

# Letter to the editor. Spotlight on measles 2010: Measles in healthcare workers – vaccination should be revisited

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**To the editor:** In the light of the current outbreak of measles in France reported by Parent du Chatelet *et al.* [1], we would like to report a case of hospital-acquired measles in a nurse who had not received the measles-mumps-rubella (MMR) vaccine. Working in our department of infectious diseases, she was infected in spite of barrier measures.

On 8 August 2010 a woman in her 20s was admitted to our department with a maculopapular rash associated with high-grade fever and cough. The cause was rapidly laboratory-confirmed as measles. From the moment of her admission in our ward to her discharge on 13 August she was confined to a single room and respiratory isolation measures were in place. As of 9 August, a nurse in her 20s took care of the patient using protective personal equipment including an FFP2 facial mask and alcohol-based hand rub.

Thirteen days after the first contact with the patient, the nurse presented with fever and four days later developed a maculopapular rash. She was laboratory-confirmed with measles which was complicated by keratitis. Following a 15-day sick leave the nurse recovered. She had had no contact with a case of measles in the community. A survey of other members of staff and patients in contact with the nurse was carried out. No other secondary cases of measles were described. One medical student without immunity to measles was vaccinated. It was not possible to establish a molecular link between the viruses in our two cases as all the measles virus genotypes circulating during the current local outbreak were identical.

The case reported here is noteworthy because an unvaccinated nurse trained in infectious diseases contracted measles in spite of efficient use of respiratory protective measures and alcohol-based hand rub. A recrudescence of measles is currently occurring in France, especially among children and young adults, due to insufficient vaccine coverage in these population groups [1]. Consequently young healthcare workers (HCW) are at risk of occupational measles if they are not immunised. In the literature, nosocomial transmission of measles from HCW to patients and from patients to unimmunised HCW has been reported

[2,3]. Indeed measles is a highly contagious disease with a basic reproduction number ranging from 7.7 to 15 [4], as the transmission airborne droplets leads to a high risk of infection for unvaccinated or not naturally immunised individuals even if isolation measures are correctly applied. Vaccination is the only reliable protection against nosocomial spread of measles. Reports of susceptibility to measles showed a high level of immunity, including natural immunity, among HCW in Europe [5]. Therefore, even if the prevalence of non-immune HCW seems to be low, the low uptake of MMR immunisation and the increase in measles outbreaks [1] may increase the risk of nosocomial transmission. .

It should be mandatory to identify non-immune HCW and offer them vaccination. Only HWC who are vaccinated or willing to be vaccinated should be recruited to work on medical wards, especially high risk wards such as infectious disease, emergency room, paediatric, maternity and oncology wards. This recommendation should also extend to medical students who are often poorly protected against vaccine-preventable diseases as seen in our case.

If mandatory vaccination is not possible in France as we saw during the 2009 influenza pandemic, a strategy of voluntary vaccination for HCW should be rapidly implemented in hospitals, especially in high risk areas and even on infectious disease wards where isolation barriers are usually used carefully.

## References

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