



Infectious diseases in 2018

A summary report of the track on infectious diseases

at the 11th European Public Health conference 2018 in Ljubljana, Slovenia

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at



The 11th European Public Health conference was held 28 November-1 December 2018 in Ljubljana, Slovenia. This report summarises the key messages from the track on infectious diseases.

| Key Messages

1. Health authorities should not underestimate the role of media in fostering health messages and raising awareness of the importance of vaccinations.
2. Continuing cooperation at European level on vaccination is important.

The pictures in this report are taken at the conference. The content of this report represents the views of the author(s) only and it cannot be considered to reflect the views of the depicted persons.

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| Introduction

The European Public Health Conference gathered 1675 public health experts, professionals, researchers, and students from 72 countries. The programme includes ample opportunities for discussions during workshops, poster walks, pitch presentations, lunch breaks, and plenaries, encouraging an active and engaged atmosphere. The infectious diseases track focused on re-emerging infectious diseases, vaccines, healthcare-associated infections and outbreak preparedness. Overall, presentations related to immunization and vaccines focused on the determinants of vaccine uptake, vaccine hesitancy and confidence, vaccination strategies in high risk groups, immunization policies in different European countries, including discussion on mandatory vaccination, reporting on vaccine coverage and discussion on influenza, human papillomavirus, hepatitis B virus (HBV), measles, mumps, and rubella (MMR) vaccines.



Keynote by Professor Anne Johnson during plenary 3 'Public health resources - core capacities to address the threat of communicable diseases', 30 November 2018, Ljubljana, Slovenia.

| Vaccine confidence

Vaccination against a range of bacterial and viral diseases is a key tool in fighting the spread of infectious diseases. It provides protection to individuals and communities and decreases social and economic inequalities. Vaccination can lead to the elimination, and in some instance the complete eradication of certain diseases. The worldwide eradication of smallpox and the near eradication of polio in many countries are excellent examples of the role of vaccination in disease control.

Despite the availability of such an effective tool, vaccine confidence is an important issue in Europe. Recent epidemics of vaccine preventable diseases are directly linked to a drop in coverage and vaccine confidence. Europe is experiencing an outbreak of measles, as we learn from the European Centre of Diseases Control report, "between 1 December 2017 and 30 November 2018, 30 EU/EEA Member States reported 12 790 cases of measles, 8 949 (70%) of which were laboratory-confirmed. One country reported no cases. The highest number of cases were reported by France (2 921), Greece (2 634), Italy (2 548), Romania (1 346) and United Kingdom (984), accounting for 23%, 21%, 20%, 10% and 8% of all cases, respectively." ¹ See figure 1. Measles cases in Europe primarily occur in unvaccinated populations of both adults and children.

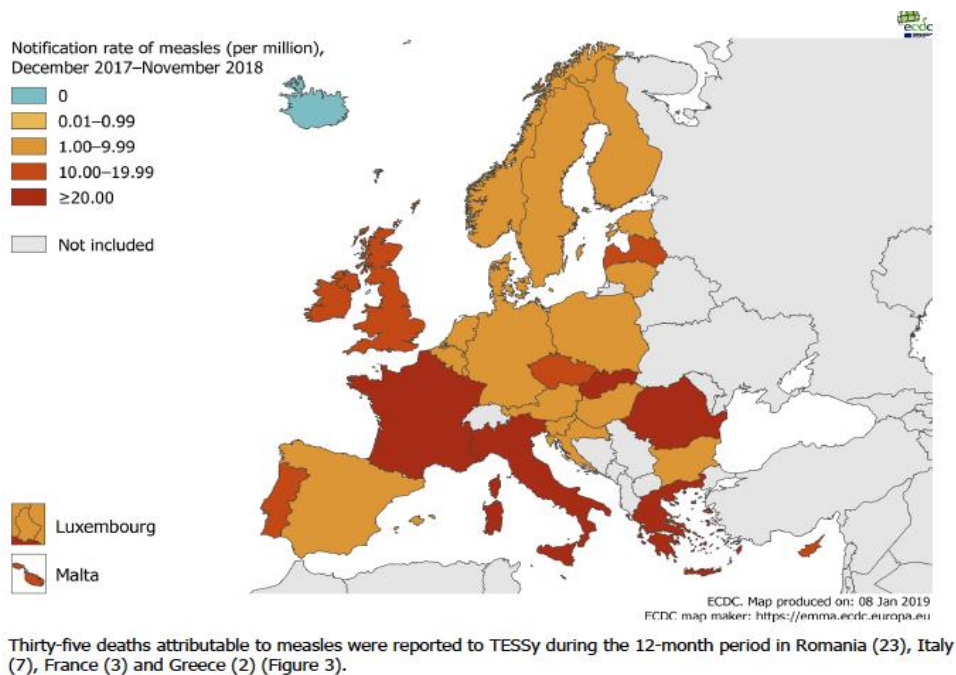
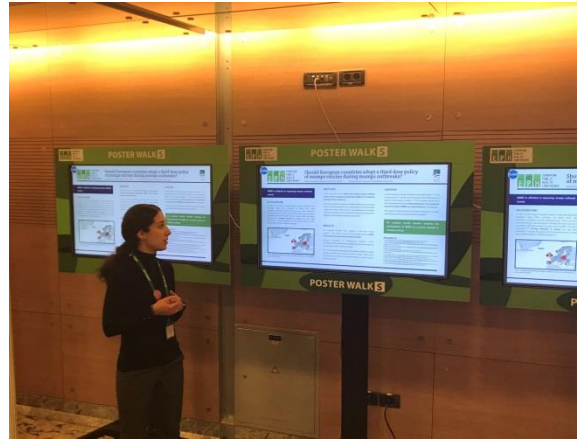


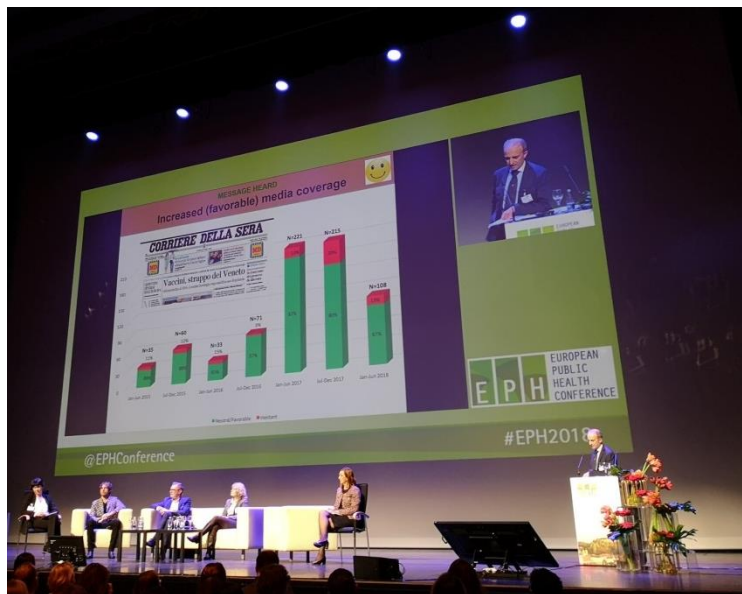
Figure 1. Notification rate of measles (per million), December 2017 – November 2018.

¹ ECDC, Monthly measles and rubella monitoring report. Period covered: 1 December 2017 to 30 November 2018,

Italy, reporting one of the highest number of cases of measles, (Immunization and media coverage in Italy: an eleven-year analysis (2007-17) M. Sao Miguel Morgado – Italy) took action in July 2017. After a long public debate, in July 2017, Italy ruled the vaccination plan adherence mandatory to be admitted in schools. The national press reported heavily on this law. An eleven-year analysis of vaccine-related topics published in the most widely read Italian newspaper, “Corriere della Sera”, showed a 150% increase in the mentions of vaccination (and related words). Since the law was approved, demonstrations against the compulsory program have arisen, and the so called “no-vax movements” raises doubts on healthcare professionals, accusing them to have economic interests in child immunization and inform only on vaccinations benefits instead of on risks.



Poster walk: Infectious diseases and vaccinations



Plenary session on the Italian media coverage on vaccination by Professor Carlo Signorelli.

Media play a crucial role in channelling health-related information and significantly influence health behaviours. People getting information from anti-vaccination websites are less likely to accept an immunization programme and are less likely to agree to compulsory vaccination. Public institutions, health authorities and the scientific community should not underestimate the opportunity to monitor media coverage and convey evidence-based health education messages through the social media.

Health authorities should not underestimate the role of media in fostering health messages and raising awareness of the importance of vaccinations.

In certain contexts, a mandatory vaccination programme can be an appropriate tool to increase adherence, but it is not a substitute the role of communication. Trust in health professionals is a main determinant of acceptance of mandatory vaccination. The role of doctors in recommending vaccinations, from general practitioners to specialists, is detrimental. Doctors play an important role in recommending vaccination based on the nature of their relationship with their patients. Educational interventions are needed to improve appropriate practices on the vaccines recommendation among general practitioners. (The NAVIDAD multicentre project: attitudes towards compulsory vaccination in Italy Gianluca Voglino – Italy).²

As highlighted by studies among pregnant women in different countries in Europe,³ rates of vaccine compliance may be raised via awareness campaigns and with the effective instruction of medical staff to mother- and father-to-be, as parental trust is the key to influence the decision to vaccinate. High parental confidence is important to maintain the vaccination coverage needed for community-level protection against vaccine preventable diseases.



Benedicte Carlsen presenting the study on willingness to be vaccinated in Norway at the plenary session of the EPH Conference in Ljubljana, Slovenia, 2018.

² 2.I. Oral presentations: Vaccination service, delivery and response

³ 3.I. Vaccine compliance and hesitation

Also the recognition of the high positive impact of vaccination in people's health, affects the decision to get vaccinated. Vaccination knowledge and attitudes towards vaccination vary among groups. Lack of knowledge and awareness about vaccine preventable diseases influences the decision to vaccinate (oneself or one's children). (Risk perception of acquiring vaccine preventable diseases in Italy: results from NAVIDAD Study Maria Rosaria Gualano – Italy)³

In contexts where mandatory vaccination is not feasible or not appropriate, to increase vaccination coverage and adherence of high-risk groups, it is crucial to find the right way to deliver the message. For example, in the Netherlands, campaigns for hepatitis B-vaccination started in 2002 and are conducted each year via social media, online dating platforms and commercial sex websites, targeting behavioural risk groups like injecting drug users, sex-workers, men who have sex with men and heterosexuals with multiple sexual contacts. (Results of a 15-year targeted HBV-vaccination program for high behavioral risk groups Anouk Urbanus – Netherlands)⁴

Continuing cooperation at European level on vaccination is important:

"The European Public Health Association (EUPHA) welcomes the adoption of a recommendation on strengthened cooperation against vaccine-preventable diseases by Health Ministers during the EPSCO Council meeting held on Friday 7 December 2018. By adopting this recommendation, Ministers send out a clear message on the importance of maintaining high levels of coverage within the European Union. They also demonstrate the importance of continuing cooperation at European level to effectively address cross-border health threats."⁵

⁴ 4.I. Infectious Diseases: outbreak, prevention, vaccination

⁵ PRESS RELEASE, 10 December 2018 EUPHA

| Healthcare-associated infections & antimicrobial resistance

Healthcare-associated infections may occur in patients during the process of care in a hospital or other health care facility. The infections are often caused by microorganisms resistant to one or more commonly-used antibiotics. The incidence of healthcare-associated infections continues to increase at an alarming rate. These infections can result in a significant morbidity and mortality burden, prolong the duration of hospital stays, increase the burden of antimicrobial resistance, and necessitate additional diagnostic and therapeutic interventions.

In Europe, antimicrobial resistance (AMR) contributes to 25 thousand deaths annually and cost EUR 1.5 billion annually, and the burden of infection by antimicrobial resistant bacteria is comparable to the burden of influenza, tuberculosis and HIV/AIDS combined. Over the counter sale of antibiotics by pharmacies, the use of leftover prescribed antibiotics by patients or relatives, and internet sales (for which limited data is available) all contribute to the problem.

The use of non-prescribed antibiotics has increased in Europe. Currently, 7% of antibiotics in the European Union (EU) are taken without a prescription. According to the Eurobarometer survey 2016, Greece, Romania and Cyprus have the highest rates of antibiotics use without prescription. Recommendations to reduce the use of non-prescribed antibiotics include education at the citizen level, collaboration between professionals from different sectors and the enforcement of existing legislation.

The EU's role in fighting AMR started a long time ago with the first strategy being adopted in 2001, and the EU was the first region to ban the use of antibiotics for growth promotion in livestock. The EU works in close collaboration

and complementarity with Member States to address all the aspects of the issue. The current One Health action plan against AMR focuses on three key areas: making the EU



Workshop session during European Public Health Conference held 28

November - 1 December, 2018 in Ljubljana, Slovenia.

a best practice region, supporting research, development and innovation, and shaping the global agenda against AMR.⁶

Healthcare-associated infections are considered an undesirable outcome, and as some are preventable, they are assumed as an indicator of the quality of patient care, an adverse event, and a patient safety issue.

Healthcare-associated infections include central line-associated bloodstream infections, catheter-associated urinary tract infections, ventilator-associated pneumonia and surgical site infections. These infections could be prevented through effective infection prevention and control measures. Healthcare-associated infections surveillance, together with appropriate infection control activities, can significantly decrease healthcare-associated infections rates.

In 2011–2012, 29 EU/EEA Member States and Croatia (became EU member in 2013) participated in the first EU-wide point prevalence survey, coordinated by the European Centre for Disease Prevention and Control (ECDC), on healthcare-associated infections and antimicrobial use in acute care hospitals. Participating in international point prevalence surveys is important to allow agencies to make accurate estimates and the result is the basis on which to develop intervention programs and plan of action. Partial results of some countries were shared during the pitch presentations of the healthcare-associated infections dedicated sessions, and discussions among participants underlined the importance of the antimicrobial stewardship programs to manage the problem and the challenge to improve prescriptive appropriateness for antibiotics.

The point prevalence surveillance of healthcare-associated infections (an ECDC protocol) also investigates hand hygiene. Hand hygiene is considered to be one of the most important preventive measures for healthcare associated infections. However, despite being recognised as the most effective procedure to prevent pathogen cross-transmission, hand disinfection is not always adequate. Finding a feasible way to implement this effective strategy is the focus of a multimodal intervention in a teaching hospital in Rome. The educational intervention and the feedback sessions empowered health care professionals, consequently leading to a significant compliance improvement. Nevertheless, raising awareness of patient safety is still the priority to increase the adherence to WHO recommendations, which still remains suboptimal.

⁶ Pre-Conference EU Actions on Antimicrobial Resistance and healthcare associated infection

In Europe, healthcare-associated infection surveillance at the local and national levels is an essential component of prevention and control. The European Public Health Conference in Ljubljana gave the possibility to all participants to share best practices and any problems encountered during their practice. For example, the Portuguese HAITool was presented:

A combination of a real-time surveillance and clinical decision system, HAITool, was designed and implemented in three Portuguese hospitals, using a participative approach between researchers and healthcare workers. HAITool monitors antibiotic usage, rates of antibiotic resistant bacteria and allows early identification of outbreaks, facilitating clinical decision.⁷

| Preparedness

In the middle of the 14th century the Black Death reshaped the landscape of Europe and the world. Approximately 25 million of people died in the first 25 weeks of the outbreak of the "Spanish Flu" in 1918. Achievements in infection control have been celebrated ever since, but between November 2002 and July 2003, an outbreak of SARS in southern China caused more than 8,098 cases, resulting in 774 deaths reported in 37 countries. Epidemics are certainly not new and definitely far from being just history. To avoid epidemics, vaccination is recommended and the next influenza virus is studied, but the sudden global explosion of an epidemic that infects a large number of the population is hard to predict. Preparedness is considered essential to respond quickly and effectively to outbreaks in order to minimize the spread of pathogens and to reduce the number of infected persons.



Poster walk on preparedness.

Emergency and disaster preparedness should lead to a better response to unexpected threats, and (public) health professionals are responsible to ensure a healthy population and take care of patients. This means not only preventing disease, also promoting vaccinations, finding a plan to provide the right treatment and avoid the spread of the diseases, as well as to manage the monitoring and early warning systems.

⁷ 6.1. Healthcare - associated infections

Evidence in literature of generic plans of preparedness is low, the strategies are mainly disease-specific, and there is a gap in linking guidance on preparedness with responses. There is a need to create an integrated model, to connect recommendations with quality improvements. Several models and frameworks have been developed to track outbreak preparedness and response. In order to optimally respond to future outbreaks, preparedness and responses should be linked.

An interesting workshop at the European Public Health conference on preparedness (organised by the National Institute for Public Health and the Environment (RIVM) of the Netherlands) tried to bridge this gap. The model proposed is carried out in three different layers of the 'Do' phase: generic activities for generic preparedness, specific threat related preparedness and outbreak response activities. The model is then applied to first responders and recommendations gained as well from "lessons learnt", making the newly acquired knowledge and experience sustainable for the next crisis.⁸



⁸ 8.1 Workshop: linking outbreak preparedness and response: bridging the gap

| Annex 1 – Sessions attended

EURO2 - EU Actions on Antimicrobial Resistance and healthcare associated infection Chafea, DG SANTE

- EU Action on antimicrobial resistance (AMR) – policy
European One Health Action Plan against antimicrobial resistance, Charles Price - European Commission, DG SANTE
- Results from some recent EU supported studies
2nd Point prevalence survey of healthcare- associated infection in European acute hospitals. Dominique Monnet
Health burden from AMR Dominique Monnet – ECDC
A model to assess the economic impact of AMR Michele Cecchini – OECD
AMR and causes of non-prudent use of antibiotics: ARNA projects results François Schellevis – Nivel, Netherlands
A model of governance for AMR Michael Anderson - European Observatory on Health Systems and Policies
New discriminators of bacterial and viral infections: initial findings from PERFORM project Jethro Herberg - Imperial College, London
- EU Supported Actions with Member States
Brief overview on JAMRAI Marie-Cecile Ploy - Inserm, France
Implementation of One Health national strategies AND national Action Plans for AMR Marie-Cecile Ploy - Inserm,
Appropriate use of antimicrobials in human and in animals German Penalva - Andalusian Health Service, Spain
Planned Romanian Presidency Conference "Reducing gaps in the fight against antimicrobial resistance" Mihail Calin, Ministry of Health, Romania

2.I. - Oral presentations: Vaccination service, delivery and response

- The NAVIDAD multicentre project: attitudes towards compulsory vaccination in Italy Gianluca Voglino – Italy
- Immunization and media coverage in Italy: an eleven-year analysis (2007-17) M. Sao Miguel Morgado – Italy
- Improving Vaccination Services Delivery – Local contributions to global Measles elimination Guilherme Duarte – Portugal
- Measles vaccination coverage in young adults in Switzerland 2012&2015 – does awareness play a role? Monica Wymann – Switzerland
- Austerity, measles and mandatory vaccination: cross-regional analysis of Italian vaccination Veronica Toffolutti – Italy

3.I. - Pitch presentations: Vaccine compliance and hesitation

- Influenza vaccination knowledge, attitudes and behaviors in dialysis patients: a national survey Matteo D'Angelo – Italy
- Vaccine compliance and hesitation among pregnant women in Israel Shiran Bord – Israel
- Risk perception of acquiring vaccine preventable diseases in Italy: results from NAVIDAD Study Maria Rosaria Gualano – Italy
- Is health literacy related to adherence to follow-up appointments in an Adult Vaccination Centre? Elena Roel – Spain
- Is mandatory vaccination influencing maternal decision to vaccinate children in Slovenia? Mario Fafangel – Slovenia
- Parental trust and beliefs following 6 years of improper vaccinations in Northern Italy Laura Brunelli – Italy
- Actions and results in an Italian Local Health Authority after the law on mandatory vaccinations Andrea Poscia – Italy

4.I. - Oral presentations: Infectious Diseases: outbreak, prevention, vaccination

- Attitudes and practices towards human papillomavirus vaccination among general practitioners in Italy Italo Francesco Angelillo – Italy
- Results of a 15-year targeted HBV-vaccination program for high behavioral risk groups Anouk Urbanus – Netherlands
- Assessment of key infectious diseases among asylum seekers at the French-Italian border (Liguria) Iliaria Barberis – Italy
- Seasonal influenza vaccine procurement systems in Europe Caterina Rizzo – Italy
- Managing 2018 Measles Outbreak in a healthcare setting in Porto, Portugal Mariana Perez Duque – Portugal

6.I. - Pitch presentations: Healthcare - associated infections

- Prevalence of healthcare associated infections and antibiotic use in Piedmont's acute care hospitals Angelo D'ambrosio – Italy
- Innovative Implementation of Antibiotic Stewardship supported by a Clinical Decision System Luís Velez-Lapão – Portugal
- Infection control staff, alcohol-based gel and hand hygiene promotion in Piedmont (Italy). Costanza Vicentini – Italy
- HALT3 study in Piedmont Region: improvement in policies and practises for an appropriate assistance Maria Francesca Furmenti – Italy
- Role of a multimodal intervention to promote hand hygiene compliance among healthcare workers Valentina Baccolini – Italy
- Healthcare-associated infections an Italian Teaching hospital: 2012, 2015 and 2017 surveys Marco Golferà – Italy
- Surveillance of HAIs and indicators for a Regional Action Plan on antimicrobial resistance Antonella Agodi – Italy
- Herd immunity among healthcare workers of high-risk units in a Northern Italy hospital in 2017 Federico Romanese - Italy

8.I. - Workshop: Linking outbreak preparedness and response: bridging the gap

- An integrated model for outbreak preparedness and response Evelien Belfroid – Netherlands
- Qualitative Research: Institutional Preparedness During Threats of Infectious Disease Outbreaks Doret de Rooij – Netherlands
- Generic recommendations for the preparedness of and response to infectious disease outbreaks Priya Somar - Netherlands



The European Public Health Association, or EUPHA in short, is an umbrella organisation for public health associations in Europe. Our network of national associations of public health represents around 20'000 public health professionals. Our mission is to facilitate and activate a strong voice of the public health network by enhancing visibility of the evidence and by strengthening the capacity of public health professionals. EUPHA contributes to the preservation and improvement of public health in the European region through capacity and knowledge building. We are committed to creating a more inclusive Europe, narrowing all health inequalities among Europeans, by facilitating, activating, and disseminating strong evidence-based voices from the public health community and by strengthening the capacity of public health professionals to achieve evidence-based change.



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