

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 (329560;456903)
B	60%	2,000	72/120	0.04	51 to 69% 385,581 (336432;451548)
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 (236,251 to 386,138)
C	60%	3,700	96/160	0.08	44 to 76%	198,003 (168,310 to 227,697)
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%	558,152 (478,977 to 637,326)
B	60%	3,700	152/253	0.15	31 to 89%	560,540 (479,540 to 641,541)
C	60%	3,700	173/287	0.06	48 to 72%	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