

## Emergenza COVID-19 e operatori sanitari.

**Childhood vaccination remains the focus of heated public debate. Parents struggle to understand the potential risks associated with vaccination but both parents and physicians assume that they understand the risks associated with infection. This study was done to characterise how modern vaccination practices have altered patient risks from infection.**

**Methods** In this modelling study, we use mathematical analysis to explore how modern-era vaccination practices have changed the risks of severe outcomes for some infections by changing the landscape for disease transmission. We show these effects using published data from outbreaks in the USA for measles, chickenpox, and rubella. Calculation of risk estimation was the main outcome of this study.

**Findings** Our calculations show that negative outcomes are 4·5 times worse for measles, 2·2 times worse for chickenpox, and 5·8 times worse for rubella than would be expected in a pre-vaccine era in which the average age at infection would have been lower.

**Interpretation** As vaccination makes preventable illness rarer, for some diseases, it also increases the expected severity of each case. Because estimates of case risks rely on data for severity generated during a pre-vaccine era they underestimate negative outcomes in the modern post-vaccine epidemiological landscape. Physicians and parents should understand when making decisions about their children's health and safety that remaining unvaccinated in a predominantly vaccine-protected community exposes their children to the most severe possible outcomes for many preventable diseases.

Quale applicativo Microsoft office consente di creare presentazioni?

## Operatori sanitari e zoonosi. Tipologie di intervento.

**Background.** Many studies assume that the serologic correlate of protection from measles disease is 120 mIU/mL. We systematically reviewed the literature to examine the evidence supporting this correlate of protection.

**Methods.** We searched peer-reviewed and gray literature for articles reporting a measles correlate of protection. We excluded studies focusing on special populations, infants aged <9 months, and those using animal models or nonstandard vaccines or administration routes. We extracted and synthesized data from full-text articles that met inclusion criteria.

**Results.** We screened 14 778 articles and included 5 studies in our review. The studies reported either preexposure antibody concentrations of individuals along with a description of symptoms postexposure, or the proportion of measles cases that had preexposure antibody concentrations above a threshold of immunity specified by the authors. Some studies also described secondary antibody responses upon exposure. The variation in laboratory methods between studies made comparisons difficult. Some of the studies that assumed 120 mIU/mL as a correlate of protection identified symptomatic individuals with preexposure titers exceeding this threshold.

**Conclusions.** Our findings underscore the scant data upon which the commonly used 120 mIU/mL measles threshold of protection is based, suggesting that further work is required to characterize the measles immunity threshold.

A cosa serve la funzione salva? Si utilizza solo al termine della creazione dell'intero lavoro?

## Il monitoraggio della tubercolosi latente.

This case study is part of a series centered on the Centers for Disease Control and Prevention/National Healthcare Safety Network (NHSN) health care-associated infection (HAI) surveillance definitions. This specific case study focuses on the definitions and protocols used to make HAI infection determinations, such as the infection window period and secondary bloodstream infection attribution period. The case reflects the real-life and complex patient scenarios that infection preventionists (IPs) face when identifying and reporting HAIs to NHSN. The intent of the case study series is to foster standardized application of the NHSN HAI surveillance definitions among IPs and encourage accurate determination of HAI events. An online survey link is provided where participants may confidentially answer questions related to the case study and receive immediate feedback in the form of correct answers and explanations and rationales. Details of the case study, answers, and explanations have been reviewed and approved by NHSN staff. We hope that participants take advantage of this educational offering and thereby gain a greater understanding of NHSN HAI surveillance definitions.

Quale applicativo Microsoft office consente di scrivere testi?

## La prevenzione e la riammissione al lavoro dell'operatore sanitario paziente oncologico.

*Summary:* The objective was to investigate the immune status against tetanus and diphtheria of health-care workers in Catalonia. A cross-sectional multicentre study was conducted in seven health centres. Blood samples were obtained, and demographic and clinical variables collected.

509 health workers were included. The prevalence of protective antibodies against tetanus was 94.7% (95% CI: 92.3–96.4) overall and 85.1% (95% CI: 74.5–92.0) in workers aged  $\geq 55$  years. The prevalence of protective antibodies against diphtheria was 68.6% (95% CI: 64.3–72.5%) overall and 29.7% (95% CI: 19.9–41.6) in workers aged  $\geq 55$  years.

Protection against tetanus in healthcare workers is high, but should be improved in workers aged  $\geq 55$  years. Protection against diphtheria has improved in healthcare workers over the past decade (68.6% vs 46.5%) but should be improved in all ages, especially in workers aged  $\geq 55$  years.

Quali categorie di destinatari contemplano i programmi di posta elettronica?

## Il morbillo e la prevenzione per gli operatori sanitari: come difendere l'operatore e il paziente.

### A B S T R A C T

Up to 20% of health care workers are considered as non-responders to hepatitis B vaccination (anti-HBs < 10 mIU/ml in serum). We have explored memory B cells differentiated in vitro into anti-HBs antibody-secreting cells (anti-HBs-SCs) by ELISPOT assay. Anti-HBs-SCs were detected in vaccinated responders ( $n = 11$ ) and non-responders ( $n = 10$ ) but IgG anti-HBs-SCs were significantly lower in the non-responder group ( $p < 0.001$ ). Low amounts of HBs antibodies were also quantified by ELISA in non-responders' sera. These results indicate that a suboptimal B cell response exists in non-responders to HBV vaccination. This B cell response may mediate a protection against clinically significant breakthrough hepatitis B infection.

Che cos'è un database?

Calendario vaccinale ai sensi del Decreto Lorenzin.

The majority of human emerging infectious diseases are zoonotic, with viruses that originate in wild mammals of particular concern (for example, HIV, Ebola and SARS)<sup>1-3</sup>. Understanding patterns of viral diversity in wildlife and determinants of successful cross-species transmission, or spillover, are therefore key goals for pandemic surveillance programs<sup>4</sup>. However, few analytical tools exist to identify which host species are likely to harbour the next human virus, or which viruses can cross species boundaries<sup>5-7</sup>. Here we conduct a comprehensive analysis of mammalian host-virus relationships and show that both the total number of viruses that infect a given species and the proportion likely to be zoonotic are predictable. After controlling for research effort, the proportion of zoonotic viruses per species is predicted by phylogenetic relatedness to humans, host taxonomy and human population within a species range—which may reflect human-wildlife contact. We demonstrate that bats harbour a significantly higher proportion of zoonotic viruses than all other mammalian orders. We also identify the taxa and geographic regions with the largest estimated number of ‘missing viruses’ and ‘missing zoonoses’ and therefore of highest value for future surveillance. We then show that phylogenetic host breadth and other viral traits are significant predictors of zoonotic potential, providing a novel framework to assess if a newly discovered mammalian virus could infect people.

Come può un computer essere esposto ad un virus?

## Un programma di promozione della salute per ridurre il sovrappeso degli operatori sanitari.

**Background:** The studies enumerating the risk of HIV transmission to health care workers (HCWs) as 0.3% after percutaneous exposure to HIV-positive blood, and 0.09% after a mucous membrane exposure, are weakened by dated literature. Our study aims to demonstrate the seroconversion rate after exposure to HIV-contaminated body fluids in a major academic center in the United States.

**Methods:** A prospectively maintained database of reported occupational injuries occurring between 2002 and 2015 at an academic medical center was analyzed. Data collected included the type of injury, injured body part, type of fluid, contamination of sharps, involvement of resident physicians, use of postexposure prophylaxis, and patients' HIV, hepatitis B virus, and hepatitis C virus status.

**Results:** A total of 266 cases were included in the study. Most exposures were caused by percutaneous injuries (52.6%), followed by 43.2% mucocutaneous injuries. Of the injuries, 52.6% were to the hand and 33.5% to the face and neck. Blood exposure accounted for 64.3% of all cases. Of the patients, 21.1% received postexposure prophylaxis. None of the HCWs exposed to HIV-contaminated body fluids seroconverted (seroconversion rate, 0%).

**Conclusions:** HIV does not seem to be as easily transmitted by needlestick, laceration, or splash injuries as previously surmised. Further large-scale and multicenter studies are needed for a more accurate estimation of the risk of transmission of HIV in U.S. health care workers.

Quale applicativo Microsoft office consente di creare tabelle e grafici?

Un programma di prevenzione della salute per ridurre il tasso di colesterolo negli operatori sanitari.

*Vaccine refusal occurs for a variety of reasons. In this article we examine vaccine refusals that are made on conscientious grounds; that is, for religious, moral, or philosophical reasons. We focus on two questions: first, whether people should be entitled to conscientiously object to vaccination against contagious diseases (either for themselves or for their children); second, if so, to what constraints or requirements should conscientious objection (CO) to vaccination be subject. To address these questions, we consider an analogy between CO to vaccination and CO to military service. We argue that conscientious objectors to vaccination should make an appropriate contribution to society in lieu of being vaccinated. The contribution to be made will depend on the severity of the relevant disease(s), its morbidity, and also the likelihood that vaccine refusal will lead to harm. In particular, the contribution required will depend on whether the rate of CO in a given population threatens herd immunity to the disease in question: for severe or highly contagious diseases, if the population rate of CO becomes high enough to threaten herd immunity, the requirements for CO could become so onerous that CO, though in principle permissible, would be de facto impermissible.*

Cosa succede quando per errore si elimina un file? Si può recuperare?



## Come programmare gli accertamenti sanitari a norma del D. Lgs 81/08.

*Background:* The risk of transmission of bloodborne pathogens, including hepatitis B virus (HBV) to healthcare workers (HCWs) is well known. In 2005 we performed a survey on HBV prevention in HCWs in the European Union (EU). An update of the 2005 survey deemed necessary as an EU Council Directive (2010/32/EU) on sharps injuries was to be implemented into national legislation by 11 May 2013 and more countries were starting universal HBV vaccination.

*Methods:* We performed an electronic survey in 2016, among national representatives from the Occupational Medicine section of the European Union of Medical Specialists (UEMS), to find out how policies have been put into practice in the European Union countries (plus Norway and Switzerland). The data were updated in 2019.

*Results:* Answers were received from 21 countries (among them 19 EU Member States), representing 78% of the population and 60% of HCWs in the EU-28. HBV vaccination was mandatory for medical and nursing staff in 10 countries; for other paramedical staff, medical and nursing students in 9 countries; for paramedical students in 8 countries; for cleaning staff in 7 countries; and for technical staff in 5 countries; it was recommended in all but one of other countries. Serotesting before vaccination was done in 7 countries. The vaccination schedule most often used was 0, 1, 6 months (18 countries), monovalent HBV vaccine was used in 14 countries, and combined (HAV + HBV) vaccine in 11 countries. Serotesting after vaccination was done in 18 countries and boosters were recommended in 14 countries. A non-responder policy was present in 18 countries. HBV vaccination coverage (5 countries) was 70–95%. Sharps injuries were reported in 13 countries, nationwide in 7 of them; European-wide reporting was not mentioned by respondents.

*Discussion:* These results show the variation in the implementation of EU legislation in the participating countries. More consultation between actors at EU level, including enhancing medical surveillance in occupational medicine could help to optimise policies in European countries in order to further reduce HBV transmission to HCWs.

## Quali sono le modalità di trasferimento dei dati fra diversi PC?