

of a scheme is on areas of quality where change is needed and if the scheme embraces a more comprehensive approach, covering many different areas of care; however, such programmes

are generally technically and politically difficult to implement. In this light, this presentation will conclude with a number of recommendations, both technical and policy-oriented.

## 6.I. Vaccination policy and infectious diseases

### Increasing HPV vaccination uptake among adolescents: A Systematic Review

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#### Background:

Human Papillomavirus (HPV) is responsible for the development of several pathologies besides the cervical cancer and HPV vaccination is a key strategy for primary prevention. The aim of this research was to identify strategies adopted to increase HPV vaccination coverage among the adolescents.

#### Methods:

A systematic review was carried-out by searching electronic databases (Pubmed, Scopus, and Web of Science) using selected keywords as “papillomavirus vaccine”, “vaccination strategy” and “efficacy”. Articles conducted in high-income countries and evaluating the impact of one or more strategies on vaccination coverage (initiation e/o completion) in adolescents were included.

#### Results:

Out of 3571 single citations screened, 42 papers (2011–2018) were included. Study size ranged from 50 to 325229 individuals. The major part of the studies was from the United States ( $n = 35$ ; 83,3%) and conducted with an experimental design ( $n = 17$ ; 40,5%). The evaluated outcomes included first dose uptake, schedule completion, vaccination timeliness and the number of administered doses. Identified strategies included reminds (9), education activities (9), multicomponent strategies (22) and others (2) and were focused on adolescents/parents and/or healthcare providers. Significant positive results were reported in seven studies (77,8%) evaluating the impact of reminds, four studies (44,4%) on education strategies, and in 12 studies (54,5%) on multicomponent strategies. Offering vaccination in “bundle” or during any medical visit was also reported as significantly effective.

#### Conclusions:

Increasing the vaccination coverage is essential to achieve HPV-related diseases control. Several types of strategies are available and showed a positive impact on vaccination uptake, in particular those relied on reminds. Nonetheless, the heterogeneity of interventions suggests the importance to adapt such initiatives to the specific context in order to maximize the improvement in vaccination uptake.

#### Key messages:

- Several types of strategies to increase vaccination uptake are available at international level and showed a positive impact among adolescents.
- These interventions are heterogeneous suggesting the importance of their adaptation to the specific context in order to gain the maximum improvement in vaccination uptake.

### Knowledge and attitudes about Human Papillomavirus and its prevention in Italian students, 2018

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#### Background:

Human Papillomavirus (HPV) infections show an estimated prevalence of 290 millions of cases worldwide, being the most common viral infection related to the reproductive tract and the main cause of cervical cancer. Being HPV vaccination currently recommended for both genders, we assessed knowledge and attitudes regarding HPV prevention among high school students in Udine, Northern Italy.

#### Methods:

Between April and May 2018, a sexual and reproductive health anonymous questionnaire was proposed to first-year students in five academic, technical and vocational upper secondary schools of Udine. In particular, students were asked about HPV related diseases, whether they were vaccinated against HPV and how that decision was taken. Data were analyzed by school type and gender using Chi Square Test with  $\alpha = 0.05$ .

#### Results:

A total of 747 questionnaires were collected from 990 students; both genders had a mean age of  $14.8 \pm 0.9$  years, 59% of respondents were males. Technical high school students were 42% of the sample, while 30% came from vocational and 28% from academic high schools. Genital warts and cervical cancer were identified as HPV-related by 8% and 20% of students respectively, the latter more frequently in technical institutes ( $p = 0.0016$ ) and in females (43% vs 13%,  $p < 0.001$ ). Almost 54% of students did not know if they were immunized against HPV; academic school students and females declared more frequently to have received at least one vaccine dose compared to others ( $p < 0.001$ ). Almost two thirds of respondents reported to have undergone vaccination due to a parental decision; parents discussed this choice more frequently with academic students ( $p = 0.0016$ ) and females (22% vs 14%,  $p < 0.001$ ).

#### Conclusions:

Girls and technical school students are more informed about HPV, while adherence to immunization schedules is higher in females and those attending academic school. Parents appear to create a supportive environment for females.

#### Key messages:

- The different level of knowledge by gender can be explained by past vaccination campaigns, mainly focused on girls, and by parental proactivity towards females.
- There is room for improvement in HPV-related knowledge and prevention among both adolescents in general and males in particular as they can play an important role to reduce the burden of HPV.

## Awareness of HPV and drivers of HPV vaccine uptake among university students in Italy

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HPV vaccination is a milestone in primary prevention. However in Italy, vaccine coverage is still nowhere near the target of 95%. We investigated drivers of vaccine uptake among university students, as they are likely to have just assumed a central role in their healthcare decision-making and potential barriers may differ from parents.

University students aged 18-25 were asked to fill in a questionnaire. The effect of socio-demographic and behavioural characteristics on HPV awareness was assessed with a logistic regression adjusting for age, gender, nationality, degree course, relationship, age at first intercourse, number of sexual partners, smoking, sexual orientation, past diagnosis of STDs and knowledge of people who had received HPV vaccine. A second regression adjusting also for information sources, awareness and knowledge investigated drivers of vaccine uptake.

9,988 questionnaires were included; awareness of HPV and vaccine was 83.3% and 69.9%, respectively. Awareness (adjOR: 3.3 95%CI 2.3-4.6) and a good knowledge positively affected acceptability, as well as a previous diagnosis of STDs and knowledge of vaccinated people. Healthcare workers (adjOR 1.6 95%CI 1.4-1.9) and family members (adjOR 1.7 95%CI 1.4-2.1) were the most influencing information sources, even if knowledge of vaccinated people was by far more persuasive (adjOR 2.7 95%CI 2.2-3.3). Only 12% of participants were acquainted with skin to skin HPV transmission, while 75% believed in a full effectiveness of condom; less than 22% associated HPV with cancer (other than cervical cancer).

Efforts to increase awareness are likely to be worth considering that: awareness is the main determinant of vaccine uptake; only 50% of individuals not interested in receiving vaccine were aware of it; males are much less aware (adjOR 0.09 95%CI 0.07-0.11). Moreover, this study spotlights some misconceptions and may provide suitable evidence in tailoring more efficacious communication strategies.

### Key messages:

- There is room for improving the awareness of HPV. Efforts are likely to be worth since it remains the main determinant of vaccine uptake. Awareness has been growing but a gender gap still persists.
- Communication should focus more on HPV involvement in neoplasia other than cervical cancer; transmission via skin to skin contact; multiple sex partnership; partial protection of condom.

## Determinants of the intention to vaccinate with MMR among pregnant women from the City of Rome

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### Background:

Further to the increase in measles cases reported in Italy since 2016, MMR vaccination became mandatory in 2017, leading to an increase in vaccination coverage in the Country. To guarantee sustained coverage, factors influencing the intention to vaccinate in the population should be better understood.

### Methods:

We conducted a cross-sectional survey to assess knowledge and attitudes on pediatric vaccinations and intention to vaccinate among pregnant women attending Antenatal Classes in Rome, through distribution of a self-administered questionnaire, which included a specific section on MMR vaccination.

Multiple logistic regression analysis was performed to analyze the determinants of the intention to vaccinate with MMR.

### Results:

A total of 458 pregnant women attending CANs in 36 family health centers and two hospitals answered the survey. Intention to vaccinate with MMR was associated with having received information from a healthcare professional (OR 1.92, 95%CI 1.01-3.63), the perceived importance of vaccines to protect against measles (OR 4.68, 95%CI 2.48- 9.54) and rubella (OR 5.97, 95%CI 2.98-11.95), not believing in news about the risks of MMR vaccine (OR 2.75, 95%CI 1.38-5.50), and the sense of guilt in case the child should contract the disease (OR 2.56, 95%CI 1.16-5.62). Factors negatively associated with the intention to vaccinate were the use of alternative medicine (OR 0.34, 95%CI 0.16- 0.76), believing that MMR vaccine can have serious side effects (OR 0.37, 95%CI 0.00-0.29) and guilt in case of serious side effects (OR 0.40, 95%CI 0.21-0.76).

### Conclusions:

Fear of MMR side effects is a relevant driver of the intention to vaccinate, coupled with the perceived importance to vaccinate to protect against measles and rubella. Also the source of information plays an important role in shaping ideas on vaccines. Information and communication strategies should be promoted to increase trust in vaccines, with a direct involvement of healthcare workers.

### Key messages:

- Fear of MMR side effects and perceived benefits of the vaccine influence the intention to vaccinate.
- Information and communication strategies to increase vaccination acceptance involving healthcare workers are needed.

## Measles outbreak at the Val Thorens ski station, France, 2019

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During the 2019 winter season, a measles outbreak occurred at the Val Thorens ski station in France, in an area frequented by over 300,000 holiday-makers (70% foreigners) and 2,500 seasonal workers.

Between 24/01/2019 and 15/04/2019, 55 cases were reported (18 confirmed and 37 clinical). Apart from 5 infected children under 2 years old attending the same nursery, cases were mainly seasonal workers between 19 and 41 years old. Five cases were hospitalised, one with severe pneumonia. Of the 36 cases with known vaccination status, 25 (69%) had not completed 2-dose vaccination. Other confirmed cases in visitors to Val Thorens were reported in neighbouring valleys (n = 3), and in other French regions. One case was reported the French overseas territory Guadeloupe (WHO 'Americas' region where measles has been eradicated). British, Belgian, Danish, Dutch and Irish authorities reported 7 cases in people who had stayed in the area. The list of exported cases is non-exhaustive.

The regional health agency (ARS) provided increased information on epidemic risk and vaccination recommendations, particularly to health professionals and the town council. Identifying all contacts was difficult because many had occurred with seasonal workers. In addition to the approximately 150 vaccinations carried out by the Val Thorens medical centre from the start of the outbreak, only 41 other people were vaccinated in 5 free vaccination sessions organized in situ by the ARS, and the local medical and immunization centres.

The large attendance at the station favoured the outbreak and its extension in France and abroad. Due to low measles vaccine

coverage in France (80.3% for 2-dose cover in 2 years in 2017), outbreaks in non-vaccinated and not fully vaccinated populations are increasing, as seen in Val Thorens.

**Key messages:**

- A major measles epidemic occurring in an undervaccinated population in frequent contact with tourists, led to the extension of cases in France and Europe.
- Despite 5 free in situ vaccination sessions, with the mobilisation of local health professionals, few seasonal workers came to be vaccinated.

**Measles outbreak in a public hospital, Szczecin, Poland, January 2019**

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**Background:**

In January 2019, a measles infection in an employee in a 168-bed hospital was reported to the local sanitary station (PSSE) in Szczecin, Poland. Further transmission occurred in the hospital and more cases were reported in the community. We investigated to identify transmission routes and implement control measures.

**Methods:**

An outbreak case was any hospital staff, visitor, or patient, or any person in contact with them, meeting clinical criteria, from 3rd January. Cases were interviewed by PSSE to identify contacts and verify vaccination status. Susceptible contacts were offered post exposure vaccination (PEV). Clinical specimens were sent to the National Reference Laboratory for RT-PCR and serology confirmation. We collected vaccination status, geographical location and queried hospital authorities about control measures.

**Results:**

The index case, the hospital employee, returned from Ukraine one day before onset of symptoms. We identified 17 (8 confirmed, 7 probable, 2 suspect) outbreak cases including 11 hospital personnel. Four of the personnel provided vaccine documentation (36%), of which three had received 2 doses. Contacts identified as susceptible (130) received PEV. Eight cases were contacts of the index case but were not promptly identified and did not receive PEV. The hospital refused new admissions for 19 days.

Another 16 cases were identified in the community, with exposure information not sufficient to establish an epidemiologic link with the outbreak.

**Conclusions:**

The introduction of measles into a susceptible population and missing contacts for PEV led to a hospital-associated outbreak. For the community cases, exposure may have occurred in multiple public spaces around the hospital.

Most of the hospital staff who developed measles lacked vaccination records. The PSSE has recommended MMR vaccination for all hospital personnel without such documentation.

**Key messages:**

- This study shows how a single imported case, in an environment poorly immunized could lead to an outbreak and potentially transmit it to the community.
- It is very important to keep a high rate of measles vaccination (95% recommended by WHO) in the community and insure of immunization status of health workers.

**Screening for tuberculosis among newly arrived migrants in France. Results from a practice study**

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**Background:**

Screening of active and latent tuberculosis among migrants is a public health concern but physicians' practices are poorly known. The study aimed to evaluate physicians' practices in France.

**Methods:**

A national survey of physicians' practices about infectious diseases prevention among migrants was conducted in 2017-2018 and broadcasted by several scientific societies.

**Results:**

In total, 367 physicians answered; 53.1% were primary care physicians, 34.3% "TB involved physicians", and 85.5% were involved daily with migrants. Screening by chest X ray is recommended by 84.8%, 71.9% and 38.4% of participants for migrants from high- (>100 cases/100,000 p.a.), medium- (>50/100,000), and low-incidence countries respectively. One physician in two declares considering migration conditions in his/her decision of screening migrants from low incidence countries. Primary care physicians are less likely to offer screening (aOR = 0.21[0.09-0.48], p < 0.001). About screening prescription, only 55.6% consider it their responsibility. TB control centres are designated by 56.7% of respondents. Concerning screening for latent tuberculosis infection (LTBI), 61.8% and 34.0% offered screening for children under the age of 15 and for all migrants (adults and children) from high incidence countries respectively; physicians working in Paris and its region being less likely to offer it (aOR = 0.45 [0.28-0.71], p = 0.001 and aOR = 0.43 [0.27-0.69] p = 0.001 respectively). Among those screening children, 88.1% recommend treatment if facing a positive result, most often with a 3-month isoniazid rifampicin double therapy, and 11.4% offer follow up alone.

**Conclusions:**

Physicians' practices in France regarding screening of tuberculosis among migrants are heterogeneous. Which population should be targeted for LTBI screening remains unclear in the context of contradictory national and international recommendations. The results of our study raise the issue of knowledge, and adherence to these guidelines.

**Key messages:**

- Physicians' practices in France concerning active and latent tuberculosis screening among newly arrived migrants are heterogeneous.
- Many physicians involved in migrants' care ignore or do not adhere to current national guidelines, especially concerning LTBI screening among newly arrived migrants.

**HCV test&treat in Milan prisons-an effective strategy for microelimination and health gaps reduction**

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**Background:**

People in prison represent a high-risk population for HCV infection control due the overrepresentation of people with a history of intravenous drug use, psychiatric patients and other vulnerable populations who have often reduced access to healthcare. With the advent of new direct antiviral agents (DAAs) HCV micro-elimination in prison setting became a feasible strategy.

### Methods:

We conducted in 2017 and 2018 a cross-sectional evaluation of HCV treatment cascade in one detention prison, Opera (OP), and one pre-trial detention center, San Vittore (SV) in Milan. A dedicated protocol for HCV eligibility and care was applied. We collected data on demographics, HCV testing and treatment on all inmates on October 31st 2017 and 2018. Data collection ended on December 31st of each year.

### Results:

On October 31st 2017, 2366 inmates were living in the two facilities, 2369 in 2018, of these, 1036 (43,7%) were already present in 2017 (71,3% in OP; 28,7% in SV). In both years the majority were men (95,4%; 96,4%) with a median age of 41 years and Italians (57%; 61,9%). Prevalence of reported drug use remained high (46,5%; 44,2%). HCV screening coverage was 89% in both years, while HCV-RNA test coverage increased (90,6%; 99%). HCV Ab+ was stable (212, 10,1%; 194, 9,2%). At the end of 2017 and 2018, 106 (50%) and 117 (60,3%) started treatment eligibility process of which 90

(42,4%) and 106 (54,6%) completed DAAs in prison. Considering last available viremia, 41 inmates (19,3%) were viremic in 2017 (OP 16,1%; SV 24,4%), while only 13 inmates (6,7%) in 2018 (OP < 1%, SV 15,4%). On December 31st 2018, among HCV Ab+ detainees 122 (62,9%) were never linked to care before incarceration.

### Conclusions:

Our study shows the success of the HCV testing and treatment strategy to achieve HCV micro-elimination in a prison setting with a significant drop in the pool of viremic individuals. We highlight how prison health care may represent a unique point of access for vulnerable population.

### Key messages:

- HCV micro-elimination is a feasible and effective strategy in prison settings.
- High-quality healthcare in prison contributes to reduce health gaps and improve access for socially deprived population.

## 6.K. Workshop: Addressing the mental health needs of lesbian, gay, bisexual, and transgender populations

Organised by: EUPHA (SGMH)

Chair persons: John Pachankis - USA, Arjan Van Der Star - EUPHA (SGMH)

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Today a large number of studies from different parts of the world clearly show that compared with heterosexuals lesbian, gay, bisexual, and transgender (LGBT) individuals have an increased risk of mental health problems, especially depression, anxiety and suicidal behaviour. To meet this increased risk of mental health problems, many governmental public health agencies call for policy and intervention programs addressing specific needs of LGBT individuals. Despite the clear need for evidence-based care, prevention, and treatment specifically tailored to LGBTQ people, there are currently few such programmes due to lack of sufficient research.

This workshop will give examples of studies on mental health care needs among LGBT individuals and effect of evidence-based training for mental health providers, as well as, studies showing improvements of mental health after treatments. Dr. Corina Lelutiu-Weinberger (Rutgers University, USA) will present results from a newly conducted study of LGBT-affirmative mental health training for health care providers in Romania. Dr. John Pachankis (Yale University, USA), will present results showing improvements in mental health among transgender individuals after receiving gender-affirmative surgical treatment, using a total population dataset from Sweden. Dr. Igor Grabovac (Medical University of Vienna, Austria) will present health and well-being disparities based on sexual orientation among older LGBT individuals in England. The situation for LGBT individuals varies greatly across Europe. The level of acceptance for minority sexual orientations differs greatly by country, and in many countries, LGBT people are also subject to legal discrimination concerning basic civil rights, e.g. regarding recognition of same-sex unions. During the workshop, Dr. Richard Bränström (Karolinska Institutet, Sweden) will present data on experiences of discrimination in health care settings and openness with sexual and gender identity to mental health providers among LGBT populations across all 28 European Union Countries.

### Key messages:

- Today a large number of studies from different parts of the world clearly show that compared to heterosexuals LGBT

individuals have an increased risk of mental health problems.

- Access to supportive mental health care for LGBT individuals varies greatly across Europe and dissemination of targeted LGBT-affirmative evidence-based interventions needed.

### Web-based training and supervision for LGBT-affirmative mental health practice: A randomized controlled trial

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### Background:

Lesbian, gay, bisexual, and transgender (LGBT) individuals in most countries remain stigmatized, requiring culturally sensitive mental health care to foster coping and resilience. This trial tested the efficacy of an LGBT-affirmative mental health training for psychologists and psychiatrists in Romania, where such resources are scarce. The trial compared in-person and web-based training modalities.

### Methods:

Participants were randomized to a 2-day training either in-person (n = 56) or via web by viewing the live-streamed training (n = 54), and assessed pre- and 5-, 10- and 15-months post-training, with optional monthly web-based supervision (n = 47) after the first follow-up. Generalized linear mixed models were conducted to assess for change across time.

### Results:

The sample (M age = 34.98) was mostly female (88%) and heterosexual (84%). Trainees, regardless of in-person or web-based attendance, reported significant decreases from baseline to 15-month follow-up in explicitly (b = 0.21, 95% CI 0.06 – 0.37, p < 0.01) and implicitly (b = 0.26, 95% CI 0.10 – 0.41, p < 0.001) assessed homonegativity, and significant increases in LGBT-affirmative clinical skills (b = -1.19, 95% CI -1.41 – -1.00, p < 0.001), beliefs (b = -0.17, 95% CI -0.31 – -0.03, p < 0.05) and behavior (b = -1.17, 95% CI -1.72 – -0.61, p < 0.05).