

Appendix 3 (as submitted by the authors): Predictive ability of scores for sepsis diagnosis

Table A3-1: Predicted probability of sepsis diagnosis among patients with emergency department diagnosed infection

Score	C	0	1	2	3	4	5
qSOFA	0.77	0.07 (0.06-0.08)	0.25 (0.22-0.28)	0.60 (0.56-0.64)	0.87 (0.84-0.89)		
BAS	0.71	0.13 (0.11-0.15)	0.30 (0.27-0.34)	0.59 (0.55-0.62)	0.82 (0.79-0.85)		
Robson	0.72	0.07 (0.06-0.08)	0.11 (0.09-0.12)	0.19 (0.17-0.22)	0.32 (0.28-0.36)	0.48 (0.43-0.53)	0.65 (0.59-0.7)
PreSAT	0.65	0.13 (0.11-0.15)	0.16 (0.14-0.19)	0.24 (0.21-0.28)	0.36 (0.31-0.4)	0.48 (0.43-0.54)	
PSP	0.66	0.13 (0.11-0.16)	0.17 (0.15-0.2)	0.26 (0.23-0.3)	0.39 (0.34-0.43)		
SIRS	0.63	0.14 (0.12-0.17)	0.17 (0.14-0.19)	0.24 (0.21-0.27)	0.33 (0.29-0.38)		
Score	C	2	4	6	8	10	11
CIP	0.79	0.18 (0.15-0.2)	0.58 (0.55-0.61)	0.90 (0.88-0.91)	0.98 (0.98-0.99)		
Borrelli	0.77	0.25 (0.22-0.29)	0.66 (0.62-0.7)	0.92 (0.89-0.93)			
SEPSIS	0.73	0.16 (0.14-0.19)	0.36 (0.33-0.40)	0.63 (0.60-0.66)	0.84 (0.81-0.86)	0.94 (0.62-0.95)	
PRESEP	0.68	0.15 (0.13-0.18)	0.22 (0.19-0.26)	0.31 (0.27-0.36)	0.42 (0.37-0.47)	0.54 (0.48-0.59)	0.65 (0.60-0.70)
Score	C	3	6	9	12	15	16
NEWS	0.76	0.12 (0.1-0.14)	0.26 (0.23-0.3)	0.49 (0.45-0.53)	0.72 (0.69-0.75)	0.88 (0.86-0.89)	0.93 (0.92-0.94)
HEWS	0.73	0.16 (0.14-0.19)	0.33 (0.3-0.37)	0.56 (0.52-0.6)	0.77 (0.73-0.8)	0.89 (0.87-0.91)	
MEWS	0.73	0.22 (0.19-0.24)	0.50 (0.47-0.54)	0.79 (0.76-0.81)	0.93 (0.92-0.94)		
PRESS	0.64	0.14 (0.11-0.17)	0.22 (0.19-0.25)	0.33 (0.29-0.36)	0.46 (0.42-0.5)	0.60 (0.55-0.65)	

† Results sorted by decreasing C statistic

C: C statistic, qSOFA = Quick Sepsis-related Organ Failure, BAS = Blood Pressure "Andningsfrekvens" (respiratory rate in Swedish) Saturation, PreSAT = Prehospital Sepsis Assessment Tool, PSP = Prehospital Sepsis Project, SIRS = Systemic Inflammatory Response Syndrome, CIP = Critical Illness Prediction, SEPSIS = Screening to Enhance Prehospital Identification of Sepsis, PRESEP = Prehospital Early Sepsis Detection, NEWS = National Early Warning Score, HEWS = Hamilton Early Warning Score, MEWS = Modified Early Warning Score, PRESS = Prehospital Severe Sepsis,

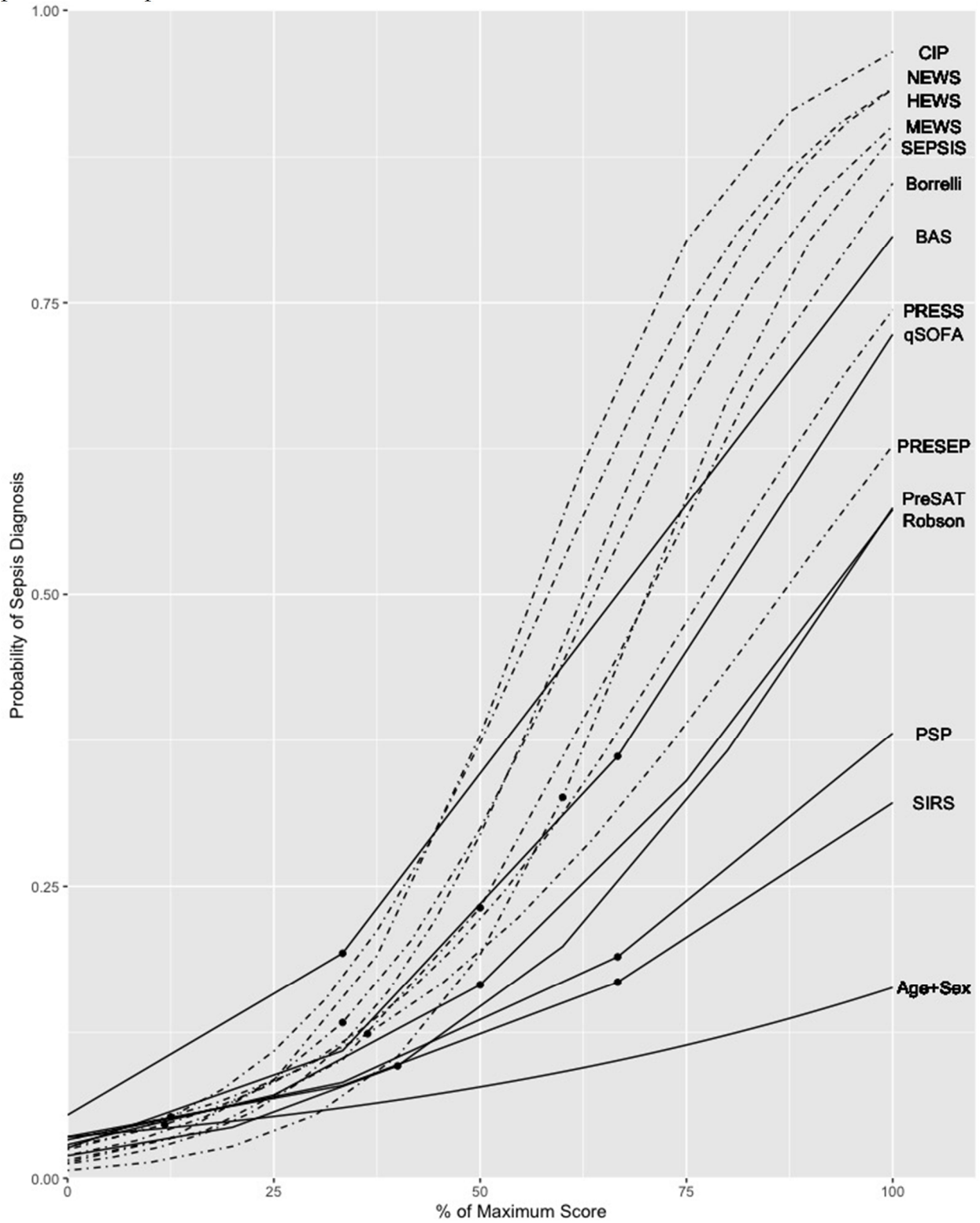
Table A3-2: Probability of sepsis diagnosis among patients suspected to have infection by paramedics

Score	C	0	1	2	3	4	5
qSOFA	0.8 2	0.02	0.10	0.33	0.70		
		(0.02- 0.03)	(0.08- 0.12)	(0.28- 0.39)	(0.62- 0.76)		
BAS	0.7 7	0.05	0.17	0.46	0.78		
		(0.04- 0.06)	(0.14- 0.2)	(0.39- 0.54)	(0.7- 0.85)		
Robson	0.8 1	0.02	0.04	0.08	0.17	0.32	0.52
		(0.01- 0.02)	(0.03- 0.04)	(0.06- 0.1)	(0.14- 0.2)	(0.26- 0.38)	(0.45- 0.59)
PreSAT	0.7 7	0.02	0.05	0.13	0.28	0.50	
		(0.02- 0.03)	(0.04- 0.07)	(0.1- 0.16)	(0.22- 0.34)	(0.42- 0.59)	
PSP	0.7 8	0.02	0.06	0.15	0.32		
		(0.02- 0.03)	(0.05- 0.08)	(0.12- 0.19)	(0.25- 0.39)		
SIRS	0.7 5	0.03	0.06	0.13	0.26		
		(0.02- 0.04)	(0.05- 0.08)	(0.1- 0.17)	(0.21- 0.33)		
MBIS	0.7 7	0.02	0.05	0.10	0.21		
		(0.01- 0.03)	(0.04- 0.06)	(0.08- 0.13)	(0.17- 0.25)		
Score	C	2	4	6	8	10	11
CIP	0.8 4	0.08	0.38	0.80	0.96		
		(0.07- 0.10)	(0.30- 0.46)	(0.71- 0.87)	(0.93- 0.98)		
Borrelli	0.8 4	0.11	0.47	0.86			
		(0.08- 0.14)	(0.38- 0.56)	(0.80- 0.91)			
SEPSIS	0.8 3	0.05	0.19	0.50	0.80		
		(0.04- 0.07)	(0.16- 0.23)	(0.42- 0.47)	(0.74- 0.86)		
PRESEP	0.7 9	0.05	0.10	0.18	0.31	0.48	0.57

		(0.04- 0.07)	(0.08- 0.13)	(0.15- 0.23)	(0.25- 0.38)	(0.4- 0.56)	(0.48- 0.65)
Score	C	3	6	9	12	15	16
NEWS	0.8 4	0.03	0.09	0.24	0.50	0.76	0.83
		(0.02- 0.04)	(0.07- 0.11)	(0.2- 0.28)	(0.43- 0.57)	(0.7- 0.82)	(0.77- 0.87)
MEWS	0.8 2	0.09	0.32	0.69	0.91		
		(0.07- 0.12)	(0.26- 0.40)	(0.60- 0.77)	(0.86- 0.95)		
HEWS	0.8 1	0.05	0.14	0.33	0.61	0.83	0.88
		(0.05- 0.08)	(0.11- 0.17)	(0.27- 0.4)	(0.52- 0.7)	(0.76- 0.89)	(0.82- 0.92)
PRESS	0.7 1	0.05	0.08	0.16	0.30	0.50	0.56
		(0.03- 0.07)	(0.06- 0.1)	(0.13- 0.19)	(0.25- 0.36)	(0.4- 0.59)	(0.46- 0.66)

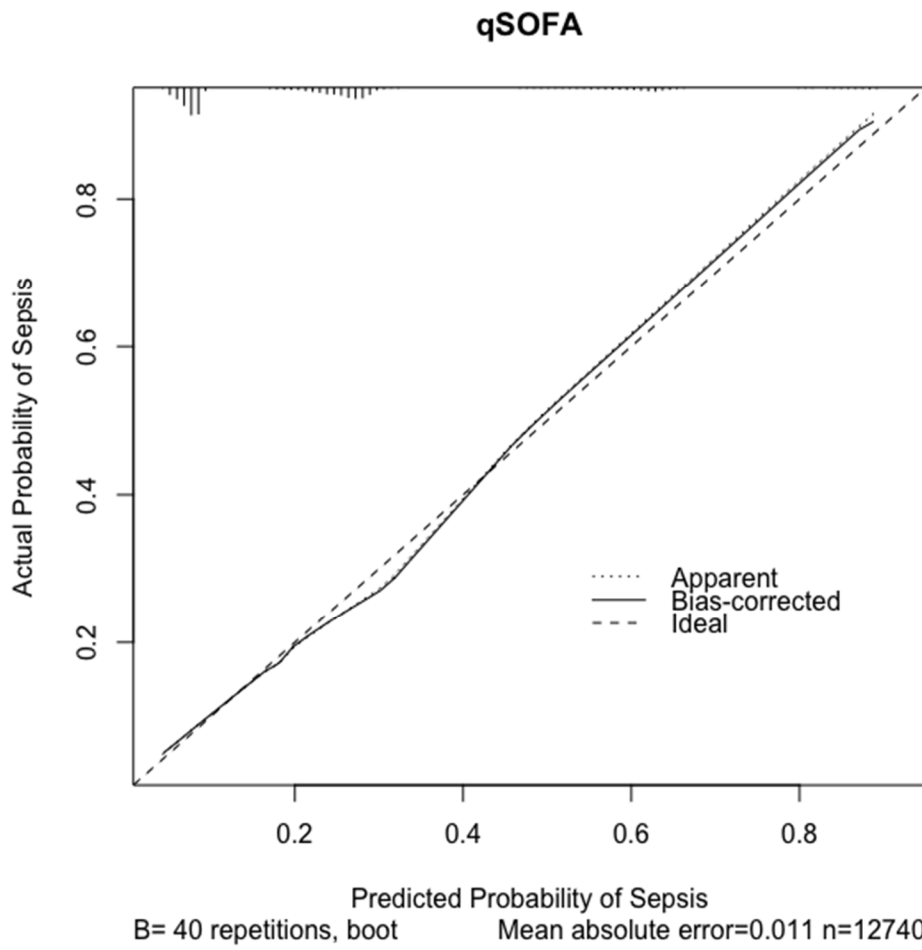
C: C statistic, qSOFA = Quick Sepsis-related Organ Failure, BAS = Blood Pressure "Andningsfrekvens" (respiratory rate in Swedish) Saturation, PreSAT = Prehospital Sepsis Assessment Tool, PSP = Prehospital Sepsis Project, SIRS = Systemic Inflammatory Response Syndrome, CIP = Critical Illness Prediction, SEPSIS = Screening to Enhance Prehospital Identification of Sepsis, PRESEP = Prehospital Early Sepsis Detection, NEWS = National Early Warning Score, HEWS = Hamilton Early Warning Score, MEWS = Modified Early Warning Score, PRESS = Prehospital Severe Sepsis,

Figure A3-1: Predicted probability of paramedic sepsis-screening strategies among patients with paramedic suspected infection



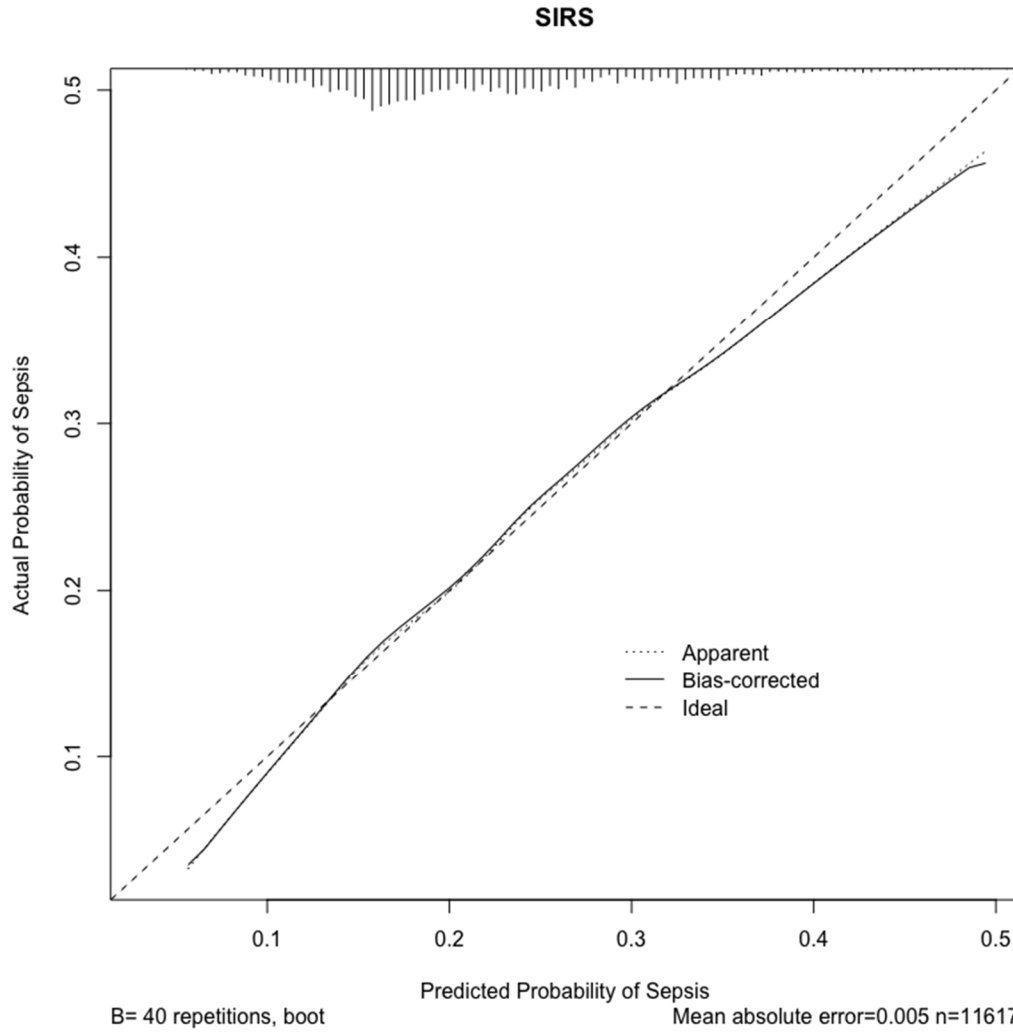
- - Dotted line indicates scores with more than 5 points.
- Point represents recommended score threshold (if available)

Figure A3-2: Calibration plot of Quick Sepsis-related Organ Failure score



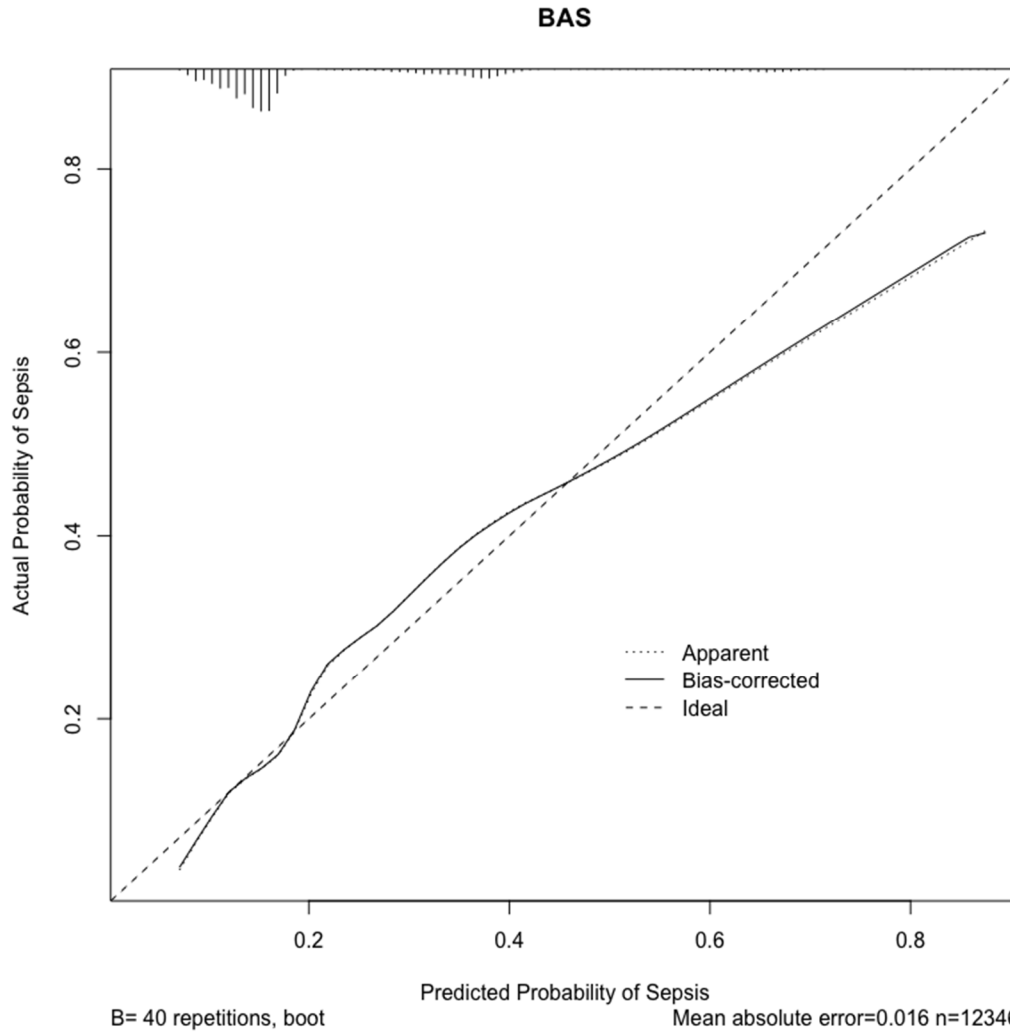
Calibration plot comparing the predicted probability of sepsis diagnosis from paramedic screening score to the actual observed probability. Ideal line indicates perfect calibration. Apparent line indicates observed calibration. Bias-corrected line indicates observed calibration with bias-correction after bootstrap resampling.

Figure A3-3: Calibration plot of Systemic Inflammatory Response score



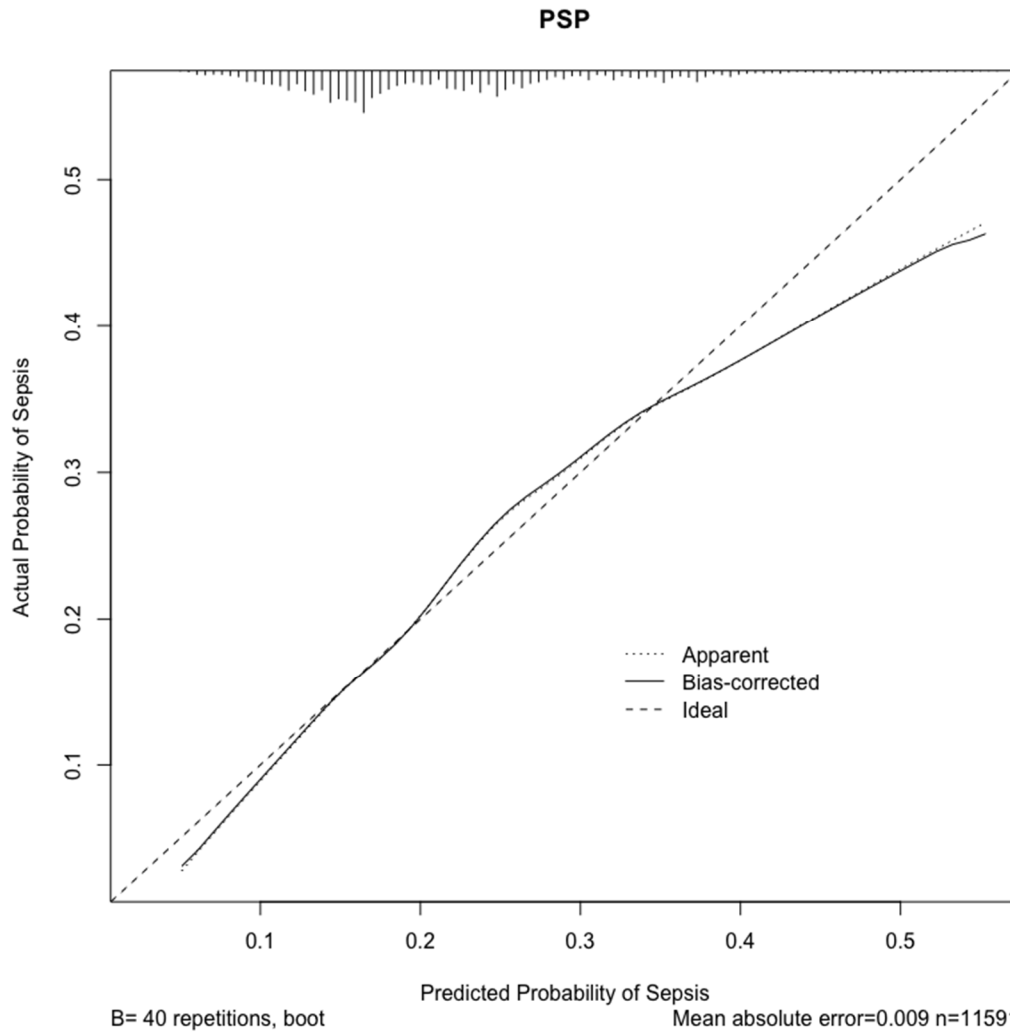
Calibration plot comparing the predicted probability of sepsis diagnosis from paramedic screening score to the actual observed probability. Ideal line indicates perfect calibration. Apparent line indicates observed calibration. Bias-corrected line indicates observed calibration with bias-correction after bootstrap resampling.

Figure A3-4: Calibration plot of Blood Pressure "Andningsfrekvens" (respiratory rate in Swedish) Saturation score



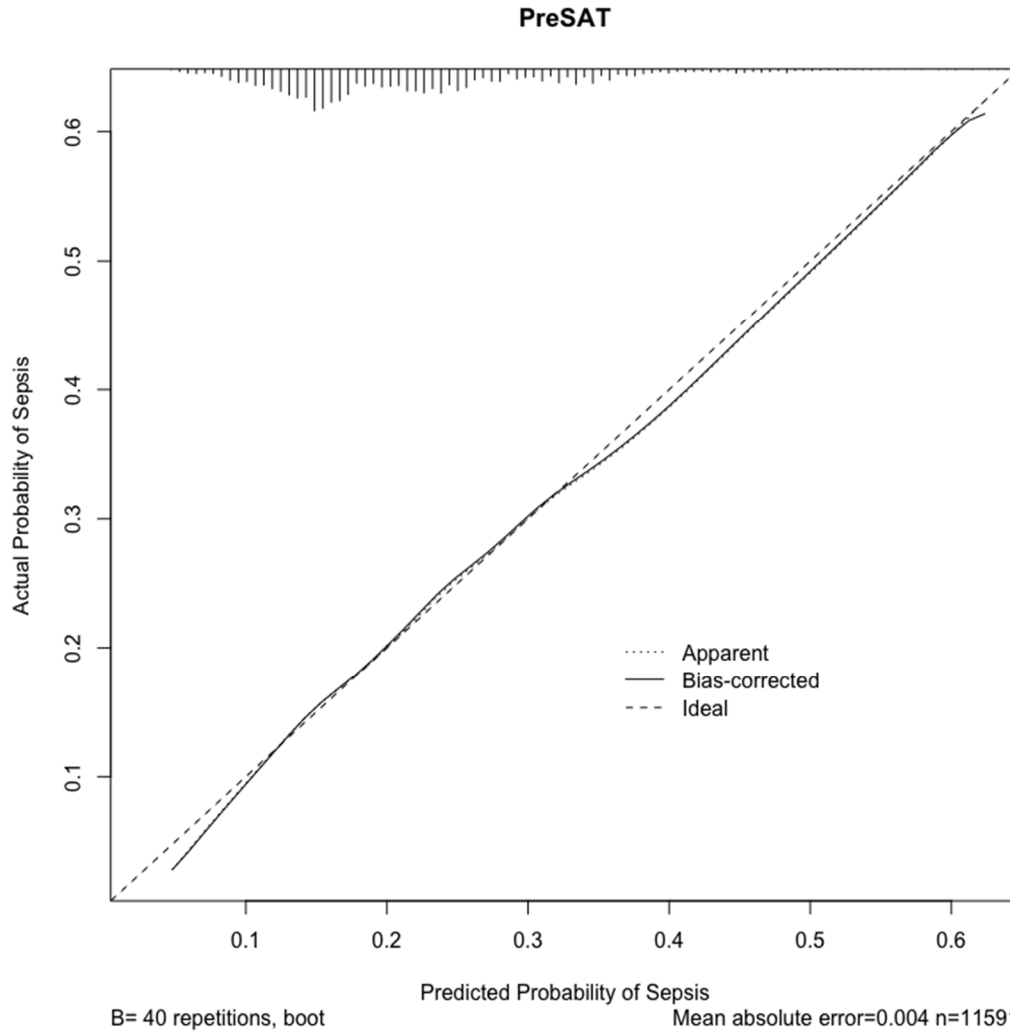
Calibration plot comparing the predicted probability of sepsis diagnosis from paramedic screening score to the actual observed probability. Ideal line indicates perfect calibration. Apparent line indicates observed calibration. Bias-corrected line indicates observed calibration with bias-correction after bootstrap resampling.

Figure A3-5: Calibration plot of Prehospital Sepsis Project score



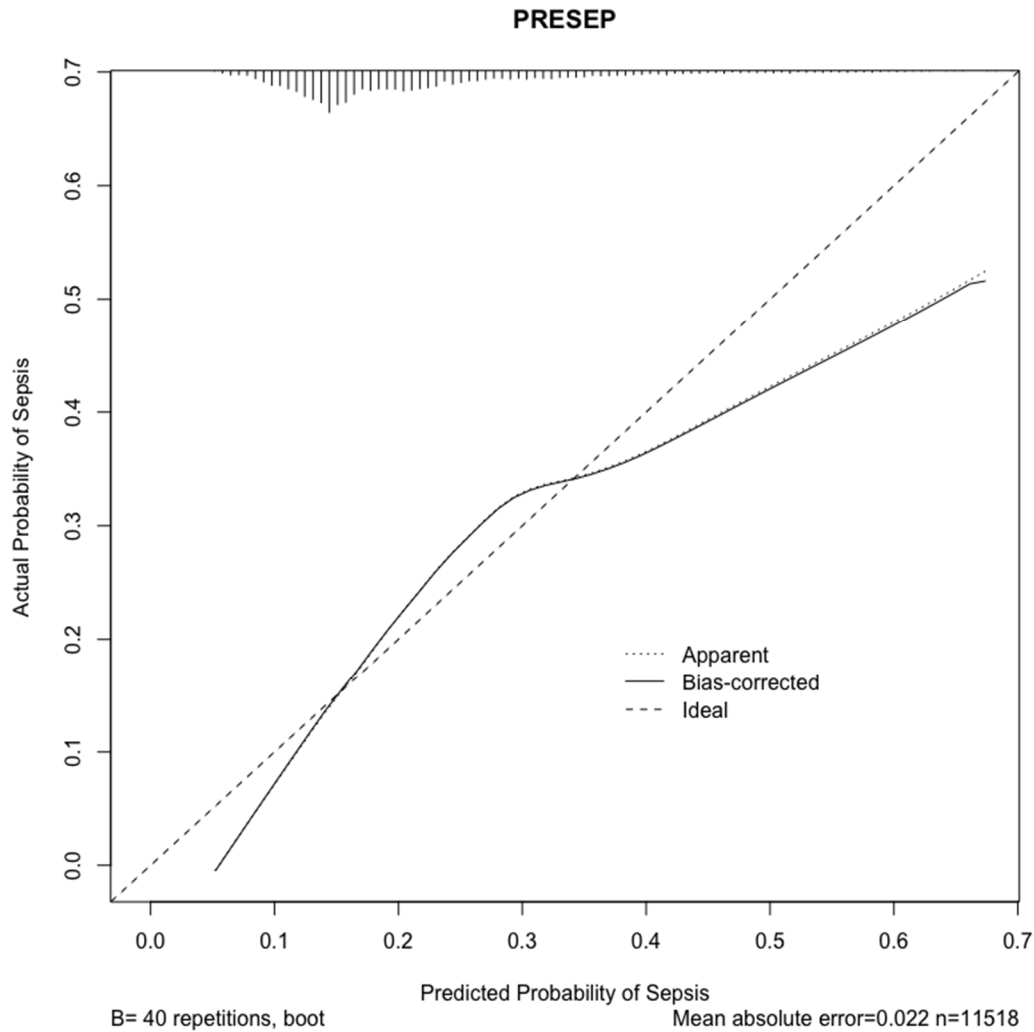
Calibration plot comparing the predicted probability of sepsis diagnosis from paramedic screening score to the actual observed probability. Ideal line indicates perfect calibration. Apparent line indicates observed calibration. Bias-corrected line indicates observed calibration with bias-correction after bootstrap resampling.

Figure A3-6: Calibration plot of Prehospital Sepsis Assessment Tool score



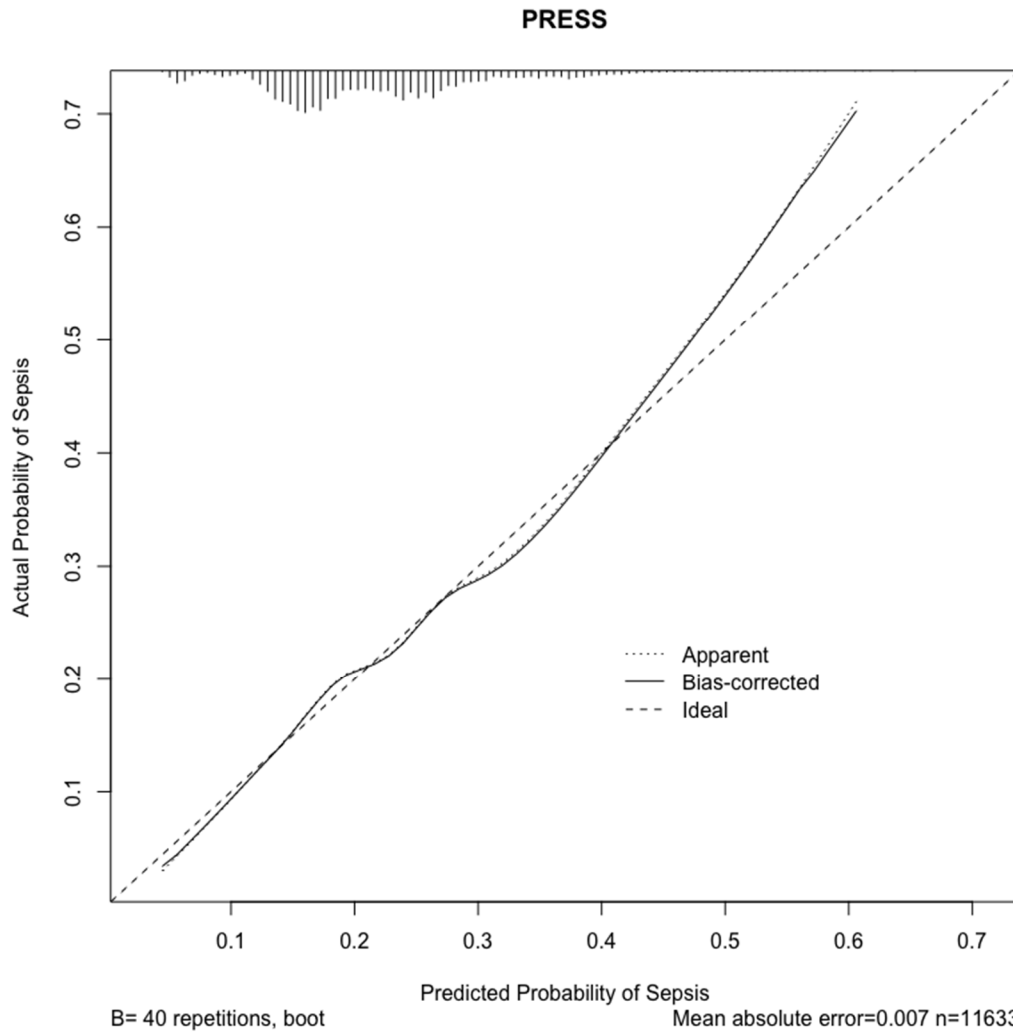
Calibration plot comparing the predicted probability of sepsis diagnosis from paramedic screening score to the actual observed probability. Ideal line indicates perfect calibration. Apparent line indicates observed calibration. Bias-corrected line indicates observed calibration with bias-correction after bootstrap resampling.

Figure A3-7: Calibration plot of Prehospital Early Sepsis Detection score



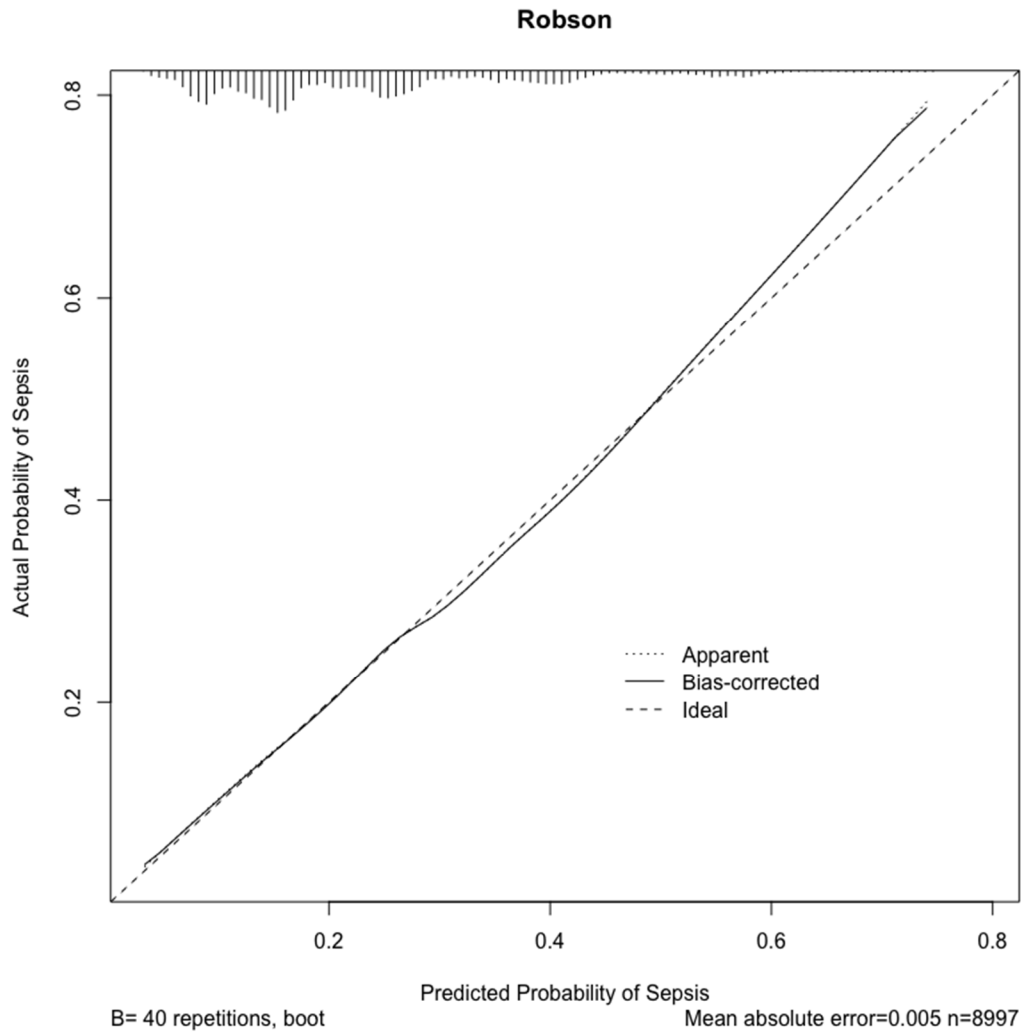
Calibration plot comparing the predicted probability of sepsis diagnosis from paramedic screening score to the actual observed probability. Ideal line indicates perfect calibration. Apparent line indicates observed calibration. Bias-corrected line indicates observed calibration with bias-correction after bootstrap resampling.

Figure A3-8: Calibration plot of Prehospital Severe Sepsis score



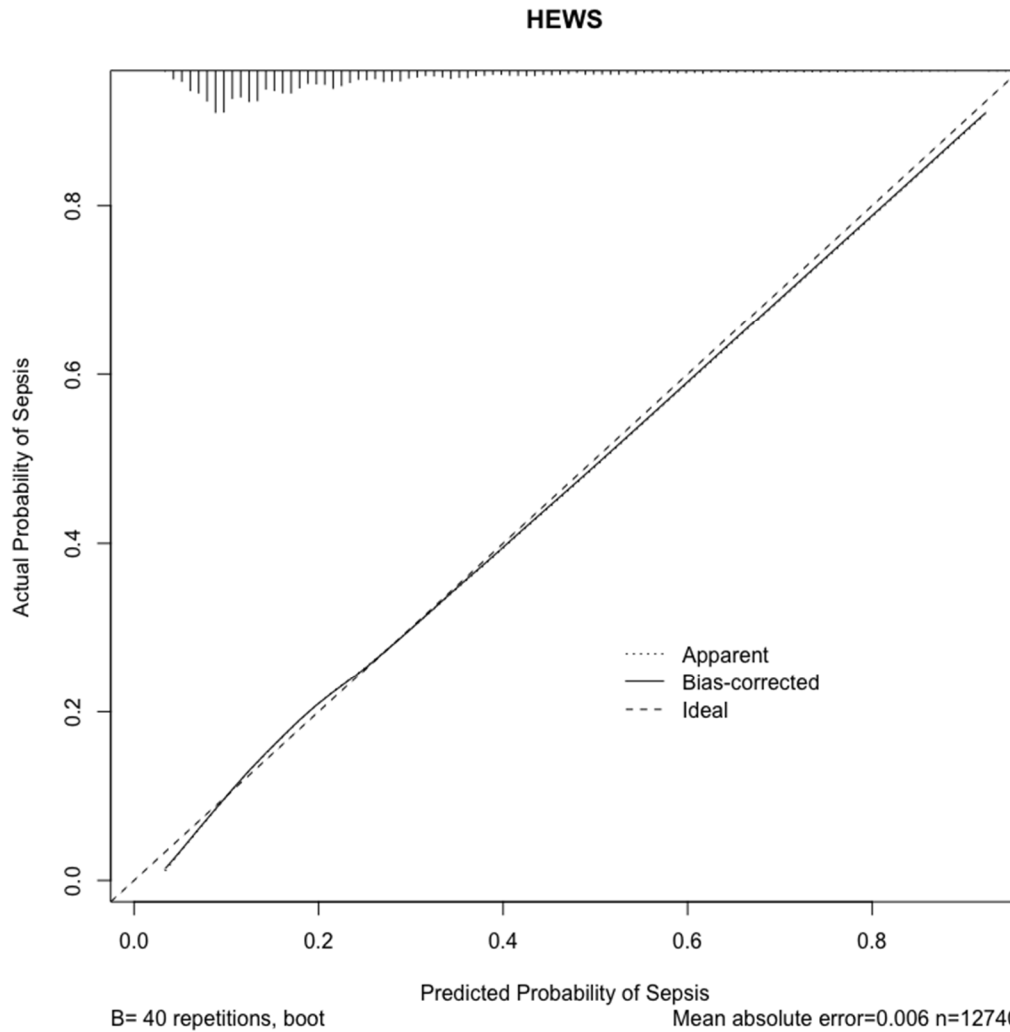
Calibration plot comparing the predicted probability of sepsis diagnosis from paramedic screening score to the actual observed probability. Ideal line indicates perfect calibration. Apparent line indicates observed calibration. Bias-corrected line indicates observed calibration with bias-correction after bootstrap resampling.

Figure A3-9: Calibration plot of Robson score



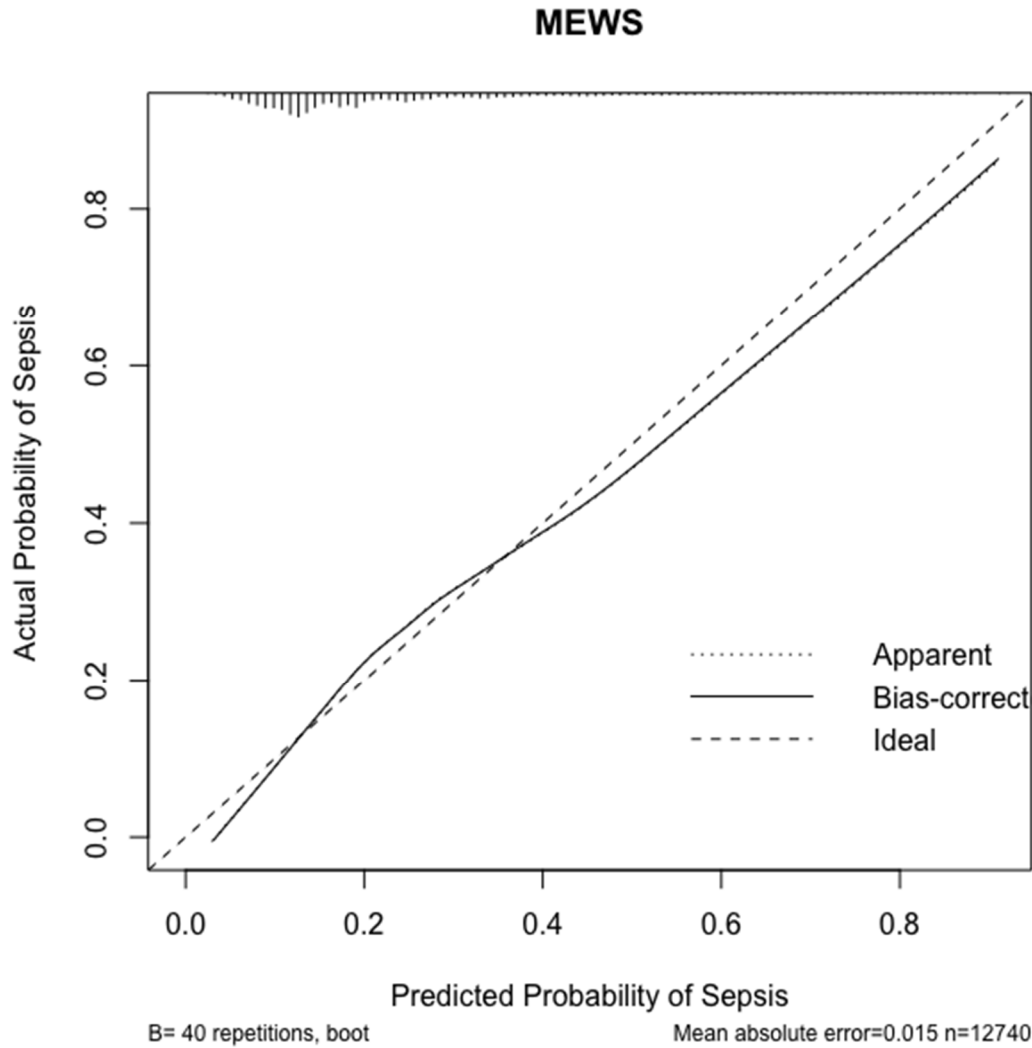
Calibration plot comparing the predicted probability of sepsis diagnosis from paramedic screening score to the actual observed probability. Ideal line indicates perfect calibration. Apparent line indicates observed calibration. Bias-corrected line indicates observed calibration with bias-correction after bootstrap resampling.

Figure A3-10: Calibration plot of Hamilton Early Warning score



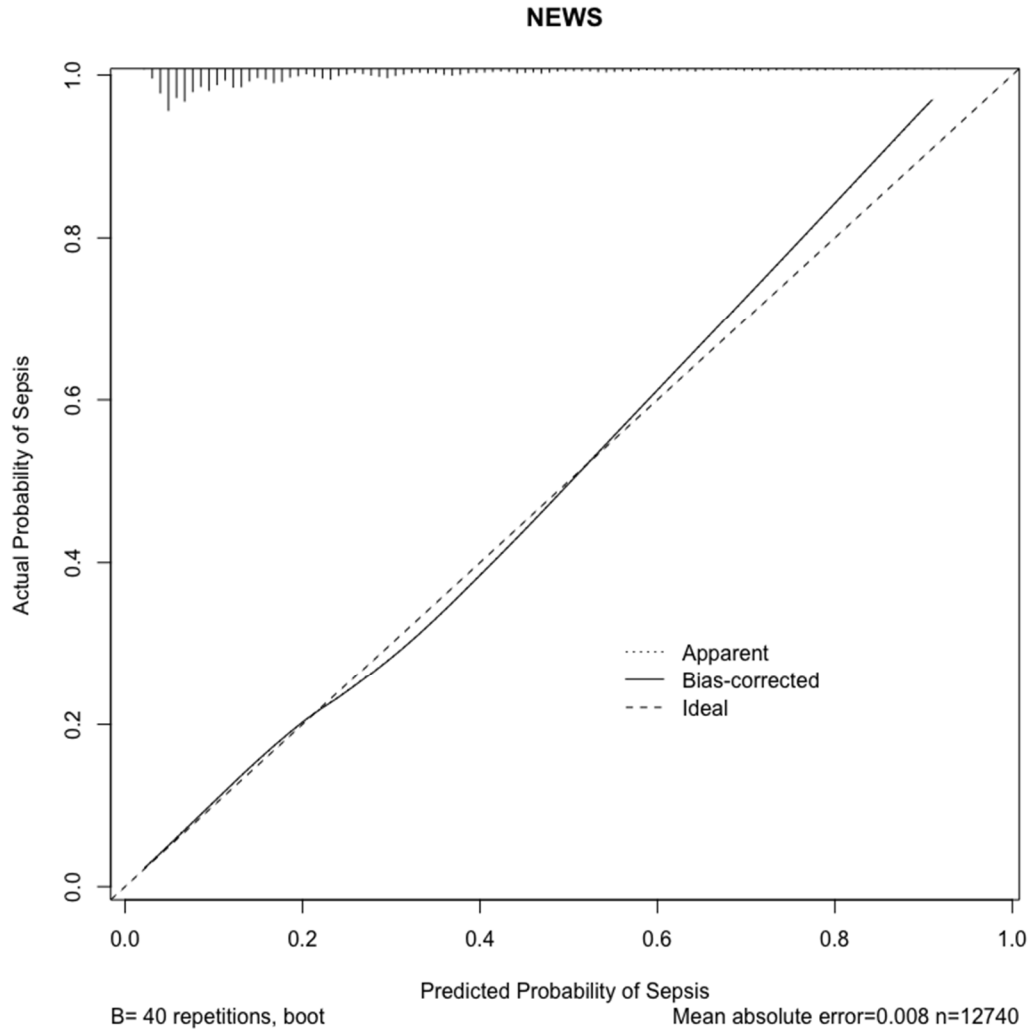
Calibration plot comparing the predicted probability of sepsis diagnosis from paramedic screening score to the actual observed probability. Ideal line indicates perfect calibration. Apparent line indicates observed calibration. Bias-corrected line indicates observed calibration with bias-correction after bootstrap resampling.

Figure A3-11: Calibration plot of Modified Early Warning score



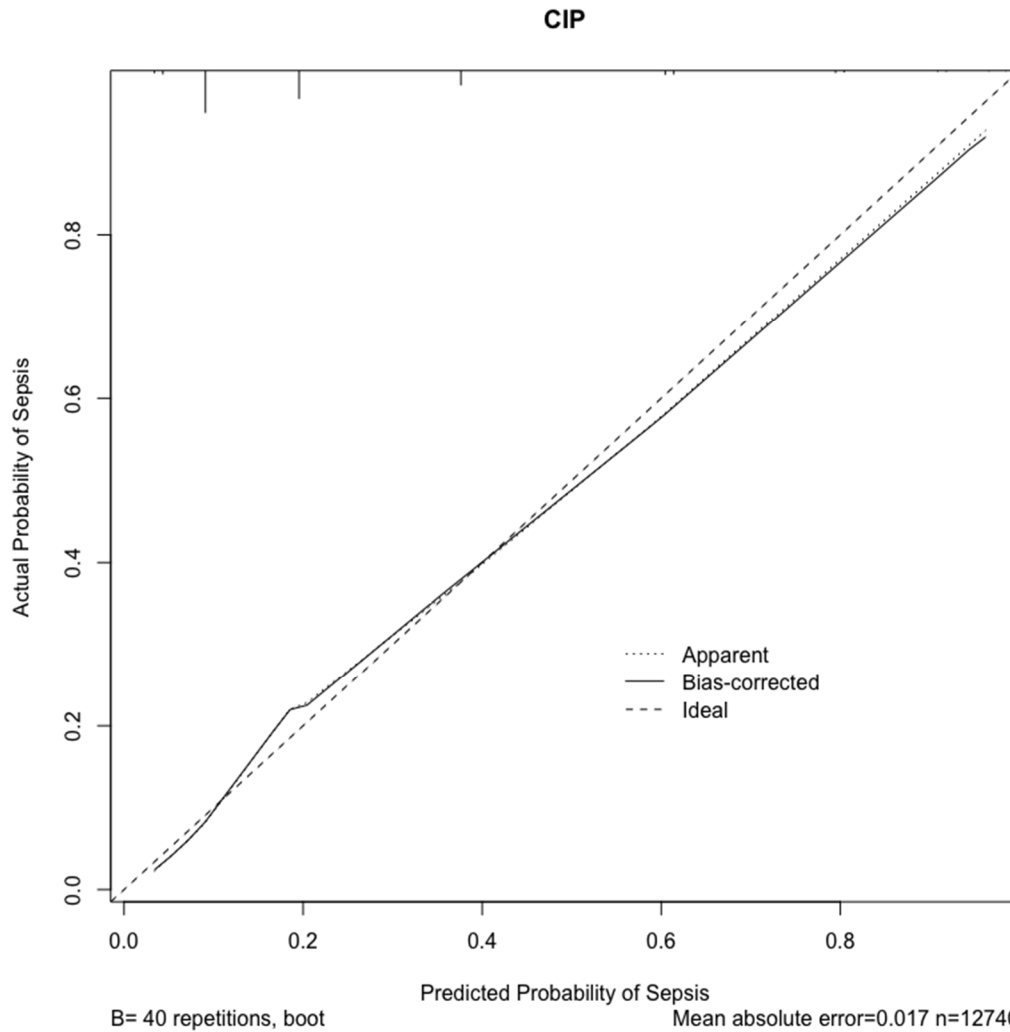
Calibration plot comparing the predicted probability of sepsis diagnosis from paramedic screening score to the actual observed probability. Ideal line indicates perfect calibration. Apparent line indicates observed calibration. Bias-corrected line indicates observed calibration with bias-correction after bootstrap resampling.

Figure A3-12: Calibration plot of National Early Warning score



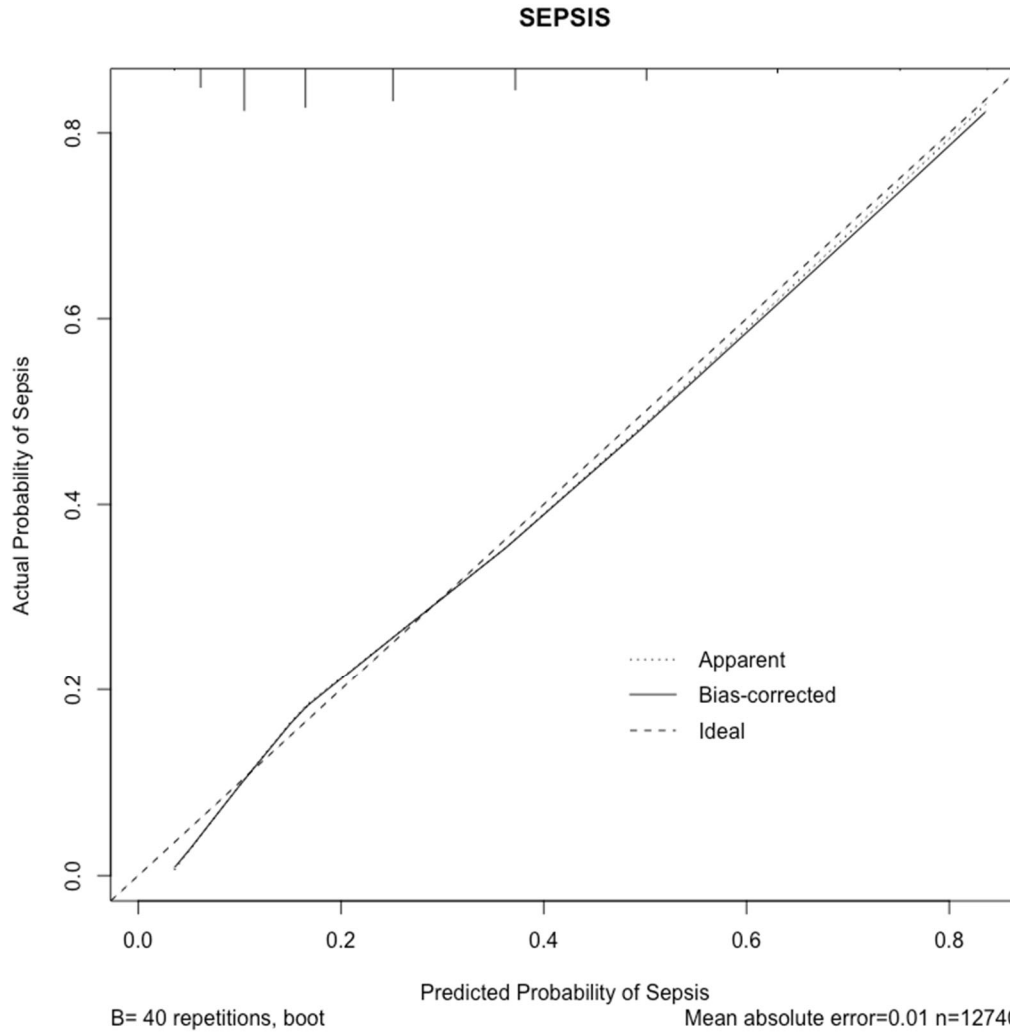
Calibration plot comparing the predicted probability of sepsis diagnosis from paramedic screening score to the actual observed probability. Ideal line indicates perfect calibration. Apparent line indicates observed calibration. Bias-corrected line indicates observed calibration with bias-correction after bootstrap resampling.

Figure A3-13: Calibration plot of Critical Illness Prediction score



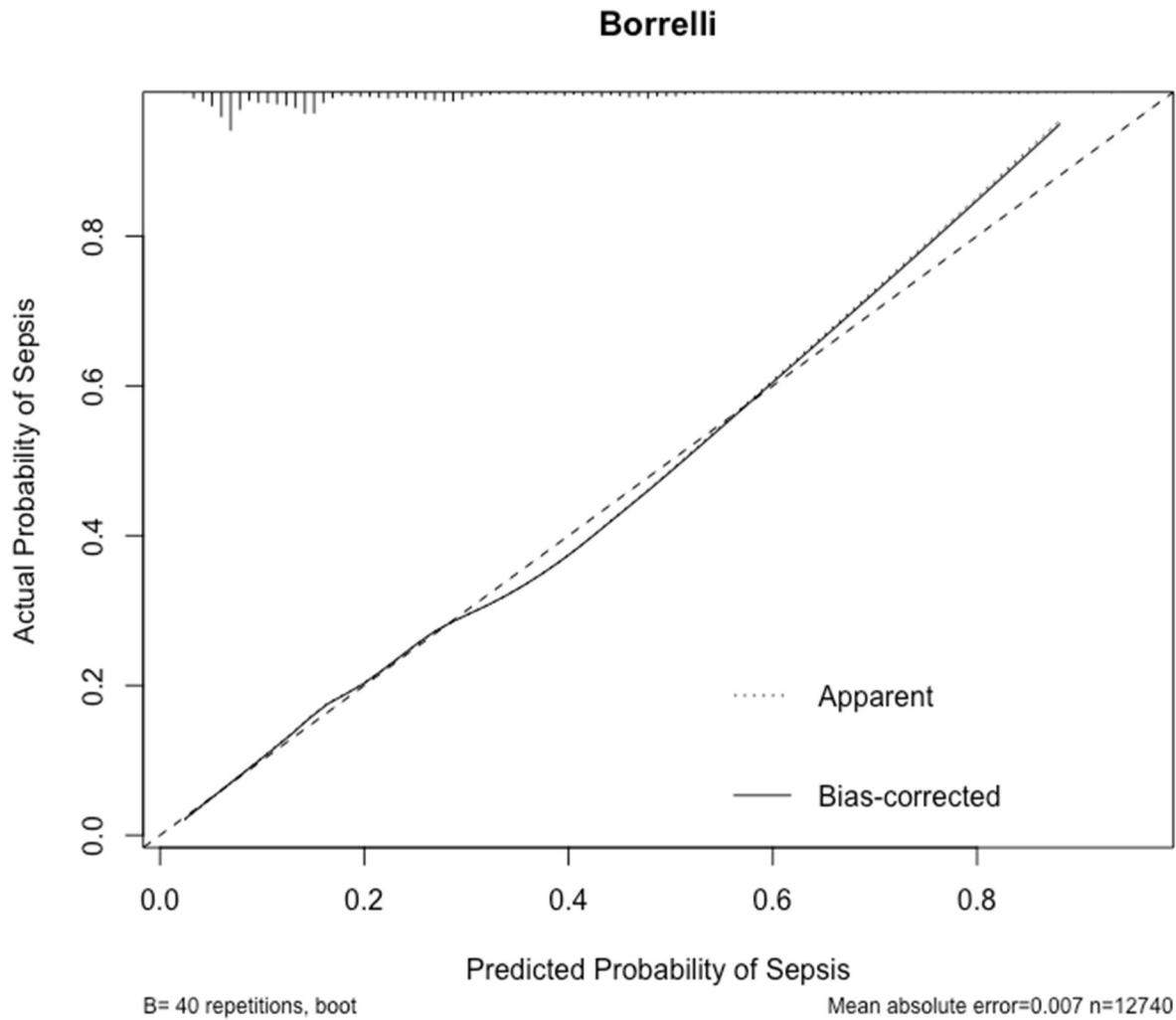
Calibration plot comparing the predicted probability of sepsis diagnosis from paramedic screening score to the actual observed probability. Ideal line indicates perfect calibration. Apparent line indicates observed calibration. Bias-corrected line indicates observed calibration with bias-correction after bootstrap resampling.

Figure A3-14: Calibration plot of Screening to Enhance Prehospital Identification of Sepsis, score



Calibration plot comparing the predicted probability of sepsis diagnosis from paramedic screening score to the actual observed probability. Ideal line indicates perfect calibration. Apparent line indicates observed calibration. Bias-corrected line indicates observed calibration with bias-correction after bootstrap resampling.

Figure A3-15: Calibration plot of Borrelli score



Calibration plot comparing the predicted probability of sepsis diagnosis from paramedic screening score to the actual observed probability. Ideal line indicates perfect calibration. Apparent line indicates observed calibration. Bias-corrected line indicates observed calibration with bias-correction after bootstrap resampling.

Supplementary Material References

1. Lane D, Ichelson RI, Drennan IR, Scales DC. Prehospital management and identification of sepsis by emergency medical services: a systematic review. *Emerg Med J*. BMJ Publishing Group Ltd and the British Association for Accident & Emergency Medicine; 2016 Jun 1;33(6):408–13.
2. Green RS, Travers AH, Cain E, Campbell SG, Jensen JL, Petrie DA, et al. Paramedic Recognition of Sepsis in the Prehospital Setting: A Prospective Observational Study. *Emergency Medicine International*. Hindawi Publishing Corporation; 2016;2016(2):6717261–5.
3. McNarry AF, Goldhill DR. Simple bedside assessment of level of consciousness: comparison of two simple assessment scales with the Glasgow Coma scale. *Anaesthesia*. 2004 Jan;59(1):34–7.