Are referrals to hospital from out-of-hours primary care associated with National Early Warning Scores?

Appendices

Appendix 1

Outcome codes: As multiple codes could be entered; encounters were coded as "referred" if they only had outcome codes from the "Referred" list. If a "Not referred" code was included, even is a "referred" code was also listed, the encounter was considered to have not ended in a referral to hospital.

"Referred" codes	"Not referred" codes
999 Arranged By Badger	Patient To Contact GP
Referral To Hospital	Advised To Call Badger Back
Advised To Attend A&E	No Follow Up
Advised To Ring 999	

Appendix 2

Assumptions for extra referrals calculation

Number of face-to-face consultations in England is 3.3 Million. [21] In this cohort, 57.8% of face to face consultations were with adults, therefore there are approximately 1.9M face-to-face consultations with adults each year. Assuming 8.5% are referred anyway, and 1.52% of the remaining have a NEWS ≥5; an extra 26,528 referrals would be made if all patients with a NEWS ≥5. This would increase referrals by 16.4%.

Appendix 3

'Real-world' analysis

The AUROC calculations were repeated without excluding those observations deemed biologically or clinically implausible in order to establish if this would significantly impact on the performance of NEWS in predicting referral.

With all encounters with a complete set of observations included, the AUROC for referrals overall was 0.592 (0.585 to 0.599). For encounters in the treatment centres, the AURCA was 0.590 (0.583 to 0.597), and for home visits it was 0.732 (0.680 to 0.785). These compare favourably with the corresponding figures from the primary analysis of 0.591 (0.584 to 0.598), 0.589 (0.582to 0.596) and 0.731 (0.681 to 0.787) respectively.