MRSA in New Zealand – descriptions of common strains

AK3 MRSA strain [ST5, SCC*mec* type IV]:

Most common *spa* type: t002
Typical antibiotic susceptibility pattern: Non-multiresistant, with variable susceptibility but often fusidic acid or erythromycin resistant or only resistant to β-lactams
Epidemiology: The AK3 MRSA strain was first recognised among MRSA referred from Auckland for the annual MRSA survey in August 2005. It is isolated predominantly in the Auckland area. The majority of isolates are from children and young adults in the community.
Other characteristics: Enterotoxin C positive

AKh4 MRSA strain [ST239, SCC*mec* type III]:

Most common *spa* type: t037
Typical antibiotic susceptibility pattern: Multiresistant to ciprofloxacin, co-trimoxazole, erythromycin, clindamycin, gentamicin and tetracycline
Epidemiology: A hospital or healthcare facility-associated strain that originates from Australia and was first isolated in patients in Auckland hospitals. This strain is sporadically isolated from patients throughout New Zealand.
Alternative names: EMRSA-1, AUS-2 EMRSA and AUS-3 EMRSA

EMRSA-15 strain [ST22, SCC*mec* type IV]:

Most common *spa* types: t032, t1401 and t5501
Typical antibiotic susceptibility pattern: Resistant to ciprofloxacin with variable erythromycin susceptibility
Epidemiology: A hospital or healthcare facility-associated strain that originates from the United Kingdom. EMRSA-15 is the predominant MRSA strain isolated from hospital patients in New Zealand.
Other characteristics: Enterotoxin C positive

EMRSA-16 strain [ST36, SCC*mec* type II]:

Most common *spa* type: t018
Typical antibiotic susceptibility pattern: Resistant to ciprofloxacin and erythromycin
Epidemiology: A hospital or healthcare facility-associated strain that originates from the United Kingdom.
Other characteristics: Toxic shock syndrome toxin-1 and enterotoxin A positive

Queensland clone MRSA strain [ST93, SCC*mec* type IV]:

Most common *spa* types: t202 and t3949
Typical antibiotic susceptibility pattern: Resistant to β-lactams only
Epidemiology: The Queensland clone is a community-associated strain of MRSA. It is the predominant community MRSA in Queensland and New South Wales, and has also spread throughout Australia. It is isolated sporadically from patients in New Zealand.
Other characteristics: PVL positive

USA300 MRSA strain [ST8, SCC*mec* type IV]:

Most common *spa* type: t008
Typical antibiotic susceptibility pattern: Resistant to ciprofloxacin and/or erythromycin
Epidemiology: USA300 MRSA is a community-associated strain that is now widely disseminated in the United States. This strain is isolated from community and hospital patients throughout New Zealand.
Other characteristics: PVL positive

WR/AK1 MRSA strain [ST1, SCC*mec* type IV]:
Most common *spa* type: t127
Typical antibiotic susceptibility pattern: Resistant to fusidic acid and mupirocin
Epidemiology: A community-associated strain that was originally isolated from patients in the Whangarei and Auckland areas, but is now found throughout the country.
Other characteristics: PVL positive
Alternative name: WA (Western Australia) MRSA-1

WSPP (Western Samoan Phage Pattern) MRSA strain [ST30, SCC*mec* type IV]:
Most common *spa* type: t019
Typical antibiotic susceptibility pattern: Resistant to β-lactams only
Epidemiology: A community-associated strain first isolated from people with a Western Samoan connection. WSPP MRSA is the most common MRSA strain isolated from community patients in New Zealand
Other characteristics: PVL positive
Alternative names: Southwest Pacific clone and Oceania clone