Improving vaccination coverage among healthcare workers in Italy

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In 2011, the Centers for Disease Control and Prevention (CDC) included vaccination among the Ten Great Public Health Achievements of the 20th century [1]. Despite vaccination is widely considered as an effective and cost-effective intervention, the lack of knowledge, and awareness, misinformation and mistrust for health authorities among citizens are currently representing a key public health challenge.

The 'Vaccine hesitancy' phenomenon, which is a behavior of delay in acceptance or refusal of vaccination [2], is also widespread among healthcare workers (HCWs) as recently confirmed by two recent literature reviews [3,4]. Health organizations and government bodies identified HCWs as a priority group for receiving vaccinations [5-8]. In fact, a high vaccination coverage among HCWs brings the potential to reduce the risk of morbidity and mortality of health care facilities' patients [9], decrease staff illness and absenteeism [10] and reduce costs resulting from loss of productivity [11].

In Italy a seasonal flu uptake proportion of 16% has been reported among HCWs in 2012-2013 [12]. A low vaccination coverage has also been reported from Apulia Region for vaccinations against hepatitis B (70.1%), Measles-Mumps-Rubella (9.7%), varicella (3.6%), and tetanus-diphtheria booster (15.5%) [13]. Regarding other European countries, a recent study conducted by the WHO and ECDC reported higher vaccination rates (median 24.9%, range: 2.6% - 99.5%), although in the vast majority of the Countries included the vaccination coverage is below 40% [14]. Such a low uptake among HCWs represents a major concern for national healthcare organizations. This topic has also been recently discussed within a meeting of Public Health Academy (Accademia Romana di Sanità Pubblica - ARSP).

Although a study conducted by European Centre for Disease Prevention and Control (ECDC) in Croatia, France, Greece and Romania reported that most of the factors affecting vaccination uptake are country- and context-specific, a qualitative study reported that HCWs experience a lack of trust in health authorities and a mistrust in the vaccination safety [15]. These findings have been confirmed also in Italy, where a recent study among the HCWs reported as a main barrier against vaccination, the belief that pharmaceutical companies influence decisions about vaccination strategies [16]. In Italy, the Italian National Immunization Prevention Plan (PNPV) 2017-2019, in line with the latest available evidence [17], strongly recommends to HCWs to undergo vaccination against influenza and many other vaccine-preventable diseases such as Hepatitis B, Measles, Mumps, Rubella, Chickenpox, Tetanus, Diphtheria and Pertussis [18].

In 2017, according to the PNPV, a board of Italian experts that represents the main Italian Scientific Societies in the field, decided to set the relevance of improving vaccination in this setting by achieving a consensus. In a position paper, experts identified the main strategic pillars to pursuit in order to increase vaccination coverage among HCWs [19].

Both PNPV and "The Pisas' Paper of Vaccinations", have the dual objective of protecting both health professionals and patients. Unlike vaccinations for children though, which became mandatory in Italy following the introduction of Law 119/2017 [20], vaccinations recommended for HCWs did not became compulsory by Law so that professionals are not obliged to be vaccinated. This implies that in case of low vaccination coverage, nosocomial outbreaks may still occur.

To overcome this issue, two Italian Regions, Marche and Emilia-Romagna, decided to make the vaccination a necessary requirement for the health assessment performed by the occupational medicine, so that the fitness for work depends on the vaccination status. The relevance of these Regional resolutions is that they are based upon the national Law on workers' health and safety at workplace [21]. These resolutions, however, do not take into account the risk of acquiring the infection from the sight of the patient, while to the sight of the worker. The onset of several nosocomial outbreaks (e.g. from measles) caused by unvaccinated HCWs calls for a change in this approach. From this perspective the Law 8 March 2017, n. 24, on the clinical risk and the professional responsibility, is expected to play an important role in the future [22].

However, a decision-making level intervention, even if desirable, should always be part of a multi-faceted intervention, as advocated by WHO [5], and this is testified by a wide series of implementation strategies carried out in the Latium Region in Italy. Bambin Gesù Hospital in Rome offers an example of an effective vaccination intervention. Based on the relevance of the "work health promotion" and on the principle of the "return of prevention intervention", the Occupational Medicine Department handled the issue of the low uptake from a "risk management" perspective achieving remarkable results. In addition to fixed and on-site vaccine stations, they took advantage of the worker's surveillance visit to actively offer vaccines to HCWs. They also provided incentives, pushing HCWs to be engaged in positive competitions, and defined a well-informed communication campaign addressed to the different stakeholders' hospital [23].

Other studies demonstrated that good results in terms of vaccination coverage among HCWs might be achieved by targeting their acceptance. It is the case of a large tertiary academic hospital in Rome, where some strategies were put in place aimed at overcoming organizational barriers and empowering stakeholders by promoting participative strategies. To foster the HCWs access to vaccination and engagement regarding flu vaccination different interventions were implemented, including the on-site vaccination, and a Forum Theater initiative in the [24, 25].

In conclusion, this scenario suggests that a lack of knowledge and awareness about vaccine safety and efficacy as well as a skepticism among HCWs represents a major challenge for vaccination uptake also among HCWs. About the implementation of effective strategies, several gaps still need to be filled. The interplay between normative aspects, worker safety and professional responsibility and the lack of updated and trustable data by creating an information immunization system, appear to be particularly relevant. Nevertheless, the case of Marche and Emilia-Romagna Region and studies from Lazio Region showed that promising results can be achieved if proactive and effective evidence-based strategies are implemented together with a strong governance for health that aim at fostering vaccination uptake among HCWs.

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