

Perspectives

THE MEASLES SITUATION IN AUSTRIA: A RAPID RISK ASSESSMENT BY AN ECDC TEAM AND THE OUTCOME OF AN INTERNATIONAL MEETING IN VIENNA, AUSTRIA

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Background

For the last three years, Austria has been considered a low-moderate incidence country ($< 1/100,000/\text{year}$) for measles [1] and the last significant measles outbreak occurred in 2003 involving 64 cases [2].

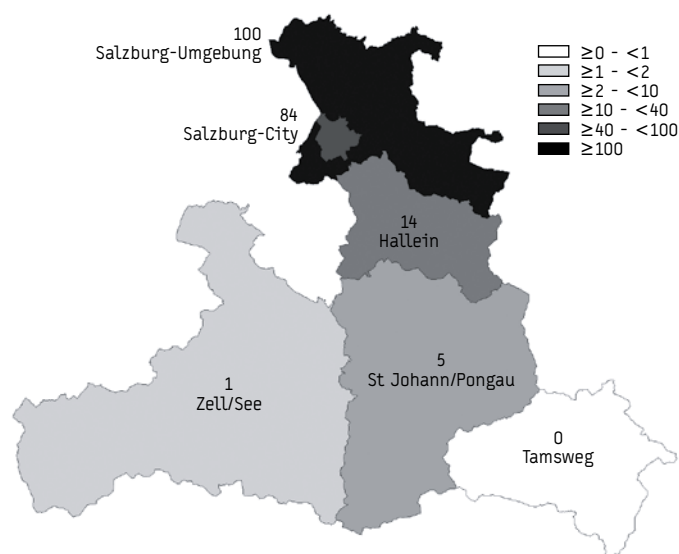
However, around Easter in March 2008, the health authorities identified a measles outbreak in the Austrian province of Salzburg in an anthroposophic school and day-care centre. By mid-April, 207 cases had been reported. Most of them (182 cases) were

from Salzburg. The other cases included Salzburg citizens that fell ill in two other provinces and small clusters in Upper Austria and Tyrol with possible epidemiological link to the Salzburg outbreak (Figures 1,2).

In addition, about 50 cases with direct link to the anthroposophic school were reported in the same period from Bavaria, Germany, two from Baden-Württemberg, Germany and four from Norway. Further details on the outbreak have been reported earlier [3]. In line with the current European Union (EU) legislation, Austria informed the

FIGURE 1

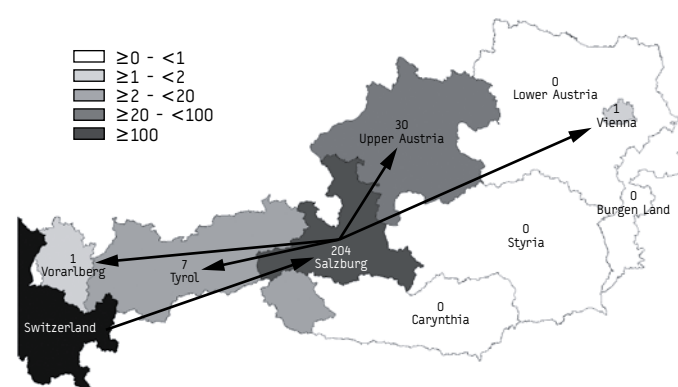
Geographical distribution of cases in the Austrian region of Salzburg



Source: regional Health Board Salzburg, update 21st April 2008

FIGURE 2

Geographical distribution of cases in Austria: import and export of cases



Source: Regional Health Boards, update 21st April 2008

Vorarlberg: 1 exported case (pupil from Salzburg with indirect connection to Rudolf-Steiner-School)

Salzburg: inclusive one case with presently doubtful "vaccination measles"

Upper Austria: therefrom 7 cases obviously without connection with Salzburg

Vienna: 1 exported case (resident from Salzburg who was diagnosed in Lower Austria and hospitalised in Vienna - pneumonia, meanwhile released)

European Commission and the EU Member States about the event and the development of the outbreak [4]. At the same time, the measles outbreak in Switzerland is still ongoing [5,6].

The threat of the development of a major multi-state outbreak just about two months ahead of the upcoming European Football Championship (EURO 2008, June 6-29, 2008; jointly hosted by Switzerland and Austria) gave rise to considerable concerns leading the Austrian Ministry of Health (MoH) to invite a team from the European Centre for Disease Prevention and Control (ECDC) for a rapid assessment of the situation. Furthermore, an international meeting was convened at the Austrian Ministry of Health to discuss the direct implications on the EURO 2008.

Results of the rapid risk assessment and proposed options for the Austrian Ministry of Health

From 14-16 April the ECDC team consisting of an expert each from the ECDC Preparedness and Response Unit and the EU Surveillance network for vaccine-preventable diseases (EU-VAC.NET) met with health authorities of all involved administrative levels, the National Measles Reference Centre and the Austrian Vaccination Board to discuss in depth the current measles outbreak. Additionally, outbreak-related data were provided by the health authorities to be re-analysed by the expert team.

The objectives of the visit were:

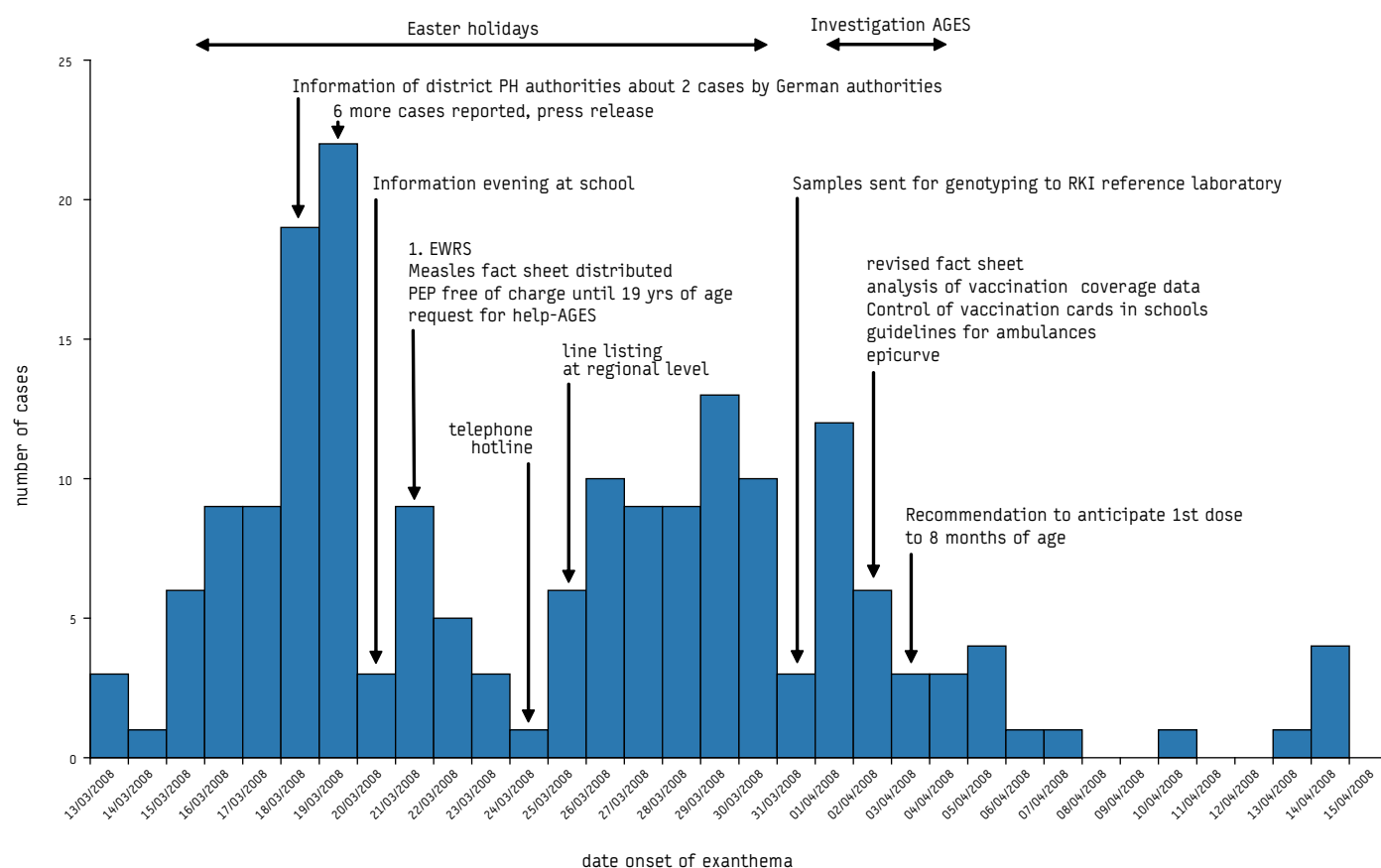
- To assess the situation in Austria and elaborate short, medium and long-term options for improvement of the measles situation;
- To provide evidence for planning a coordinated response, particularly in relation to the upcoming EURO 2008 football championship.

The following findings were presented by the ECDC-team:

- The outbreak was most probably imported by Swiss nationals who visited the anthroposophic school in Salzburg as the laboratory investigation of the D5 strain available showed a 100% sequence compatibility and identity with the genotype D5 measles virus from Switzerland;
- The outbreak that has primarily affected the anthroposophic community and their direct contacts has to date apparently been contained;
- Despite sub-optimal vaccination coverage of about 90 percent in the Austrian population transmission of the infection beyond the anthroposophic community and their immediate contacts was limited;
- Both the excellent cooperation between the health authorities at the different levels and the rapid introduction of measures (swift information campaigns, general offer of vaccination free of charge to people up to the age of 19 years, ring vaccination free

FIGURE 3

Epidemic curve and overview of control measures taken (CAVE: cases were reported later than they occurred!)



of charge for all ages, positive immune status as a pre-requisite for visiting community facilities) allowed for fast containment of the outbreak (Figure 3) – although a few cases still occurred and are expected to occur in the near future.

On the basis of these findings, the following options for improvement were proposed to the Austrian MoH:

- To improve the quality and timeliness of epidemiological and vaccination data by the introduction of the electronic reporting system that was already planned for 2009,
- To ensure optimal management and flow of epidemiological data between district, regional and national levels for rapid outbreak response by continuation of the ongoing training initiative for health authorities at regional and district level, and
- To perform a nationwide sero-epidemiological study in order to identify unvaccinated risk groups and reasons for low uptake in order to tailor information campaigns for these groups and to allow planning of targeted vaccination campaigns to improve vaccine uptake.

Outcomes of the International Meeting on Measles

In addition to the rapid assessment of the specific Austrian situation an international meeting was convened on 17 April at the Ministry of Health. The meeting involved key persons from Austrian Ministry of Health, the surveillance unit, and the National Measles Reference laboratory along with representatives from Switzerland, the affected provinces of Germany (Bavaria, Baden-Württemberg), the ECDC Preparedness and Response as well as Scientific Advice Unit, the WHO European Office, EUVAC.NET and the EU Commission. The objective of the meeting was to discuss possible coordinated action in preparation of and during the EURO 2008.

The main outcomes of this meeting were:

- Information to stress the importance of measles vaccination to all European citizens with a special emphasis on participants of the EURO 2008 is planned to be published on the ECDC website. EU Member States will be encouraged to distribute this information. Similar information was already released by Switzerland and Austria and should also be released by all EURO 2008 participating countries (EU + Croatia, Turkey and Russia) (7,8).
- Closer cooperation between the health authorities of Switzerland and Austria in the preparation and during the EURO 2008.
- As a long-term strategy to improve the vaccination coverage, a well-prepared and evidence-based vaccination campaign ("catch-up campaign") for specific risk groups imbedded into a general action programme to reach the goals of the WHO Measles Elimination Programme by 2010 should be implemented [9].

Further perspectives

Most of the proposed options are already covered by ongoing projects within Austrian MoH:

- A web-based electronic reporting system that is planned to be operational in 2008 will facilitate real-time surveillance;
- A specific outbreak module as part of the electronic reporting system will provide substantial support for the responsible health authorities on district regional and national level;
- The electronic vaccination registration system planned for 2009 will both increase quality and timeliness of data on vaccine coverage and identification of geographic and demographic vaccination gaps;

- Due to Austria's federal political structure with decentralised responsibilities, outbreak management capacities fall within the district and regional levels. Therefore the intensive and successful cooperation between the Austrian Ministry of Health and the ECDC concerning training in epidemiological methods and outbreak management will benefit the country at sub-national level. So far about twenty Austrian public health officers have participated in such training [10];
- A EURO 2008 workshop will take place at the Ministry of Health with support of the ECDC and the German Robert-Koch-Institute (RKI). The objective is to optimise the preparatory work of the Austrian public health system concerning infectious diseases surveillance and response to health crises. Furthermore, the principles of collaboration and information exchange during the EURO 2008 will be laid down together with the participating Swiss colleagues [11,12].

A comprehensive assessment report as well as a detailed meeting report are currently under preparation and will be published soon. In conclusion, the ECDC assessment and the International Measles Meeting represent impressive examples for the close cooperation of member states and international organisations such as WHO, ECDC and European Commission and EU-projects such as EUVAC.NET in health crises.

Acknowledgements

The following people contributed in addition to the authors to the successful International Measles Meeting in Vienna: Johann Ehmsen-Höhl, MoH Austria, Prof Dr Michael Kunze (Institute for Social Medicine, Austria), Prof Dr Franz Allerberger (AGES Austria), Dr Pierluigi Lopalco (ECDC), Dr Günter Pfaff (LGA Stuttgart), Dr Wolfgang Hautmann (LGL Bayern), Dr Maria Wadl (RKI Germany), Dr Virginie Masserey Spicher (FOPH Switzerland)

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This article was published on 24 April 2008.

Citation style for this article: Strauss R, Kreidl P, Muscat M, Coulombier D, Mulders M, Gijssens A, König C, Stirling J, El Belazi G, Muchl R, Feierabend P, Holzmann H, Mutz I, Hrabcik H. The measles situation in Austria: a rapid risk assessment by an ECDC team and the outcome of an international meeting in Vienna, Austria. *Euro Surveill.* 2008;13(17):pii=18852. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=18852>