MEMO

CALL CODE CHANGES:

ALIGNING WALES TO ENGLAND

WELSH AMBULANCE SERVICE TRUST

Version: -

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1 INTRODUCTION

WAST has asked CSAM Optima to re-run simulations for an earlier report called *"Priority Category Changes For Certain Call Codes (2021 Data)", 25 April 2022.* That report covers the impact of changing the call priority of certain AMPDS codes so that they are aligned with those in England.

In the meantime, the model has been updated as follows:

- WAST has supplied a new dataset for both 2021 and 2022, in which some data has been repaired. For example, the earlier extract missed CSD responses for certain date ranges.
- CSAM Optima has updated the call import to not filter out incidents with 'extreme' durations when importing data. For example, transported incidents with hospital durations above 6 hours were previously filtered out during call import, whereas now they are retained.
- The simulation model has now been loaded with planned shifts (rotas) instead of estimated actual shifts. The planned shifts in the model are turned into actual shifts by randomly 'dropping' (not running) some shifts occasionally. The shift dropping is informed by WAST UHPs, which have been calibrated in the model by region and by time and have proven to be more accurate than previous shifts.
- The 'business logic' has been updated in the model, which improved the baseline match with historical response durations, travel durations, number of dispatches by area, etc.
- 'Incident abandonment logic' has been implemented. When incidents have been queued for more than 12 hours, there is a very small chance every minute that the incident never gets responded to. This enables the model to keep running where previously it would become unresponsive. For example, when the workload is so high that the backlog of lower priority queued incidents in the model keeps lingering on for several days.

Due to the new data, the updated call import and the updated model, the 2021 results in this report are different than the previous report.

2 SIMULATION RESULTS

The table below shows the results over 2021 data (1 January – 31 December) and 2022 data (1 January – 31 May).

	RED performance (% < 8 min)	AMBER1 median (minutes)	AMBER2 median (minutes)	AMBER1 95th pctl (minutes)	AMBER2 95th pctl (minutes)	Utilisation** EA+RRV+UCS (average, %)	Simulation Abandoned (%)
2021 (Jan – Dec)	47%	57	108	548	618	70%	0.5%
- with call codes aligned to England	49% (+2%)	66 (+9 min)	116 (+8 min)	580 (+32 min)	641 (+23 min)	70% (<1%)	0.5%
2022 (Jan – May)	44%	85	160	621	715	82%	0.6%
- with call codes aligned to England	45% (+1%)	95 (+10 min)	173 (+13 min)	633* (+12 min)	734* (+19 min)	83% (+1%)	0.8%
* = defined as Busy Unit Hours / (Shift Hours minus Meal Break Hours). ** = the impact has been limited by to the incident abandonment logic (see Introduction).							

The results suggest that the impact in 2022 is similar as in 2021.

The previous report (using 2021 data) showed small performance losses across all performance metrics. In this report, there is a very small improvement in RED performance, but the impact on AMBER1 and AMBER2 response durations is larger. One reason for the stronger AMBER1/2 impact is that the updated model closely resembles the utilisation patterns for all months during 2021 and 2022, whereas the former model had slightly under-utilised resources in some months due to small data changes and modelled shift changes.

The conclusion remains the same: changing the call code priorities so that they align with those in England has a limited impact on RED performance, but a negative impact on AMBER1/2 response durations.