

INTRODUCTION

E. faecalis and *E. faecium* are common gastrointestinal commensal organisms acquiring resistance through the transfer of plasmids and transposons and recombination or mutation events. Infection with vancomycin-resistant enterococci (VRE) is a growing problem. The Belgian National Reference Centre (NRC) for enterococci received since 2012 an increasing number of enterococcal strains (mainly VRE) from all over Belgium. The aim of this study is to report the epidemiology of enterococci isolated from infections/invasive sites in Belgium on strains received from hospital laboratories between 01/01/2011 and 31/10/2016.

Year	2011	2012	2013	2014	2015	2016	Total
Blood	20	36	54	49	79	66	304
Urine	13	31	51	61	94	80	330
(non)-sterile wound	5	16	27	18	39	41	146
Tissue	0	1	0	1	3	4	9
Catheter	2	2	0	5	1	4	14
Peritoneal non-sterile	3	5	7	6	9	11	41
broncho-tracheal	4	3	2	21	10	5	45
Other sterile	5	1	0	1	8	2	17
Other	7	7	11	1	15	9	50
	0	0	0	30	17	15	62
Total	59	102	152	193	275	237	1018

Table 1. Enterococcal strains isolated from an infection

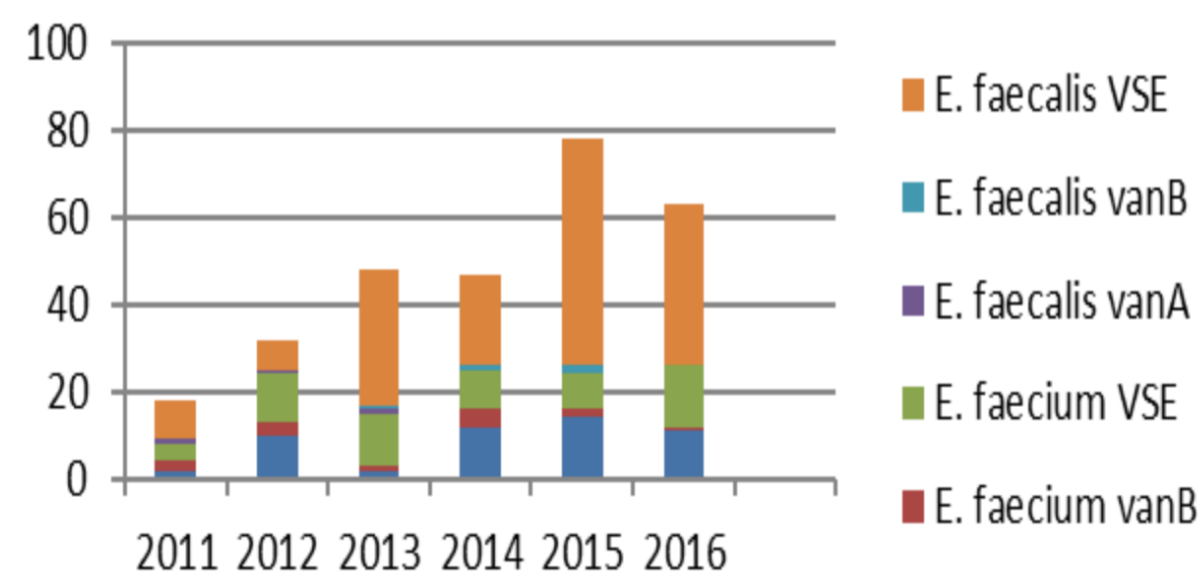
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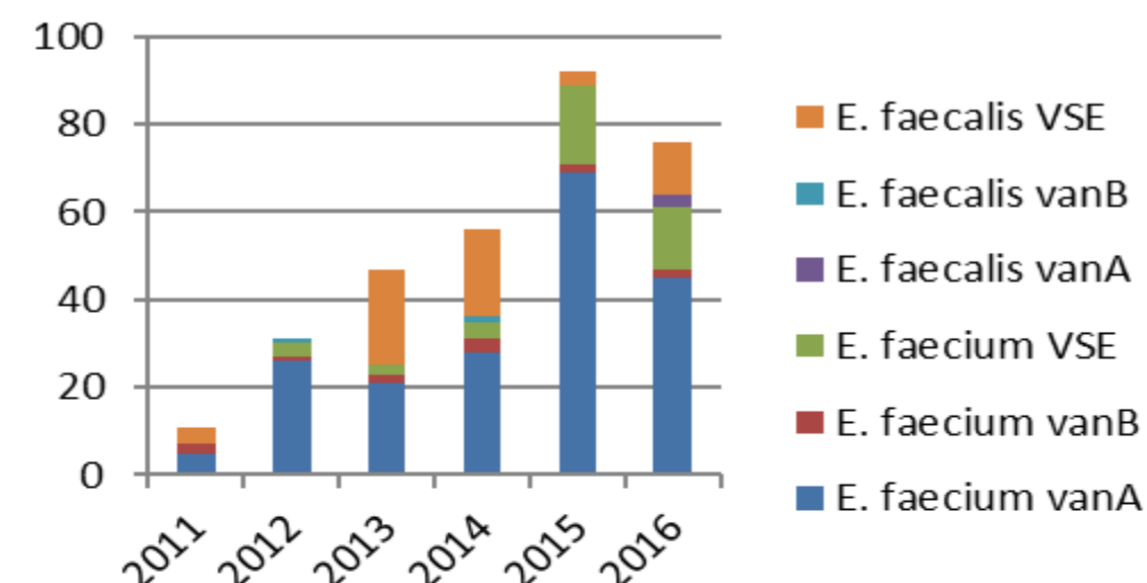
MATERIALS & METHODS

Species identification was confirmed by conventional diagnostics, by Maldi-TOF Mass Spectrometry and by *sod/ddl/16S* rDNA-PCR and sequencing. Antibiotic susceptibility was determined by using disk diffusion and E-test and interpretation according to CLSI (up to 2012) and EUCAST from (from 2012 onwards). The following antibiotics were tested: ampicillin, vancomycin, teicoplanin, linezolid) and tigecycline. PCR targeting *vanA* and *vanB* genes was applied to confirm VRE

Blood isolates



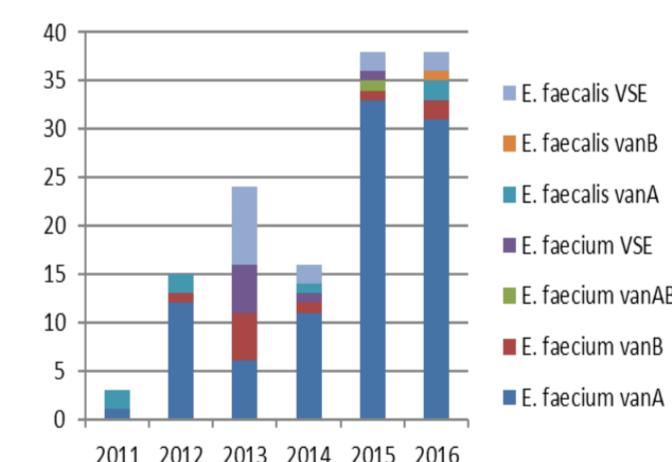
Urine isolates



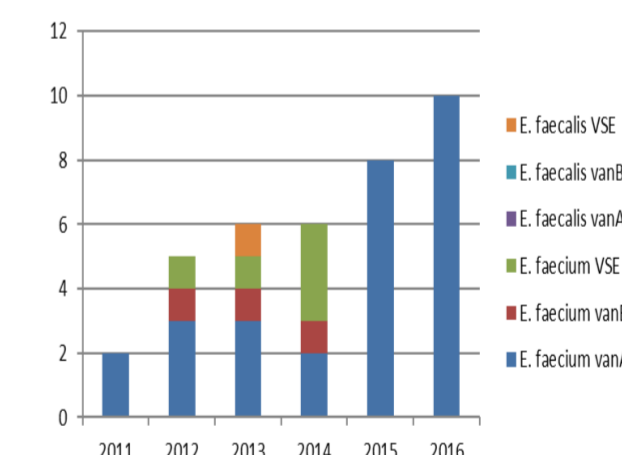
RESULTS

The number of enterococcal strains isolated from infections was steadily increased during the study period: n=59, 102, 152, 192, 275 and 207 in 2011, 2012, 2013, 2014, 2015 and 2016, respectively (Table 1). The VRE% ranged between 40,8 and 75,5 of which *vanA* increased from 45.5% to 91.4% in the same period. The number of isolates increased from 20 to 79, from 13 to 94, from 5 to 34 and from 3 to 10 for resp. isolates from blood, urine, wound infections and peritoneal fluids. Fig. 1-4 shows the proportions of vancomycin sensitive enterococci (VSE) and VRE per species for blood, urine, wound and peritoneal isolates.

Wound isolates



Peritoneal isolates



CONCLUSIONS

In the last 6 years, the NRC received an ever increasing number enterococci isolated from an infection. The highest increase was found to be caused by *vanA* positive *E. faecium* isolated from urine. Yet, since Belgian laboratories for clinical microbiology are not legally bound to submit their VRE strains to the NRC one should be cautious about the interpretation.