

Appendix 1. Expected ranges of uncertainty around different sensitivities and for different expected prevalence

Sampling option [note 1]	Sensitivity	Desired sample size after 11% loss	Expected sepsis cases detected/True sepsis cases	Estimated SE	Expected confidence interval	Estimated number of sepsis cases [note 2] (95% confidence interval range)
ICU patients (30% prevalence) [note 3]						
A	60%	320	58/96	0.05	51 to 70%	68,123 (58,630 to 81,285)
B	60%	400	72/150	0.04	51 to 69%	68,597 (59,853 to 80,332)
A	70%	320	67/96	0.05	61 to 79%	68,801 (60,800 to 79,228)
B	70%	400	84/120	0.04	62 to 78%	68,597 (61,404 to 77,697)
Emergency non-ICU patients (2% prevalence)						
A	60%	1,600	19/32	0.09	42 to 76%	129,880 (100,948 to 182,058)
B	60%	2,000	24/40	0.08	45 to 75%	128,527 (102,573 to 172,066)
C	60%	3,180	38/64	0.06	47 to 71%	129,880 (107,994 to 162,891)
A	70%	1,600	22/32	0.08	53 to 85%	130,864 (106,083 to 170,751)
B	70%	2,000	28/40	0.07	56 to 84%	128,527 (106,850 to 161,239)
C	70%	3,180	45/64	0.06	59 to 82%	127,956 (110,383 to 152,183)
Emergency non-ICU patients (6% prevalence)						
A	60%	1,600	58/96	0.05	51 to 70%	382,922 (329,560;456,903)
B	60%	2,000	72/120	0.04	51 to 69%	385,581 (336,432;451,548)
C	60%	3,180	115/191	0.04	53 to 67%	384,240 (344,520 to 434,313)
A	70%	1,600	67/96	0.05	61 to 79%	386,732 (341,755 to 445,343)
B	70%	2,000	84/120	0.04	62 to 78%	385,581 (345,153 to 436,737)
C	70%	3,180	134/191	0.03	64 to 77%	384,718 (352,146 to 423,930)
Non-ICU-non-ED patients (1%)						
A	60%	1,780	11/18	0.11	39 to 84%	107,106 (78,264 to 169,614)
B	60%	1,300	8/13	0.13	35 to 88%	106,363 (74,392 to 186,522)
Total population (option C excludes non-ICU- non-ED patients): 30% ICU sepsis 2% ED sepsis; 3% sepsis overall						
A	60%	3,700	88/146	0.15	30 to 90%	305,110

B	60%	3,700	104/173	0.16	28 to 92%	(242,987 to 367,232) 311,195
C	60%	3,700	96/160	0.08	44 to 76%	(236,251 to 386,138) 198,003
Total population (option C excludes non-ICU-non-ED patients): 30% ICU sepsis, 6% ED sepsis; 7% sepsis overall						
A	60%	3,700	127/210	0.13	34 to 87%	(168,310 to 227,697) 558,152
B	60%	3,700	152/253	0.15	31 to 89%	(478,977 to 637,326) 560,540
C	60%	3,700	173/287	0.06	48 to 72%	(479,540 to 641,541) 452,364
						(406,060 to 498,667)

Note 1. Option A samples from each population. Option B boosts the samples from ICU and ED, sacrificing precision in non-ICU-non-ED patients. Option C boosts from ED and excludes non-ICU-non-ED patients.

Note 2. Estimated sepsis cases nationally.

Note 3. Sampling option C is equivalent to A for the ICU population

Appendix 2 – data collection instrument

Information

*** PATIENT NHS NUMBER, DATE OF BIRTH, HOSPITAL NUMBER, SEX, ADMISSION DATE MUST BE REMOVED PRIOR TO TRANSFER TO UKHSA ***

	indicate "yes" if the reviewer treated the patient at any point during the listed admission ;
Treated_patient_spell	if the reviewer did not treat the patient at any point during the listed admission, write "no"
reviewer_pseudoID	insert the reviewer's pseudoID - this will be communicated to you in your training pack

[illegible]