Figure 1: Prehospital duration of symptoms for children with and without alternative first diagnosis.

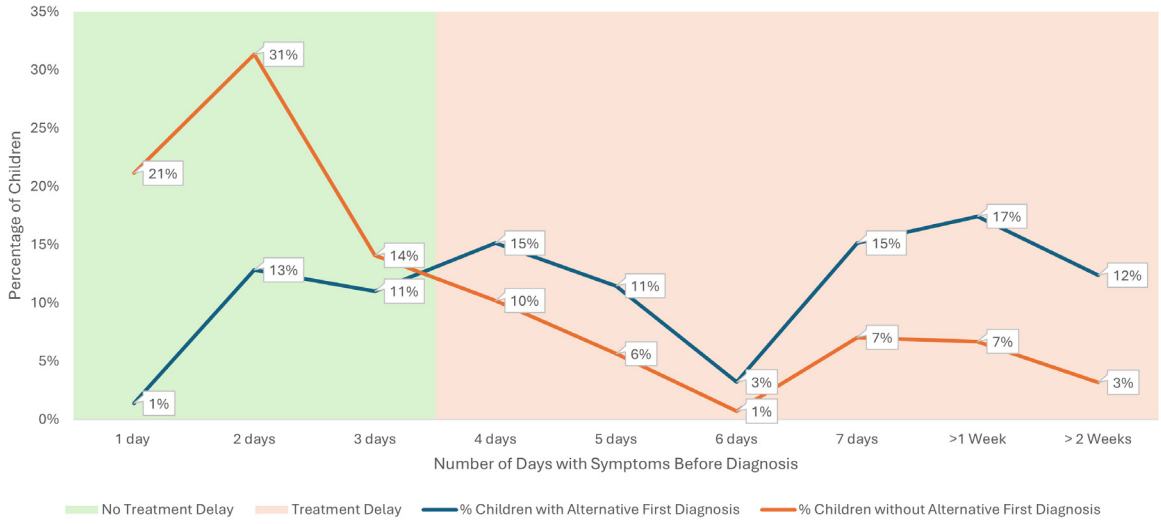
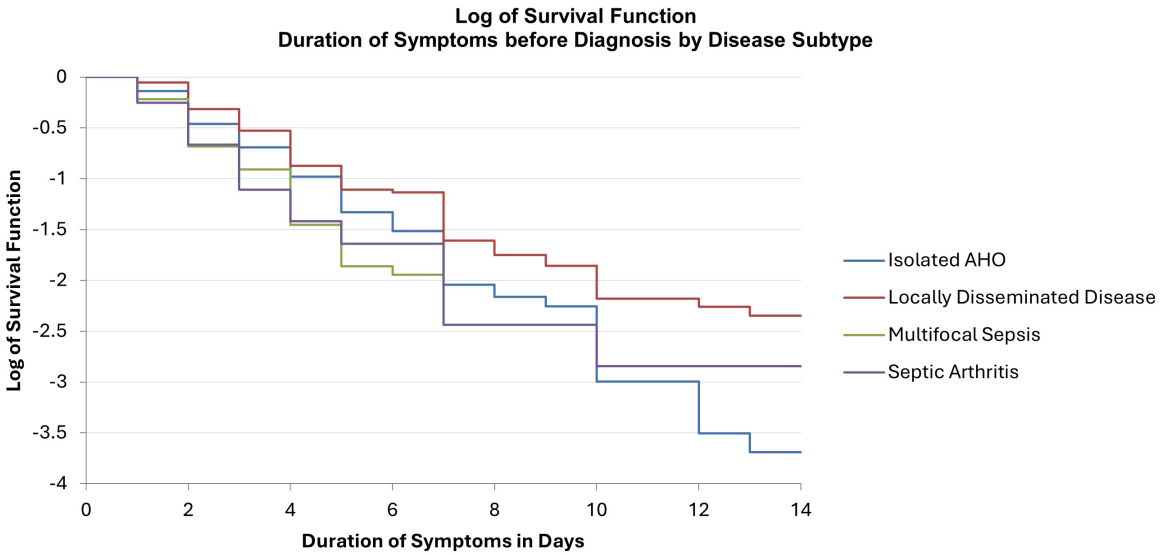


Figure 2: Kaplan–Meier analysis of time to diagnosis by disease subtype.



Mean duration of symptoms in days

Groups	Mean	Std dev	LCL (95%)	UCL (95%)
All	4.28	0.15	3.99	4.57
Status = isolated AHO	4.37	0.22	3.93	4.8
Status = locally disseminated disease	5.3	0.35	4.6	5.99
Status = multifocal sepsis	3.25	0.23	2.8	3.69
Status = septic arthritis	3.75	0.33	3.1	4.39

Figure legend: Log of survival function denotes the probability of a patient remaining in the community at each specified time point.
Std dev = standard deviation; LCL = lower confidence limit; UCL = upper confidence limit; AHO = acute haematogenous osteomyelitis.

Figure 3: Proportion of children receiving surgical intervention by duration of symptoms prior to diagnosis.

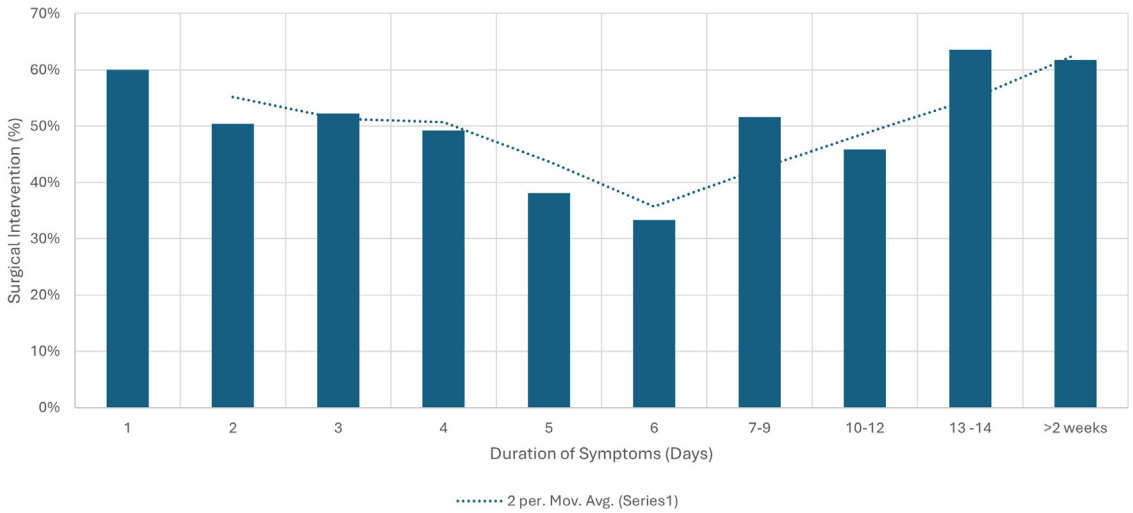


Table 1: Demographic information.

Auckland cases of childhood BJI 2018–2023 (n=563)		
Basic demographics		
	N	**%/Standard deviation**
Male	351	62%
Female	212	38%
Mean age (interquartile range)	6 (9.7)	4.6
NZ European	175	32%
Pacific	152	28%
Māori	106	19%
Indian	32	6%
Asian	57	10%
Other	39	5%
Average NZDep (interquartile range)	7 (5)	3
Disease type		
Isolated AHO	222	39%
AHO with contiguous local disease	139	25%
Multifocal sepsis	90	16%
SA	112	20%

Table 1 (continued): Demographic information.

Severe or complicated disease course (N=328)		
Intensive care admission	39	7%
>1 surgery to control infection	85	15%
Multifocal sepsis	90	16%
Chronic infection	30	5%
Readmission for treatment failure or further surgery	106	19%
Causative pathogen (from 503 cases with microbiological samples)		
Staphylococcus aureus	236	42%
Streptococcus pyogenes	30	5%
Kingella kingae	23	4%
Culture-negative	214	38%

BJI = bone and joint infection; NZ = New Zealand; NZDep = New Zealand Index of Deprivation; AHO = acute haematogenous osteomyelitis; SA = septic arthritis.

Table 2: Characteristics of children with and without alternative first diagnosis.

	Full cohort		**Children who receive alternative diagnosis first**		**Children who do not receive alternative diagnosis first**		**P value**
	N	%/SD[IQR]	N	%/SD[IQR]	N	%/SD[IQR]	
Number of cases	512		218	43%	294	57%	
Demographics							
Median age (IQR)	5	4.5 [9]	4	4.4 [8]	6	4.4 [9]	0.0003
Māori	94	18%	40	43%	54	57%	0.04
Pacific	130	25%	42	28%	88	68%	<0.0001
NZ European	169	33%	83	47%	86	54%	0.04
Other ethnic groups	114	22%	52	46%	62	54%	0.2
Median NZDep (IQR)	7	3 [5]	6	3 [6]	7	3[6]	0.0003
Illness presentation							
Attended primary care	290	57%	178	82%	112	38%	<0.0001
Recent viral illness	202	39%	101	46%	101	34%	0.008
History of trauma	116	23%	55	25%	61	21%	0.23
Febrile	336	66%	147	67%	189	64%	0.51

Table 2 (continued): Characteristics of children with and without alternative first diagnosis.

Fever + pain at site of infection	232	45%	102	47%	130	44%	0.62
Duration of symptoms in days	4	5.9 [5]	7.8	6.7 [6]	4	4.2 [2]	<0.0001
Disease characteristics							
AHO	392	77%	172	83%	220	75%	0.81
SA	120	23%	45	21%	74	25%	0.81
Multifocal sepsis	78	15%	22	10%	56	19%	0.005
AHO with locally disseminated infection	139	25%	80	37%	59	20%	0.00002
Spine	23	4%	14	6%	9	3%	0.51
Pelvis	53	10%	25	11%	28	10%	0.47
Surgical intervention	267	52%	110	50%	157	53%	0.56
>1 surgery	111	22%	42	19%	69	23%	0.36
Culture positive *S. aureus* or *S. pyogenes*	229	45%	84	39%	145	49%	0.005
Culture-negative or *K. kingae*	263	51%	126	58%	137	47%	0.004

SD = standard deviation; IQR = interquartile range; NZ = New Zealand; NZDep = New Zealand Index of Deprivation; AHO = acute haematogenous osteomyelitis; SA = septic arthritis; *S. aureus* = *Staphylococcus aureus*; *S. pyogenes* = *Streptococcus pyogenes*; *K. kingae* = *Kingella kingae*.
*512 cases with prehospital information available were included in this analysis out of 563 children with BJI.

Table 3: Disease subtypes by duration of symptoms prior to diagnosis.

Duration of symptoms	**Multifocal sepsis**		**Septic arthritis**		**Acute hae-matogenous osteomyelitis**		**Contiguous disease**	
	N	**%**	**N**	**%**	**N**	**%**	**N**	**%**
Symptoms for </= 48 hours (“early” presentation)	38	20%	50	26%	74	38%	34	17%
Symptoms >48hrs <1 week	28	15%	33	18%	82	44%	50	25%
>1 week symptoms (“late” presentation)	14	10%	22	15%	63	43%	85	34%
P value: early vs late	<0.00001		0.03		0.34		0.002	

Table 4: Rates of surgical intervention, length of stay and hospitalisation cost by subtype of disease.

	Surgical intervention	%	Median LOS (days)	Mean ± SD	IQR	Median hospitalisation cost (NZ$)	Mean ± SD	IQR
Isolated SA	100	89%	5.93	6.95±8.52	4.56	14,230.50	17,535.56±20,278.26	5,940.1
Isolated AHO	32	14%	5.14	6±4.8	4.2	8,587.9	27,402.16±229,346.62	4,217.2
Multifocal sepsis	71	89%	19.64	27±22.1	22.5	27,505.85	190,350 ± 566,998	71,502
Contiguous disease	97	70%	8.42	10.3±7.21	6.2	14,102.4	48,452.8±229,365.83	10,488.28
P value (isolated AHO vs contiguous disease)	0.0001*		<0.0001†			0.26†		

LOS = length of stay; SD = standard deviation; IQR = interquartile range; NZ = New Zealand; SA = septic arthritis; AHO = acute haematogenous osteomyelitis.
* Chi-squared test.
† Mann–Whitney U test.