Increase of Clostridium difficile infections in the German state of Saxony 2002-2007

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Background
• C. difficile is not a notifiable disease on the federal level in Germany
• The state of Saxony (population 4,300,000) consists of the district Chemnitz, Dresden, Leipzig
• In 2002, it implemented additional surveillance of community and hospital acquired Enteritis infectiosa caused by laboratory confirmed C. difficile
• We analysed trends of C. difficile incidence in Saxony to assess the usefulness of including its surveillance in the general German population
• Information on age an sex available from 2006+

Methods
• Case definition: community or hospital acquired C. difficile as laboratory confirmed cause for gastroenteritis
• Laboratory reporting between 2002 and 2007 in three distinct regions: Chemnitz, Dresden, Leipzig
• Laboratory reports from all districts were aggregated by State-level health authorities and sent to the Robert Koch Institute
• Secular trend for whole of saxony tested with Chi2 trend test
• Incidence by quarter compared descriptively with data on Salmonella spp. and Rotavirus notifications to account for increases in notifications of gastroenteric diseases due to possible reporting bias
• Age-sex distribution

Results
• Similar reporting pattern in all districts, showing marked increases after 2004 (fig 1) and a drop in third quarter of 2005
• Elevated levels of the Dresden district (fig 1) due to a specialised rehabilitation clinic
• Highest incidence in people older 65 (fig 2)
• Men and women affected equally (fig 2)
• Increasing trend for whole of Saxony (Chi2=1905; df=1; p<0,001)
• Increase is not found in Salmonella spp. and Rotavirus data (fig 3)

Conclusions
• Data from Saxony shows increase of C. difficile with numbers reaching seasonal levels of Salmonella spp. and Rotavirus
• Comparison with other gastroenteric infections does not suggest reporting bias
• Drop in third quarter of 2005 unexplained; might be due to transition to new data collection and management procedures
• Data does not permit to distinguish outbreaks from sporadic cases, neither community from hospital acquired cases
• Verification needed for rest of Germany
• We recommend to extend surveillance to the whole of Germany and include information on more detailed patient characteristics