its name, nearly 30% of patients report no recognisable rat bite. Precise history-taking related to contact with rats and other rodents and detection of skin eruptions can be clues to diagnosis of this infection.

183 WORKPLACE INFLUENZA: TO BE VACCINATED OR NOT TO BE VACCINATED, THAT'S THE QUESTION FOR HEALTHCARE WORKERS – THE ETHICS-

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Introduction Seasonal influenza (SI) vaccination has been recommended for healthcare workers (HCWs) for many years. Despite decades of efforts to encourage HCWs to be immunised, vaccination uptake levels remain low. Most voluntary policies to increase vaccination rates among HCWs have not been very effective. How to close the gap between desired and current vaccination rates, that's the question. Whether (semi)mandatory vaccination policies (e.g., vaccination-required, vaccinate-or-mask, 'may not work during facility outbreaks' policies) are justified is an ethical issue.

Methods We explored the ethical, moral, empirical and evidential arguments for or against (mandatory) SI vaccination of HCWs in the literature (2011–2017). Neither the 'clinical' nor the 'public health' ethics frameworks resolve the question fully. Are the 'medical ethical principles' of beneficence (an action done to benefit others) and non-maleficence (one ought not to inflict evil or harm) sufficient enough to support mandatory influenza vaccination policies?

Results Recently 'components of justice' frameworks were also added to the ongoing ethical debate. HCWs remain bound by ethical principles of both beneficence and non-maleficence. It is very unlikely that purely voluntary programmes will achieve vaccination rates among HCWs that are sufficient to meet the ethical obligations of beneficence and non-maleficence. Although there is increasing evidence, that individuals are more inclined to get vaccinated if this benefits other, if their own costs are low.

Further studies documenting the impact of HCWs influenza vaccination outcomes on the patients' health, would inform decisions on the use of mandatory vaccine policies in HCWs. Despite the ongoing debate about the evidence, some governments and health care organisations have judged that the scientific evidence is sufficiently strong to justify (semi)mandatory vaccination policies for HCWs.

Discussion Gaining early and broad-based support from employers, employees, governmental administration, human resources, and occupational health appears to be important for development of a SI vaccine mandate.

185 WORKPLACE MEASLES: RISK ANALYSIS & MATERNITY PROTECTION – A REVIEW OF LITERATURE

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Introduction Measles is one of the most transmissible and highly communicable human infectious diseases known. It has a 90% secondary attack rate and the reproduction number is around 17. It is probably the most deadly of all childhood rash/fever illnesses. Since 2008 a rise in measles cases has been reported with outbreaks in 36 European countries.

Methods A review of literature generated 85 articles of interest and were consulted for this review.

Result Risk analysis shows that schools play a crucial role in the transmission chain of measles. At highest risk are infants under one year of age, adolescents and young adults. The risk is the highest in the part of the population that typically constitutes the engine of airborne transmission through social contacts at child-care, school, and within and between households. A catch-up campaign focusing all young adults and school personnel is necessary to achieve elimination in the short term. Health care workers (HCWs) are at substantially higher risk (2–13 times) than the general population for becoming infected with measles. Waning immunity in these HCWs will increase the risk of nosocomial infections. Nosocomial outbreaks are also exacerbated by atypical presentations of the disease.

Pregnant women with measles had significantly higher risks of adverse maternal, fetal, and neonatal outcomes like sudden spontaneous abortions, stillbirth, early fetal death, and premature deliveries. Measles in pregnancy is complicated by a high maternal morbidity and mortality rate.

Discussion To achieve 'herd immunity', more than 95% of the community must be vaccinated with 2 doses. For those unprotected, in doubt about clinical measles in anamnesis, in doubt about vaccination status or undocumented vaccination with 2 doses of measles containing vaccination, it is necessary to provide two doses with an interval of one month. Special focus on young adults among kindergarten, (pre)school personnel and HCWs is necessary.

1553 INFLUENZA INFECTION AND IMMUNISATION COVERAGE AMONG HEALTHCARE PROFESSIONALS IN NATIONAL GUARD HOSPITAL, WESTERN SAUDI ARABIA

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Introduction Burden of influenza infection among healthcare professionals (HCPs) is high including transmission to high risk and severely-ill patients. This chart review aims is to record laboratory confirmed influenza cases and influenza immunisation coverage among HCPs in Ministry of National Guard hospital, a 500-bed tertiary care hospital, in western Saudi Arabia.

Methods Laboratory confirmed influenza cases among healthcare professionals from June 2014 – June 2017 were reviewed. Influenza immunisation and reasons of declining to receive the vaccine were recorded.

Results During the study period, 78 HCPs had laboratory confirmed influenza (9.1% of all confirmed cases). There were 18 HCPs with H1N1 (8.1%), 43 with influenza A (11.1%) and 17 with influenza B (6.8%). In the meantime, influenza immunisation coverage ranged from 33%–64% among physicians, 80%–93% among nurses and 32%–41% among paramedicals