vaccine hesitant behaviours within health care workers should be addressed.

Relevant training, of nursing, medical and other health care professional students, needs to be included into academic curricula. Educating younger individuals about vaccines could shape future vaccine beliefs and behaviour. As part of good immunization program practice, civil society organizations, local communities and health care workers need to be involved in supporting vaccination programs, in enhancing demand for vaccination and in helping to address vaccine hesitancy depending upon the underlying factors. Country information on vaccine hesitancy and lessons learned should be shared among member states. In addition National Immunization Technical Advisory Groups (NITAGs) may be a valuable resource to address vaccine hesitancy and should give consideration to issues of vaccine hesitancy in their country.

Based on the recommendations of the SAGE Working Group, efforts are now underway to define and develop any additional tools to help understand and develop interventions on hesitancy.

For more information, see the report of the WHO SAGE Vaccine Hesitancy Working Group.³

³http://www.who.int/immunization/sage/meetings/2014/october/1_Report_WORKING_GROUP_vaccine_hesitancy_final.pdf?ua=1

Table.1 A model to identify determinants of vaccine hesitancy

CONTEXTUAL INFLUENCES	a.Communication and media environment	b. Influential leaders, gatekeepers and anti- or pro-vaccination lobbies	c.Historical influences	d.Religion/culture/gender/socio-economic	e. Politics/policies (Mandates)	f.Geographic barriers	g.Pharmaceutical industry
<p>Influences arising due to historic, socio-cultural, environment al, health system/institutional, economic or political factors</p>	<p><i>Media and social media can create a negative or positive vaccine sentiment and can provide a platform for lobbies and key opinion leaders to influence others; social media allows users to freely voice opinions and experiences and it can facilitate the organization of social networks for or against vaccines .</i></p>	<p><i>Community leaders and influencers, including religious leaders in some settings, celebrities in others, can all have a significant influence on vaccine acceptance or hesitancy.</i></p>	<p><i>Historic influences such as the negative experience of the Trovan trial in Nigeria can undermine public trust and influence vaccine acceptance, as it did for polio, especially when combined with pressures of influential leaders and media. A community's experience isn't necessarily limited to vaccination but may affect it.</i></p>	<p><i>A few examples of the interplay of religious/cultural influences include:</i></p> <p><i>Some religious leaders prohibit vaccines</i></p> <p><i>Some cultures do not want men vaccinating children</i></p> <p><i>Some cultures value boys over girls and fathers don't allow children to be vaccinated),</i></p>	<p><i>Vaccine mandates can provoke vaccine hesitancy not necessarily because of safety or other concerns, but due to resistance to the notion of forced vaccination</i></p>	<p><i>A population can have general confidence in a vaccine and health service, and be motivated to receive a vaccine but hesitate as the health center is too far away or access is difficult.</i></p>	<p><i>Industry may be distrusted and influence vaccine hesitancy when perceived as driven only by financial motives and not in public health interest; This can extend to distrust in government when perceived that they are also being pushed by industry and not transparent.</i></p>

<p><u>INDIVIDUAL and GROUP INFLUENCES</u> Influences arising from personal perception of the vaccine or influences of the social/peer environment</p>	<p>a. Experience with past vaccination</p> <p><i>Past negative or positive experience with a particular vaccination can influence hesitancy or willingness to vaccinate. Knowledge of someone who suffered from a VPD due to non-vaccination may enhance vaccine acceptance. Personal experience or knowledge of someone who experienced an AEFI can also influence hesitancy.</i></p>	<p>b. Beliefs, attitudes about health and prevention</p> <p><i>Vaccine hesitancy can result from 1) beliefs that vaccine preventable diseases (VPD) are needed to build immunity (and that vaccines destroy important natural immunity) or 2) beliefs that other behaviors (breastfeeding, traditional/alternative medicine or naturopathy) are as or more important than vaccination to maintain health and prevent VPDs.</i></p>	<p>c. Knowledge/awareness</p> <p><i>Decisions to vaccinate or not are influenced by a number of the factors addressed here, including level of knowledge and awareness. Vaccine acceptance or hesitancy can be affected by whether an individual or group has accurate knowledge, a lack of information, or misperceptions due to misinformation. Accurate knowledge alone is not enough to ensure vaccine acceptance, and misperceptions may cause hesitancy, but still result in vaccine acceptance.</i></p>	<p>d. Health system and providers-trust and personal experience.</p> <p><i>Trust or distrust in government or authorities in general, can affect trust in vaccines and vaccination programmes delivered or mandated by the government. Past experiences that influence hesitancy can include system procedures that were too long or complex, or personal interactions were difficult.</i></p>	<p>e. Risk/benefit (perceived, heuristic)</p> <p><i>Perceptions of risk as well as perceptions of lack of risk can affect vaccine acceptance. Complacency sets in when the perception of disease risk is low and little felt need for vaccination. E.g. Patient's or caregiver's perceptions of their own or their children's risk of the natural disease or caregivers' perceptions of how serious or life threatening the VPD is.</i></p>	<p>f. Immunisation as a social norm vs. not needed/harmful</p> <p><i>Vaccine acceptance or hesitancy is influenced by peer group and social norms</i></p>
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<p>VACCINE/ VACCINATION -specific issues</p> <p>Directly related to vaccine or vaccination</p>	<p>a. Risk/ Benefit (scientific evidence)</p> <p><i>Scientific evidence of risk/benefit and history of safety issues can prompt individuals to hesitate, even when safety issues have been clarified and/or addressed e.g. suspension of rotavirus vaccine due to intussusception; Guillain-Barre syndrome following swine flu vaccine (1976) or narcolepsy (2011) following (A)H1N1 vaccination; milder, local adverse events can also provoke hesitancy.</i></p>	<p>b. Introduction of a new vaccine or new formulation</p> <p><i>Individuals may hesitate to accept a new vaccine when they feel it has not been used/tested for long enough or feel that the new vaccine is not needed, or do not see the direct impact of the vaccine (e.g. HPV vaccine preventing cervical cancer). Individuals may be more willing (i.e. not complacent) to accept a new vaccine if perception of the VPD risk is high.</i></p>	<p>c. Mode of administrati on</p> <p><i>Mode of administration can influence vaccine hesitancy for different reasons. E.g. oral or nasal administrations are more convenient and may be accepted by those who find injections fearful or they do not have confidence in the health workers skills or devices used.</i></p>	<p>d. Design of vaccination program/Mo de of delivery</p> <p><i>Delivery mode can affect vaccine hesitancy in multiple ways. Some parents may not have confidence in a vaccinator coming house-to-house; or a campaign approach driven by the government. Alternatively if a health centre is too far or the hours are inconvenient</i></p>	<p>e. Reliability and/or source of vaccine supply</p> <p><i>Individuals may hesitate if they do not have confidence in the system's ability to provide vaccine(s) or might not have confidence in the source of the supply (e.g. if produced in a country/culture the individual is suspicious of) ; health workers may also be hesitant to administer a vaccine (especially a new one) if they do not have confidence that the supply will continue as it affects their clients trust in them. Caregivers may not have confidence that a needed vaccine and or health staff will be at the health facility if they go there.</i></p>	<p>f. Vaccination schedule</p> <p><i>Although there may be an appreciation for the importance of preventing individual vaccine preventable diseases, there may be reluctance to comply with the recommended schedule (e.g. multiple vaccines or age of vaccination). Vaccination schedules have some flexibility that may allow for slight adjustment to meet individual needs and preferences. While this may alleviate hesitancy issues, accommodating individual demands are not feasible at a population level.</i></p>	<p>g. Costs</p> <p><i>An individual may have confidence in a vaccine's safety and the system that delivers it, be motivated to vaccinate, but not be able to afford the vaccine or the costs associated with getting themselves and their child(ren) to the immunization point. Alternatively, the value of the vaccine might be diminished if provided for free.</i></p>	<p>h. Role of healthcare professionals</p> <p><i>Health care professionals (HCP) are important role models for their patients; if HCPs hesitate for any reason (e.g. due to lack of confidence in a vaccine's safety or need) it can influence their clients' willingness to vaccinate</i></p>
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