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Short communication

Utilization and impact of European immunization week to increase measles, mumps, rubella vaccine uptake in Austria in 2016

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ABSTRACT

This paper describes engagement in European Immunization Week (EIW) in Tyrol, Austria in April 2016 and an assessment of its possible impact on demand for measles, mumps, rubella vaccination (MMR).

It further describes the output of a knowledge, attitudes and practice (KAP) survey conducted during EIW, showing that 93% (188/202) of respondents were in favor of vaccination in general and 90% (192/214) perceived MMR vaccination to be important. MMR vaccination was perceived as important by more participants than other vaccinations.

The number of MMR doses administered by public health services in the province of Tyrol during EIW was greater than in the previous week, and EIW activities thus potentially resulted in increased MMR vaccine uptake in Tyrol during the observed period. The annual EIW campaign provides important opportunities to address vaccine hesitancy by raising awareness about immunization, to identify barriers to immunization and test possible solutions.

1. Background

In adopting the European Vaccine Action Plan 2015–2020, all 53 Member States of the WHO European Region renewed their commitment to eliminate measles and rubella [1]. Elimination is declared by the European Regional Verification Commission for Measles and Rubella Elimination when a country has demonstrated interruption of endemic transmission for three consecutive years. While Austria is considered to have interrupted transmission of both diseases in 2015, it reported 309 measles cases in 2015 and national vaccination coverage with the second dose of measles-mumps-rubella vaccine (MMR) (89% in 2015) was below the 95% per annual cohort considered necessary to achieve and sustain interruption [1–3]. A key strategy to achieve and sustain elimination is to "ensure that individuals receive information about the risks of vaccine-preventable diseases and the benefits of and risks of vaccination, and that trust in vaccines, immunization services and health authorities is enhanced" [1]. The Austrian national elimination plan for measles adopted in 2013 also emphasizes the need to optimize demand, increase awareness and improve the dissemination of evidence-based information [4].

Tyrol is one of Austria's nine provinces, with an estimated population of 736,176 in 2017 [5]. MMR coverage among birth cohorts 2000–2009 was estimated to be 88.2% with the first dose of MMR and 76.5% with the second dose [6]. Most vaccinations are carried out by pediatricians.

European Immunization Week (EIW) is an annual campaign led by the WHO Regional Office for Europe to help raise awareness about the importance and benefits of immunization.

This paper describes EIW-2016 activities in Tyrol, presents the results of a survey conducted during EIW-2016 to identify potential determinants for negative attitudes and perceptions related to MMR and reports on the possible impact of EIW activities on vaccine uptake.

2. Methods

EIW-2016. (24–30 April 2016) in Tyrol, Austria was coordinated by the Division of Hygiene and Medical Microbiology of the Medical University of Innsbruck [7] in collaboration with the Provincial Government of Tyrol, the Innsbruck Medical University Hospital, the Ministry of Health, the nine public health offices in the province (PHAs) and the association of medical doctors in Tyrol.

EIW-2016 activities included the communication of key messages (press conference 21 April), a continuing education course for healthcare workers and medical students (25 April), interactive

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lectures in schools targeting children aged 14 years (25–29 April), video-spots in 7-min intervals on public buses in Innsbruck (estimated to reach 62,000 persons) [8] and on 45 patient television screens in three hospitals (annually >1.1 million patients), and three information sessions including presentations and information stands for the public (22, 26 and 28 April). All resident general practitioners (GPs) and pediatricians were provided with a total of 8500 MMR information leaflets and were encouraged to participate in the campaign.

The information sessions were used to recruit participants for a knowledge, attitudes and practices (KAP) survey. Information on respondents' characteristics such as age, sex, education, knowledge about measles and MMR, attitudes towards vaccination, preferred type of medical care (traditionally schooled versus alternative forms of medicine such as homeopathy, acupuncture or herbal medicine) was obtained through a questionnaire completed by 223 respondents (Table 1). Helium-filled balloons were distributed to children as an incentive for their accompanying adults to participate in the survey. Data were entered and analysed in epi.info version 7 (CDC). Respondents' characteristics were considered as potential determinants of participants' knowledge related to measles and attitudes towards vaccination, and associations were assessed by calculating the prevalence ratios, including 95% confidence intervals using univariate analyses.

Table 1
Demographic features of participants of KAP Survey (n = 223).

Demographic variables		Number (%)
Sex	Females	146/217 (67)
	Males	71/217 (33)
Age group	Under 15 years of age	14/215 (6)
	15–24 years	56/215 (26)
	25–49 years	90/215 (42)
	50 years and older	55/215 (26)
Level of education	Compulsory schooling	16/211 (8)
	Apprenticeship	21/211 (10)
	Technical college	27/211 (13)
	High school diploma	47/211 (22)
	University	100/211 (47)
Place of birth	Austria	166/216 (77)
	Foreign born	50/216 (23)
Place of living	Urban area	124/198 (63)
	Rural area	74/198 (37)

All 9 PHAs expanded the times during which MMR vaccination was offered to include 16:00–19:00 on Friday, 29 April in addition to usual morning service hours.

To assess the impact of these activities, attention to immunization in the media was monitored and all 498 GPs, 38 resident pediatricians and 9 PHAs were encouraged to report aggregated numbers of administered MMR vaccine by age group, dose and week of administration between 17 April and 7 May 2016.

3. Results

3.1. Potential impact of EIW activities

Prompted by the awareness-raising activities, immunization was featured in seven articles published during the week in the most popular Tyrolean newspaper (readership 400,000) [9], and in all district newspapers, which are distributed free of charge to all Tyrolean households. Interviews were broadcast on local radio [10] and regional television.

5% (25/498) of Tyrolean GPs, 32% (12/38) of pediatricians and 89% (8/9) of PHAs reported the administered MMR doses during the 3-week assessment period. 505 MMR vaccine doses were administered, of which 57% (n = 289) were administered during EIW, 57% (n = 290) were first dose and 43% (n = 251) second dose. Pediatricians administered approximately half of the doses (50%; 254), followed by PHAs (27%; 138) and GPs (23%; 113).

For all three groups of healthcare providers, more vaccine doses were administered during EIW (289) than in the week before (125) or after (91). This effect was especially strong in PHAs, where 86% of MMR vaccine doses were administered during EIW (Fig. 1).

The number of MMR doses administered by pediatricians during EIW showed a 9% increase compared to the three week median for the previous year and a 36% increase compared to the second week of March 2016.

3.2. Outcome of KAP study

The proportion of respondents in favor of vaccination was 93% (188/202). The only determinants associated with a negative perception of vaccination were 'preference for alternative medicine' (regardless of the person's response related to 'trust in traditional school medicine') and age ≥50 years (Table 2).

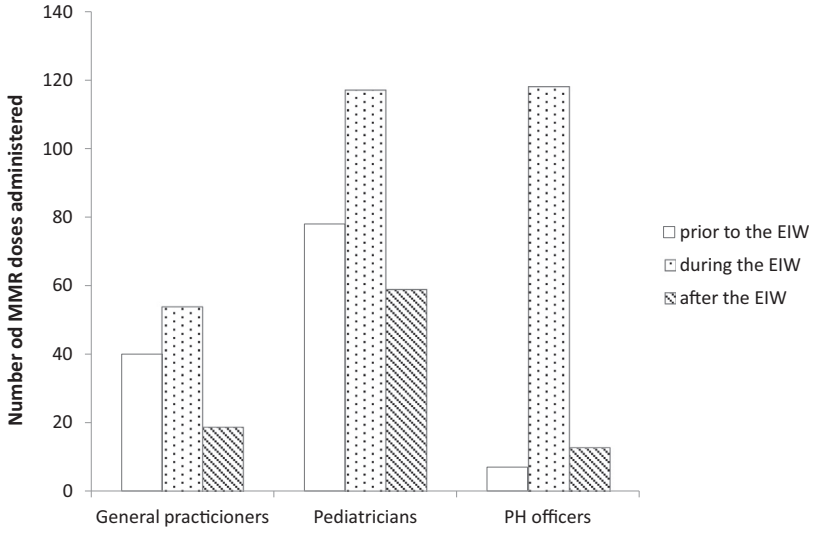

Fig. 1. MMR vaccinations administered by time and source of administered vaccines (n = 505).

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