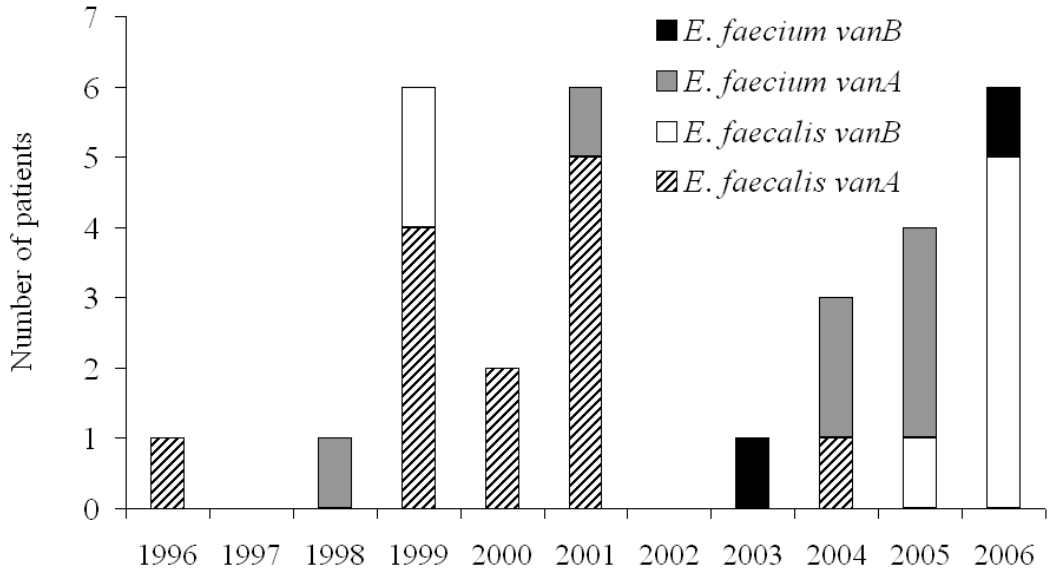
Vancomycin-resistant enterococci (VRE) confirmed in 2006

Six VRE isolates were referred to ESR in 2006:

- Five *Enterococcus faecalis* isolates with the *vanB2* genotype. Pulsed-field gel electrophoresis (PFGE) typing showed that these five *E. faecalis* isolates were closely related. They were isolated from patients in the Northland and Auckland areas. One of the patients was a tourist from Europe who had arrived in New Zealand about 1 month prior to the VRE being isolated. None of the other four patients was reported to have travelled or been hospitalised overseas. All five patients had a history of multiple admissions to local hospitals. In all five cases, the VRE was isolated from a urinary specimen.
- One *E. faecium* isolate with the *vanB2* genotype. This VRE was isolated from peritoneal tissue of a CAPD patient in the Waikato area. The patient had no history of recent overseas travel.

Figure 1. Species and van genotype of VRE isolated in New Zealand, 1996-2006



Since the first reported isolation in New Zealand in 1996, VRE have been isolated from a total of 30 people (Figure 1). Until 2001, *E. faecalis vanA* was dominant and, based on PFGE typing, all but two of the *E. faecalis vanA* isolated up until 2001 belonged to the same strain (Table 1, PFGE pattern A). In the 2003-05 period, *E. faecium* was the most common vancomycin-resistant species, and a variety of strains were identified with only one strain (Table 1, PFGE pattern H) isolated from more than one patient. In 2006, *E. faecalis vanB* was predominant, and the *E. faecalis vanB* isolated in 2005 and 2006 all belonged to the same strain (Table 1, PFGE pattern J).

In the periods when single strains of vancomycin-resistant *E. faecalis* were dominant (ie, ≤2001 and 2006), most patients with VRE had apparently not travelled or been hospitalised overseas (Figure 2). In contrast, during the 2003-05 period, when multiple strains of vancomycin-resistant *E. faecium* were common, most patients had been hospitalised overseas or at least recently travelled overseas.

Table 1. Vancomycin-resistant enterococci (VRE) isolated in New Zealand, 1996-2006

Species	Van gene	PFGE pattern[1]	Number of patients[2]	Years isolated	Area[3]
E. faecalis	*vanA*	A	12[4]	1996,1999, 2000, 2001 and 2004	Hamilton Christchurch Auckland Wellington
		B	1[4]	1999	Christchurch
		E	1	2001	Christchurch
	vanB	Z	1	1999	Christchurch
		B	1	1999	Christchurch
		J	6	2005 and 2006	Auckland Whangarei
E. faecium	*vanA*	C	1	1998	Hamilton
		D	1[5]	2001	Auckland
		F	1[5]	2001	Auckland
		H	2	2004 and 2005	Auckland
		I	1	2004	Hamilton
		K	1	2005	Wellington
		L	1	2005	Auckland
	vanB	G	1	2003	Whangarei
		M	1	2006	Hamilton

1 In-house PFGE pattern designations

2 Repeat isolations from the same patient excluded, unless the isolates differed (see footnotes 4 and 5).

3 In chronological order of place of first isolation.

4 Isolates with PFGE patterns A and B were isolated from the same patient.

5 Isolates with PFGE patterns D and F were isolated from the same patient.

Figure 2. Overseas travel and hospitalisation history of patients from whom VRE isolated, 1996-2006