

O0679 Susceptibility of healthcare workers to measles, mumps, rubella and varicella

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Background: To prevent infection in susceptible employees and to reduce the likelihood of nosocomial transmission to patients, non-immune healthcare workers (HCWs) should be vaccinated against measles, mumps, rubella and varicella. We report susceptibility to vaccine-preventable diseases and vaccination adherence among 2,700 healthcare workers employed in four hospital of ASST of Lodi, in Lombardia, a Northern Italian Region.

Materials/methods: HCWs susceptibility was established with serologic screening, not history. Between August 2017 and February 2018 workers from the ASST of Lodi were asked to submit blood samples. Collected sera were tested using commercial ELISA for anti-measles, mumps, rubella and varicella IgG (Enzygnost, Dade Behring). Antibody levels were reported as positive, equivocal or negative. Vaccinations with proQuad, Priorix or Varivax were proposed to susceptible HCWs (i.e., those with equivocal or negative IgG results).

Results: A total of 2204/2610 HCWs were tested with an adherence rate (AR) to the screening protocol of 84%, comprising 1487 nursing staff and laboratory technicians (AR of 89%), 298 medical staff (AR of 66%), and 198 administrative personnel (AR of 89%); 70% were females and 30% males. The age ranged from 23 to 70 years (mean 39) including 168 workers born before 1957. Of the employees examined, 95.7% were immune to measles, 89% to mumps, 95.5% to rubella, 97.2% to varicella. 180 HCWs were non-immune to at least one disease (6.9%), 12 (0.4%) participants were negative for both mumps and measles and 9 (0.3%) were negative for both mumps and rubella. Eventhough participants born before 1957 were not all positive, they had a higher prevalence of immunity. Seroprevalence resulted higher among HCWs employed in infectious disease and pediatric departments. Among susceptible HCWs vaccination rate was of 58%. Susceptible nurses were more likely to be immunized than other professionals belonging to other categories. The total cost of screening ad vaccination was 23,000 Euros.

Conclusions: Our findings in healthcare staff of four Italian hospitals support data from other European countries. Immunization rates are high, but an important proportion of employees is not immune to mumps. Vaccine adherence in susceptible HCWs is suboptimal.