



## Commentary

## Unpacking Vaccine Hesitancy Among Healthcare Providers

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Vaccine hesitancy – which refers to “delays in acceptance or refusal of vaccination despite availability of vaccination services” – is a growing concern worldwide (MacDonald and SAGE Working Group on Vaccine Hesitancy, 2015). Vaccine hesitancy is increasingly being recognized as a barrier to immunization program success and healthcare providers are known to play a crucial role in fostering vaccine acceptance among the vaccine-hesitant (Leask et al., 2014). Healthcare providers are expected to be knowledgeable about the risks and benefits of vaccination, the risks of vaccine preventable diseases and to be able to communicate this information well to their patients. In this issue of EBioMedicine, Verger et al. present the findings of a questionnaire study of vaccination practices and attitudes among general practitioners in France (Verger et al., 2015). Up to 43% of the surveyed practitioners were not recommending vaccination to their target patients which, as noted by the authors, is a proxy for the practitioners own vaccine hesitancy. Many respondents disagreed with statements about the safety and usefulness of vaccines and a strong association between practitioners' reported recommendations and their own vaccination behavior was found (Verger et al., 2015). These findings underline a major barrier in addressing vaccine hesitancy: many healthcare providers are themselves vaccine-hesitant and therefore are unlikely to dispel their patients' concerns and doubts about vaccination.

Vaccine hesitancy among healthcare providers must be addressed as studies in high, middle and limited resource settings consistently have shown that the majority of parents look to their child's healthcare provider for information and advice on vaccine-preventable diseases, vaccines and the recommended schedule (Wheeler and Buttenheim, 2013; Favin et al., 2012). When providers are able to communicate effectively with parents about vaccine benefits and risks, the value and need for vaccinations and vaccine safety, parents are more confident in their decision (Opel et al., 2013). However, to do this well, providers need to be confident themselves about the safety, effectiveness and importance of vaccination. Previous studies have shown a strong association between healthcare providers' knowledge and attitudes about vaccines, their recommendations of vaccines to their patients and the vaccine uptake of their patients (Zhang et al., 2012). Although the majority of practitioners surveyed in Verger et al. study felt confident in their ability to explain vaccine utility and safety to their patients, many also held negative beliefs regarding vaccination (Verger et al., 2015). Thus the concern raised by the authors about how effectively

these practitioners can actually address the fears of their vaccine-hesitant patients is noteworthy and merits further investigations.

The Verger et al. study also highlights the important influence of risk perceptions and trust on healthcare providers' attitudes towards vaccines (Verger et al., 2015). As with the general public, risk perceptions can be influenced by emotions, values and worldviews much more than by evidences and facts (Brownlie and Howson, 2006). Up to one third of the French general practitioners' perceived risk of vaccines were more aligned with controversies spreading in the social context than with the scientific evidence. In the 1990s, concerns in France about a possible association between the hepatitis B vaccine and multiple sclerosis resulted in the suspension of the universal vaccination program, despite strong evidence from many studies showing no such association. This belief is peculiar to the French context and appears to still be influencing practitioners' risk perceptions and recommendations more than two decades later, as shown by Verger et al. (Verger et al., 2015) This also underlines the importance of trust in the policy-makers who decide about vaccination programs, in the medical authorities who develop recommendations and clinical guidelines and in the different types of information about vaccines. Healthcare practitioners' conviction when making vaccination recommendations to patients is influenced by their level of trust in these sources (MacDonald and SAGE Working Group on Vaccine Hesitancy, 2015).

Finally, the Verger et al. study reemphasizes that the factors leading to vaccine hesitancy vary by vaccines and are highly context-specific, complex and multidimensional, even among healthcare providers (Verger et al., 2015). Vaccine hesitancy is the result of influences at many levels: providers' knowledge, attitudes and beliefs about vaccination interact with, and are influenced by, broader organizational, political, cultural or historical factors (MacDonald and SAGE Working Group on Vaccine Hesitancy, 2015). Hence, not surprisingly, there is no evidence of a unique solution to fix vaccine hesitancy in healthcare providers. While ensuring sufficient training in vaccinology in the curricula of future healthcare providers is certainly a worthwhile step for future longer term gain, it does not address the current problem. In the interim, providing more information about vaccination benefits and safety to healthcare providers is unlikely to be successful as knowledge alone is not enough to shift vaccine-hesitant beliefs (Henrikson et al., 2015). Only with a better understanding of the underlying individual, structural and contextual determinants of vaccine hesitancy among these hesitant healthcare providers can effective tailored responses be designed (World Health Organization, 2013).

Given the critical role healthcare providers play in stimulating vaccine acceptance among hesitant patients, and the frequency of the general practitioners' vaccine hesitancy shown in the Verger et al. study

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(Verger et al., 2015), failure to address practitioners' hesitancy leaves France's immunization programs at significant risk. This system flaw must be forcefully attended to if vaccination programs are to grow and hesitancy in the community curbed. Healthcare providers' vaccine hesitancy is likely occurring at significant levels in many other countries. Studies are needed to determine the prevalence and causes of healthcare providers' hesitancy, followed by implementation of tailored interventions and evaluation to determine what strategies work best in what contexts and with what concerns.

### Disclosure

No competing interests to declare.

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