



Supporting Information

Supplementary methods and results

**This appendix was part of the submitted manuscript and has been peer reviewed.
It is posted as supplied by the authors.**

Appendix to: Wright CM, Moorin R, Pearson G, et al. Increasing incidence of invasive group A streptococcal disease in Western Australia, particularly among Indigenous people. *Med J Aust* 2021; doi: 10.5694/mja2.51117.

Table 1. International Classification of Disease, tenth revision, Australian modification (ICD-10-AM) codes and PathWest panel codes for invasive group A streptococcal disease

ICD-10-AM principal diagnosis code*	Description
A40.0	Streptococcal sepsis due to <i>Streptococcus</i> , group A
A48.3 with code B95.0 without codes B95.1–B95.8 or B96.1–B96.8 as additional diagnoses	Toxic-shock syndrome
G00.2 with code B95.0 without codes B95.1–B95.8 or B96.1–B96.8 as additional diagnoses	Streptococcal meningitis
J15.4 with code B95.0 without codes B95.1–B95.8 or B96.1–B96.8 as additional diagnoses	Streptococcal pneumonia [†]
M00.2 with code B95.0 without codes B95.1–B95.8 or B96.1–B96.8 as additional diagnoses	Other streptococcal arthritis and polyarthritis
M46.2 with code B95.0 without codes B95.1–B95.8 or B96.1–B96.8 as additional diagnoses	Osteomyelitis of vertebra
M46.3 with code B95.0 without codes B95.1–B95.8 or B96.1–B96.8 as additional diagnoses	Infection of intervertebral disc (pyogenic)
M46.5 with code B95.0 without codes B95.1–B95.8 or B96.1–B96.8 as additional diagnoses	Other infective spondylopathies
M72.6 with code B95.0 without codes B95.1–B95.8 or B96.1–B96.8 as additional diagnoses	Necrotising fasciitis
M86 with code B95.0 without codes B95.1–B95.8 or B96.1–B96.8 as additional diagnoses	Osteomyelitis
P36.1 with code B95.0 without codes B95.1–B95.8 or B96.1–B96.8 as additional diagnoses	Sepsis of newborn due to other unspecified streptococci
O85 with code B95.0 without codes B95.1–B95.8 or B96.1–B96.8 as additional diagnoses	Puerperal sepsis
PathWest sample group	PathWest panel codes
Blood	BC1, BC2, BS1
Tissue	BIO, SWT, TSI
Cerebrospinal fluid	CF2, FSL
Unspecified fluid	FLU (knee/hip aspirates, pleural fluid)
Peritoneal fluid	FSA
Amniotic fluid	FSB
Peritoneal dialysis fluid	FSC, SWS
Synovial fluid	FSJ
Pleural fluid	FSP, RTP
Placenta	PLA
Intra-ocular fluid	SWI
Vitreous fluid	SWV
Tips and lines	TPI

* Addition of code B95.0 (must be the first additional diagnosis) indicates group A *Streptococcus* (*Streptococcus pyogenes*) disease. The other B95 and B96 codes indicate other bacterial codes and records were not eligible if these codes were present as a subsequent additional diagnosis because of the resulting uncertainty as to the bacterial cause of invasive disease.

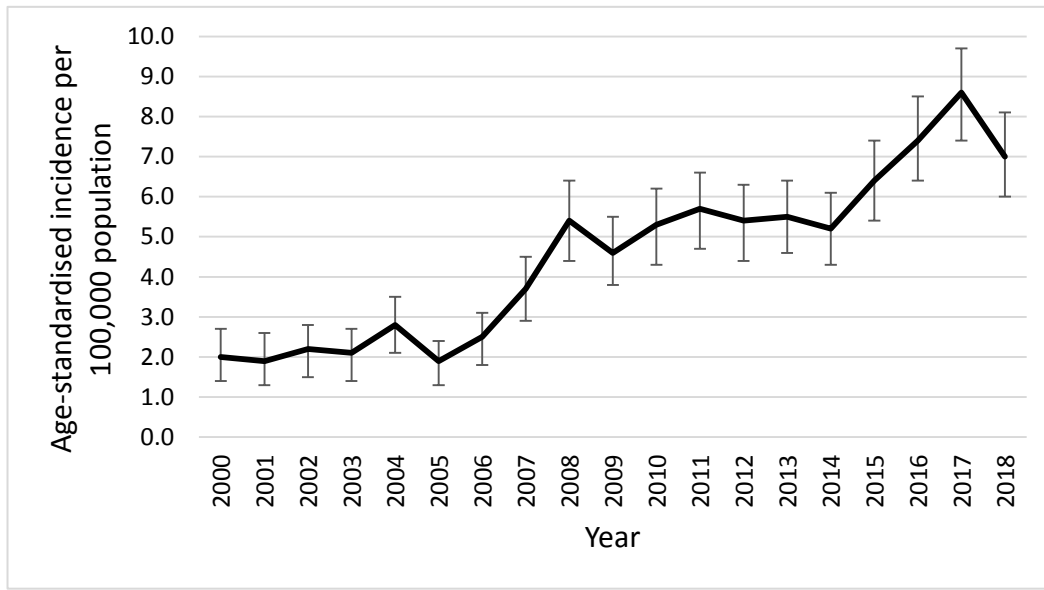
† Except for group B *Streptococcus* and *Streptococcus pneumoniae*.

Table 2. Invasive group A streptococcal disease cases, Western Australia, 2000–2018: all-cause mortality

Age group (years) [*]	30-day deaths	90-day deaths
< 1	< 5	< 5
1–4	0	< 5
5–14	< 5	< 5
15–24	< 5	< 5
25–34	6 (2%)	8 (3%)
35–44	7 (2%)	13 (3.4%)
45–54	15 (4.4%)	20 (5.9%)
55–64	11 (4.3%)	16 (6.2%)
65–74	24 (11%)	29 (13%)
75–84	27 (14%)	38 (19%)
85 or older	22 (24%)	26 (29%)

* For numbers of cases by age group, see Box 1. Data are not provided for cells with fewer than five cases to comply with confidentiality requirements.

Figure 1. Age-standardised incidence of invasive group A streptococcal disease, Western Australia, 2000–2018: only one incident case allowed per individual



Note: 116 of 2237 cases (5%) were “repeat cases”.

Figure 2. Age-standardised incidence of invasive group A *Streptococcus* disease with blood or tissue culture isolates, Western Australia, 2000–2018

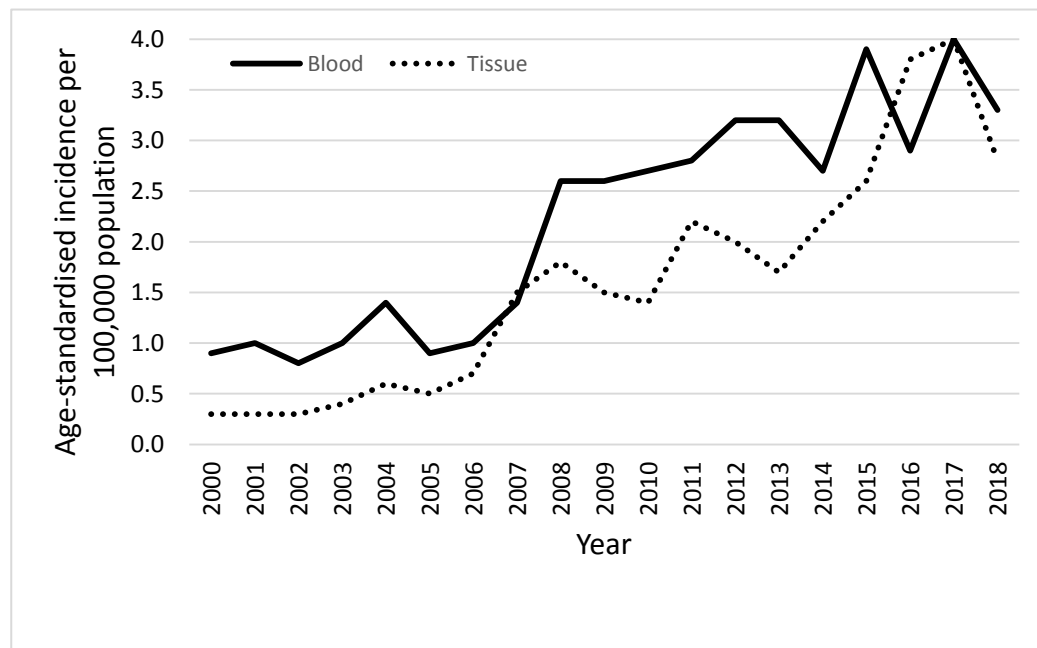


Figure 3. Crude incidence of invasive group A streptococcal disease, Western Australia, 2000–2018, by sex

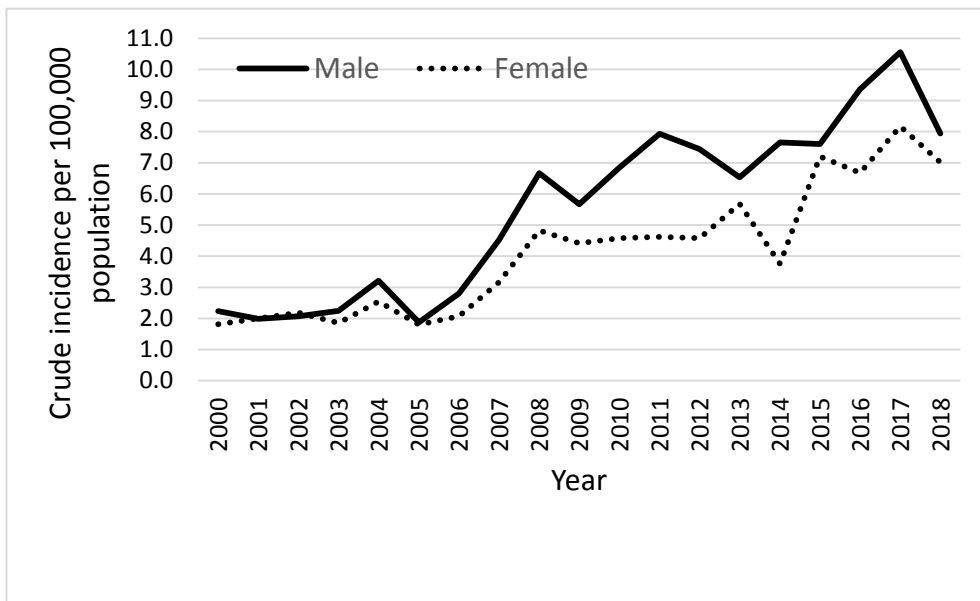


Figure 4. Crude incidence of invasive group A streptococcal disease, Western Australia, 2000–2018, by climate region

