GGII.4 cons is the consensus sequence of strains prevalent before 2002, GGII.4 2002 is the consensus sequence of the strain that was dominant in the 2002/2003 winter season, GGII.4 2004 is the consensus sequence of the strain that has become dominant during 2004. The sequence is from the RNA dependent RNA polymerase gene, the region upstream of the conserved YGDD motif. Eleven informative positions in the alignment have been highlighted with an asterisk above the sequence. In these positions one sequence is different from the other two.

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First vancomycin-resistant *Enterococcus faecium* outbreak reported in Hungary

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The first healthcare-associated vancomycin-resistant *Enterococcus faecium* (VRE) outbreak in Hungary occurred between April and September 2004 at a haematology and stem cell transplantation unit of a hospital. Fourteen cases of infection and seven cases of intestinal colonisation were detected.

During the outbreak, *E. faecium* was identified in blood samples (9 patients), urine (12 patients) and wound secretions (two patients). The vancomycin-resistant isolates had vancomycin minimum inhibitory concentrations (MICs) of 48-128 µg/ml and were teicoplanin susceptible (MICs 1-2 µg/ml) (the so-called *vanB* phenotype). During the epidemiological investigation at the haematology unit in September, *E. faecium* isolates were also identified in three environmental samples (a surgical bowl, a sheet from a ward, and a wash basin from the bedpan-washing room). As part of the investigation, stool samples from forty patients were tested. Eight VRE positive samples were identified (colonisation in seven cases and one symptomatic case).

Two patients with symptomatic illness had undergone stem cell transplantation. Twelve of the 14 infected patients had malignant haematological disease. Five colonised patients also had haematologic malignancies, and one colonised patient had a benign form of disease.

Presence of the *vanB* gene in resistant *E. faecium* strains was confirmed by polymerase chain reaction testing. Twelve isolates analysed by pulse gel field electrophoresis (PFGE) showed similar patterns for resistant isolates that were different to the patterns seen with isolates of vancomycin-susceptible *E. faecium* strains found in the unit and with the set of *vanB E. faecium* isolates identified in the country.

Bacteriological surveillance data in Hungary show that, in 2003, vancomycin-resistant *Enterococcus* species isolates were less than 1% of all *Enterococcus* isolated in Hungary that year (15 933) [1]. The monoclonal origin of the strains suggested that the emergence of the outbreak strain was recent and has not reached an endemic level.

During the outbreak, all patients were screened on admission. Patients were isolated until their screening results were negative. VRE-infected and/or colonised patients were isolated in separate rooms, and were nursed only by certain staff. The importance of hand hygiene and surface disinfection was emphasised. The outbreak ceased after the control measures were implemented. The last VRE-positive patient was identified on 2 September 2004.

This outbreak demonstrated the importance of strengthening infection control measures in the hospital, introduction of surveillance of multi-resistant pathogens, and revision of disinfection technologies and antimicrobial policy [2].

This is the first such outbreak reported in Hungary. The source was not identified cases were only identified by routine microbiological cultures. Three publications connected with the outbreak, on microbiological diagnosis of VRE [3], manifestations and therapy [4], and prevention and infection control [5]) have been Published on the website of the National Center for Epidemiology, in Hungarian only.

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Cases of rabies in Germany following organ transplantation

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On 16 February 2005, the Deutsche Stiftung Organtransplantation (German Foundation for Organ Transplantation, http://www.dso.de/) announced possible rabies cases in three of six patients who received organs from a donor who died in late December 2004 [1].These three patients, who received lung, kidney and kidney/pancreas transplants following the donor's death, are in a critical condition. The remaining three organ recipients (two corneal, one liver) have not shown any signs of rabies.

The organ donor suffered cardiac arrest in a hospital, where she was resuscitated several times. Her circulatory system was stabilised, but prolonged hypoxemia led to brain death. There were no clinical indications that the donor patient was infected with rabies.

The Bernhard-Nocht-Institute for Tropical Medicine in Hamburg (http://www.bni-hamburg.de/) and the Konsiliarlabor for Rabies at the University Clinic in Essen's Institute of Virology confirmed the diagnosis of rabies in the donor and two of the recipients on 16 and 17 February, 2005 [2]. As a precaution, all contacts of the infected donor and the infected patients in Germany have received rabies immunoglobulin and started a course of rabies vaccination. A warning was posted on the European Early Warning and Response System on 18 February.

The risk of rabies infection in Germany is extremely low. The last two deaths due to rabies in Germany occurred in 1996 and 2004

[3,4]. In both cases, the infection was acquired abroad, through an animal bite.

Transmission of the rabies virus to humans usually occurs through the bite of an infected animal, but can also occur through direct contact of mucous membranes or fresh breaks in the skin with infectious material (e.g. saliva, neural tissue, cerebrospinal fluid). Person-to-person transmission has been observed only in rare isolated cases after transplantation. Rabies in transplant recipients was last reported in 2004 in the United States [5,6]. Based on a risk analysis (http://www.cdc.gov/ncidod/dvrd/rabies/organ_update_070204.htm), 174 contacts associated with these cases received post-exposure prophylaxis with simultaneous passive immunisation with rabies immunoglobulin and active immunisation with rabies vaccine.

As a result of this situation, in consultation with the Konsiliarlabor for Rabies and the Bernhard-Nocht-Institute, the Robert Koch-Institut has defined indications for immunisation after contact with a person suspected of or confirmed as having rabies. These are available at http://www.rki.de.

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Large ongoing rubella outbreak in religious community in the Netherlands since September 2004

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As of 25 February 2005, 128 serologically confirmed cases of rubella were notified in the Netherlands (since 1 September 2004). This is a large increase compared with the annual average of five cases notified from 2000 to 2003. Forty six cases were in males and 82 in females. The median age was 11 years. None of the patients had been vaccinated against rubella, most frequently for religious reasons (118 cases). Nine of the 128 reported cases are known to be in women who were pregnant at the time of infection. Of these, five were infected in their first trimester.

Postnatally acquired rubella is generally mild, and in many cases infection is asymptomatic. However, rubella infection acquired during early pregnancy can lead to severe birth defects known as congenital rubella syndrome (CRS). This syndrome occurs in up to 90% of infants born to mothers who were infected in the first trimester [1].

Since 1999, only laboratory confirmed cases of rubella have been notifiable in the Netherlands. Surveillance based on this has meant that the true number of infections has been largely underestimated. Age and sex distribution may be also biased if based on notified cases only. Case finding has been enhanced by offering non-invasive diagnostic methods (using saliva, finger prick blood, urine and throat swabs).These non-invasive methods are being used in a pilot surveillance project for rash diseases, and will be introduced nationally later in 2005 [2].

Vaccination strategies against rubella aim primarily to prevent CRS. In the Netherlands rubella vaccination of 11 year old girls began in 1974. However, mathematical models predicted that more CRS cases might be prevented by universal vaccination [3]. Therefore, since 1987, rubella vaccination has been offered to all children aged 14 months and 9 years as part of the combined vaccination against measles, mumps and rubella (MMR).

The uptake of MMR is generally high in the Netherlands (96%, MMR (first dose) in 2004). However, this conceals areas of lower vaccination coverage which are sociogeographically linked [4]. The spread of the current outbreak closely matches these areas of lower coverage (see http://www.rivm.nl/vtv/object_map/o1219n21466.html). These areas are characterised by a high proportion of religious inhabitants, some of whom refuse vaccination because they feel prevention of disease interferes with divine providence. In these areas, GGDs (Municipal Health Services) continue to offer vaccination to individuals up to 18 years of age.

The risk of outbreaks in this specific community increases when a critical number of susceptible children are born after an epidemic. Periodic epidemics occurred in the last decade: poliomyelitis (1992/93), rubella (1996) and measles (1999/2000). The current rubella epidemic could be expected: a large seroprevalence study in 1995/6 estimated that the seroprevalence in unvaccinated individuals in the age group 1-9 years was low [5]. The prevalence of immunity in females >10 years of age was >97%, both overall as well as in areas of lower vaccination coverage. The latter can be explained by natural rubella infection in the past. Based on this, it is estimated that the current prevalence (8 years after the sample) of immunity in women of childbearing age is >97%, irrespective of vaccination status.

Experience in countries with MMR programmes has shown that immigrants may be a risk group for rubella infection and CRS [6,7]. Limited information available suggests that immunity in some immigrant groups in the Netherlands may be low compared to the indigenous population [8]. However, there is no indication yet that the current rubella outbreak in the Netherlands has spread beyond the unvaccinated religious community to immigrants.

In the past, outbreaks in the Dutch orthodox religious groups have spread abroad. In the 1992/3 poliomyelitis outbreak, spread of infection to Canada was documented [9]. In the 1999/2000 measles outbreak, Canada was again affected [10].

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