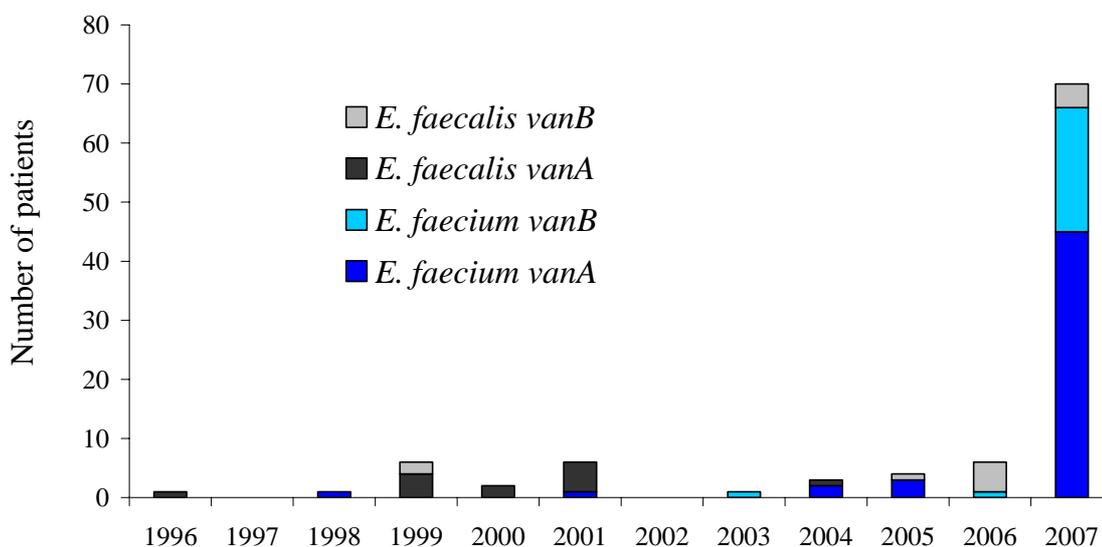


Vancomycin-resistant enterococci (VRE) confirmed in 2007

VRE from 69 patients were referred to ESR in 2007. This is a large increase in referrals compared with previous years (Figure 1). Before 2007 VRE were isolated from no more than six patients in any one year.

Figure 1. Species and van genotype of VRE isolated in New Zealand, 1996-2007



The increase in VRE isolates in 2007 can be attributed entirely to an outbreak in Auckland City Hospital - the first VRE outbreak in a New Zealand hospital. In August 2007, several patients in Auckland City Hospital were identified as having the same strain of vanA positive *E. faecium* (Table 1, PFGE profile EfN). During the remaining months of the year, this outbreak strain was isolated from a total of 44 Auckland City Hospital patients. During the course of the outbreak investigation, several other strains of VRE were isolated from a further 25 patients (Table 1). Two vanB positive *E. faecium* strains (PFGE profiles EfQ and EfO) were each isolated from several patients. Most (91.3%) of the VRE from the Auckland City Hospital patients were isolated from screening swabs taken as part of extensive outbreak control measures.

The vanA *E. faecium* outbreak strain (PFGE profile EfN) has not been previously recognised in New Zealand. It is multiresistant to ampicillin, ciprofloxacin, high-level gentamicin, high-level streptomycin and tetracycline. Multilocus sequence typing identified the strain as sequence type (ST) 375 which belongs in the ST17 clonal complex or lineage. Globally, vancomycin-resistant *E. faecium* belonging to this lineage are associated with nosocomial transmission and outbreaks. The other vancomycin-resistant *E. faecium* strains that were identified in 2007 also all belonged to the ST17 clonal complex.

Table 1. VRE referred to ESR, 2007

Referred from	Species	van gene	PFGE profile ¹	Number of patients ²
Auckland City Hospital ³	<i>E. faecium</i>	A	EfN	44
			EfT	1
		B	EfQ	9
			EfO	8
			EfP	1
			EfR	1
			EfS	1
			EfU	1
	<i>E. faecalis</i>	B	EfJ	3
Whangarei Hospital	<i>E. faecalis</i>	B	EfJ	1

- 1 In-house pulsed-field gel electrophoresis (PFGE) profile designations. The PFGE profiles of isolates designated as the same strain share $\geq 90\%$ similarity.
- 2 Two vanA *E. faecium* strains were isolated from one patient: EfN and EfT.
- 3 One patient's VRE was isolated and referred by the Auckland community laboratory following the patient's discharge from Auckland City Hospital.