GIG CYMRU NHS WALES
Pwyllgor Gwasanaethau Ambiwlans Brys
Emergency Ambulance Services Committee

AGENDA ITEM
2.2

EMERGENCY AMBULANCE SERVICES COMMITTEE

INDEPENDENT DEMAND AND CAPACITY REVIEW OF EMERGENCY MEDICAL SERVICES

Date of meeting	(28/01/2020)
FOI Status	Open/Public
If closed please indicate reason	Choose an item.
Prepared by	Hugh Bennett, Assistant Director of Commissioning and Performance (WAST)
Presented by	Jason Killens, Chief Executive WAST
Approving Executive Sponsor	Chief Ambulance Services Commissioner
Report purpose	FOR APPROVAL

Engagement (internal/external) undertaken to date (including receipt/consideration at Committee/group)		
Committee/Group/Individuals	**Date**	**Outcome**
EASC Management Group	(20/12/2019)	ENDORSED FOR APPROVAL

ACRONYMS	
EMS	Emergency Medical Services

1. SITUATION/BACKGROUND

1.1 The purpose of this report is to provide EASC with the final full report for the independent EMS Demand & Capacity Review, which was one of the "assurance mechanisms" agreed by EASC as part of the Amber Review Implementation Programme and the current position on the emerging Implementation Programme associated with the Review.

1.2 The terms of reference for the Review were agreed at May-19 EASC and the National Collaborative Commissioning Unit (NCCU) and WAST collaborated from the inception of the Review through to this final report. A health board Chief Executive Officer was also invited to attend all the Review's meetings. Trade Unions were also engaged throughout as was Welsh Government.

Background

1.3 Members will recall that the EASC agreed the terms of reference for an independent EMS Demand & Capacity Review at the meeting in May 2019.

1.4 The Review was one of the Amber Review Implementation Programme "assurance mechanisms" agreed by EASC at its February 2019 meeting. The Amber Review identified that ambulance availability was the key issue in some patients waiting too long for an ambulance (and not the Clinical Response Model). Ambulance availability is a product of demand, ambulance hours produced (in turn a product of investment and efficiencies) and lost hours (at hospital – arrival and clear – and other lost hours referred to as post production lost hours, for example, ambulance defects).

1.5 The terms of reference had seven aims:

1. Forecast all incident demand by type, condition and location over the next five years;
2. Agree the required levels of quality and time performance for each type of patient;
3. Model the required resources to deliver ii. above by hour of day, day of week and geographical location;
4. Identify and quantify WAST efficiencies including new models of response such as Advanced Paramedic Practitioners (APPs), abstraction reduction and roster realignment;
5. Identify and model unscheduled care system efficiencies;
6. Model the impact of planned service changes affecting patient flows; and

7. Model required resources for Clinical Contact Centres (CCC) including call handling and clinical staff delivering hear and treat services to meet forecast activity and quality and performance requirements.

1.6 A collaborative EMS Demand & Capacity Steering Group was established in May-19 with the CASC and WAST CEO as senior responsible officers. Operational Research in Health (ORH) Ltd were appointed to undertake the Review. ORH are international market leaders in the forecasting and modelling of ambulance services. ORH used seven years of demand data and one year of CCC and Response data to build their simulation model. A significant amount of data assurance work was undertaken until the simulation model was found to be accurate to within 0.5% of performance (using 18/19 actual performance as a test).

1.7 The Review has been undertaken at pace with full collaboration between the NCCU and WAST through every stage of the Review's process, in particular, an EMS Demand & Capacity Steering Group, weekly project calls and Performance Parameters Workshop.

Assessment

1.8 In November 2019, EASC received an initial summary report of the Review and presentation from the Manager Director of ORH Ltd, who undertook the Review.

1.9 EASC referred the summary report to the EASC Management Group, which reviewed the report at its Nov-19 meeting. EASC Management Group required ORH to undertake some additional sensitivity analysis modelling, in particular:

- The reduction in the number of full time equivalents (FTEs) required if the best in class ambulance service's relief rate was used (based on a 36.5 hour week with continuing professional development of one hour a week removed at source);
- The reduction in the number of FTEs required if the best in ambulance service's relief rate was used and a 37.5 hour i.e. no reduction for continuing professional development at source); and
- The FTEs required for WAST based on 2019/20 handover lost hours (the Review is based on 2018/19 data).

1.10 EASC Management Group received the final full report, including these sensitivity analyse at its December 2019 meeting and endorsed the final full report.

1.11 The final full report for the Review is contained in **Appendix 1**.

1.12 Further modelling work will be required during the implementation programme stage. The results of the sensitivity analysis and remarks on further modelling are detailed in the following sections.

1.13 The following sections provide an overview of the full final report's findings.

Forecast Demand

1.14 The Review has forecast verified call demand of 2.3% per annum or 12.04% cumulative over five years. This is in line with previous forecasts and observed demand.

Performance Parameters

1.15 Currently there is only one formal time target, the Red 8 minute performance of 65% Pan-Wales. WAST is currently in "enhanced performance management" for Red performance.

1.16 A sub-group of the main Steering Group agreed a range of monthly performance parameters for modelling purposes, using the targets in the English Ambulance Response Programme as a back drop. These parameters are detailed in Appendix 1 Figure 6.1. It is important to note that these are not proposed new targets, they are agreed parameters around which ORH could undertake their independent modelling, for example, the Review models the ambition to achieve Red performance of 70% pan-Wales and 65% in each health board.

1.17 Whilst there has been an increased focused on improving Red performance, the origin of the Review is to ensure that patients in the Amber category receive an appropriate i.e. conveying resource where this is the requirement, and timely ambulance response i.e. quality, safety and patient experience

Benchmarks and Efficiencies

1.18 Generally, WAST benchmarked favourably with other UK ambulance services that ORH has worked with. A range of potential efficiencies were identified by ORH, in particular:

- Reducing the level of abstractions from CCC and Response rosters (thereby reducing the full time equivalents required for relief);
- Re-rostering around the daily demand pattern (with a closed relief gap);
- A range of CCC efficiencies (including a benchmarked hear & treat rate of 10.2%); and

- The use of APPs to reduce conveyance, where it is clinically safe and appropriate to do so, in locations where their utilisation is at least 50%.

1.19 The efficiencies were phased in at two points (for modelling purposes), Dec-21 and Dec-24 respectively. December was used as this was the month with the highest demand volume in the data sampled.

Assumptions

1.20 The key assumption in the modelling is handover lost hours at 18/19 levels. 19/20 levels are significantly higher, for example, they were 117% higher in Q3 19/20 compared to Q3 18/19, and the Amber tail (a key area of focus on the Amber Review) is sensitive to small changes in available ambulance hours (the actual change is significant).

Findings

1.21 Before doing any modelling, ORH identified a significant relief gap i.e. the gap between the budgeted FTEs and the number required to fill existing Response roster lines of +262.5 FTEs (based on a more efficient level of abstractions).

1.22 Based on the forecast verified call demand, the agreed performance parameters, the agreed phase 1 efficiencies and the assumption on handover lost hours, ORH have identified an FTE requirement of +232.5 FTEs for Dec 21. This includes a net reduction of -29.9 FTEs (Dec-21) in the CCC based on re-modelled dispatch desks with a single allocator. By 2024 a number of factors will have changed the workload on each desk within the CCC to achieve a workload that could be managed by a single allocator without the reliance on a dispatcher (see Appendix L5 of the final report). Some of these factors are existing and some will occur through the changes indicated in this Review. The factors are:

- A historical reduction in radio communications through the introduction of MDT (existing);
- The introduction of auto-allocation to RED calls (existing);
- The reconfiguration of dispatch desks (based on patient flow, by 2024);
- A more simplified dispatch process (due to the shifting vehicle mix, by 2024);
- Increased verified call demand; and
- Additional APPs in CCC to support Response APPs.

1.23 The Review does not contemplate other performance and/or quality support or supervisory roles within the CCC. A separate project is

underway by WAST which is exploring opportunities to reorganise the roles within the CCC, based on the recent upgrade to the new Computer Aided Dispatch system, which also supports the single allocator model.

1.24 ORH have modelled a further 305 FTEs being required by Dec-24, based on the same performance parameters, the continued increase in demand and phase 2 efficiencies.

1.25 The overall modelled FTE requirement in Dec-24 is +537.5 FTEs.

1.26 The Dec-24 FTE figure includes 72.5 FTE APPs. This is the APPs on WAST CCC and Response rosters only and does not include APPs funded by health boards working in primary care. Also, it is worth noting that the APP utilisation rate modelled by ORH is 50% and above.

1.27 If the best in class relief rate is used (based on a 36.5 hour week) the number of FTEs required for the Dec-24 position reduces by 81 FTEs. A further reduction of 52 FTEs has been modelled if the best in class relief rate is used and a 37.5 hour week.

1.28 If the 2019/20 handover lost hours are used the number of FTEs required in Dec-24 increases by 177 FTEs (this is the difference between 2018/19 and 2019/20 levels). The Review has used 2018/19 handover levels which account for 183 FTEs in the modelled figures, so the total impact of handover lost hours at 2019/20 levels (over 15 minutes) is 350 FTEs.

1.29 The EASC Management Group considered whether the full final report should be reworked on these numbers. The CASC fed back health boards' views that the 37.5 hours should be used. The Group considered whether the Review's final Dec-24 should be remodelled, but there was consensus that the sensitivity analysis should remain in the report with the proposed Collaborative Implementation Programme Board undertaking further modelling around the relief rate beyond the current Review's scope.

Quality, Safety & Patient Experience

1.30 The Amber Review arose as a result of a Ministerial concern about the length of wait in the Amber category of the Clinical Response Model and the associated patient safety and patient experience. The Amber Review identified that some patients in this category are waiting too long and that this is primarily a product of ambulance capacity to respond.

1.31 The Amber Review Implementation Programme that flowed from the Amber Review had nine "assurance mechanisms" (with supporting sub mechanisms). The Demand & Capacity Review is the main strategic response to the Amber Review.

1.32 The Demand & Capacity Review models achieving an Amber 1 mean response time of 17:42 (minutes:seconds) in Dec-24 i.e. meeting the agreed performance modelling parameter of 18 minutes and similarly an Amber 1 90th percentile of 35:12 (minute:seconds) i.e. meeting the agreed performance modelling parameter of 40 minutes, which would deliver the desired level of quality, safety and patient experience.

1.33 Also, it is important to note that the performance modelling parameter for Amber 1 is a hybrid parameter, where the clock only stops once the Ideal response arrives on scene, so if a Rapid Response Vehicle (RRV) arrives and a conveying resource (Emergency Ambulance or Unscheduled Care Service) is required the clock will keep ticking. For the Quarter 2 19/20 Ambulance Quality Indicators (AQIs) the Ideal response for Amber arrived first on scene 67% of the time and the gap between the clock stopping and the appropriate conveying back up arriving on scene is not currently measured in the AQIs (first resource on scene stops the clock), but can be significant (hours).

1.34 WAST is seeing a gradual increase in the Coroners activity (see WAST Provider Report) and a number of Coroners have enquired about the timeframes of the Demand & Capacity Review and its findings. It is reasonable to assume that the Review will feature in future inquests.

2. SPECIFIC MATTERS FOR CONSIDERATION BY THIS MEETING (ASSESSMENT)

Implementation Programme

2.1 EASC has already agreed to fund "quick wins" in 2019/20, in particular, an additional 46 FTEs (30 Paramedics, 12 EMTs and 4 UCA) which WAST estimated we could recruit from bank colleagues, part time colleagues, retire and returns and external already trained candidates. Despite the "quick wins" being based on conservative estimates WAST is unlikely to be able to recruit up to this level by March 2020, but the growth plan will then roll into 2020/21.

2.2 Subject to EASC approval, the NCCU and WAST have agreed the following commissioning intentions:

- A minimum of 90 extra FTE front line EMS staff by 31 Mar 2021 (Steps 3, 4 & 5); and
- Collaborate to develop and deliver a coherent Implementation programme arising from the Demand & Capacity Review.

2.3 The CASC's expectation is that the implementation programme must be a coherent programme of efficiencies and investment.

2.4 An Implementation Programme Board, with the WAST Director of Strategy, Planning & Performance as the Programme Director, has been established by WAST, with representation from the NCCU and the programme operating in the same collaborative manner as the Review's Steering Group and being supported by appropriate programme documentation, in particular, a programme plan, risk register and benefits realisation, to provide assurance that this complex programme is delivered to the agreed milestones.

2.5 One constraint for the Implementation Programme is the capacity of the Training School.

2.6 The Training School has increased its bank of driving instructors by 12, so that WAST can draw down additional instruction capacity as required. Similarly, WAST has a number of options for increasing its clinical training capacity, for example, use of third party suppliers, additional internal clinical instructors. Final decisions on these options will be made shortly in collaboration with the CASC. WAST will also be procuring an additional four training vehicles and expects to upgrade the Training School's estate (and associated capacity). These changes should enable WAST to plan to increase its training capacity by at least 150 FTEs per annum over and above its existing Workforce Plan requirements per annum, possibly higher if WAST was to use both the third party option and internal capacity increase.

2.7 There have been detailed workforce planning meetings between the NCCU and WAST, which will now be managed through the Implementation Programme Board. These discussions have included the need to front load recruitment to avoid abstractions (and therefore reduced ambulance capacity) resulting from training courses as staff transition between roles.

2.8 The final report models (see page 27) the potential impact of The Grange University Hospital, which is due to open in Mar-21. This is initial modelling, based on 42 step-ups and 39 step-downs per day (an equivalent of 567 additional patient journeys per week) between Aneurin Bevan University Health Board (ABUHB) hospitals. Further, more detailed modelling, is dependent on ABUHB supplying WAST with the preferred ambulance service model for The Grange. This information has recently been received and further modelling is now being undertaken using Optima Predict (another ambulance simulation software package) to determine a revised (and lower) FTE requirement; nevertheless servicing The Grange will be a significant requirement on the FTEs available to EASC from recruitment and training in 2020/21.

3. KEY RISKS/MATTERS FOR ESCALATION TO THE COMMITTEE

3.1 Members should note that the Minister for Health and Social Services released a written statement on 15 Jan-20: update on unscheduled care pressures over winter 2019/20 and next steps to improve ambulance services, which included the establishment of a Ministerial Ambulance Availability Taskforce to be jointly chaired by the CASC and Emergency Medical Retrieval Service Cymru (EMRTS Cymru) National Director. The written statement identified five areas for the Taskforce to lead on, one of which is the Demand & Capacity Review.

4. IMPACT ASSESSMENT

Quality/Safety/Patient Experience implications	There are no specific quality and safety implications related to the activity outined in this report.
Related Health and Care standard(s)	ALL are relevant to this report
Equality impact assessment completed	Not required
Legal implications / impact	There are no specific legal implications related to the activity outlined in this report.
Resource (Capital/Revenue £/Workforce) implications / Impact	Yes (Include further detail below)
	The financial impact will need to be clarified.

Link to Commissioning Intentions	The Committee's overarching role is to ensure its Commissioning Strategy for Emergency Ambulance Services utilising the five step patient pathway outlined within the National Collaborative Commissioning Quality and Delivery Agreement and the related outcomes for each care standard aligned with the Institute of Healthcare Improvement's (IHI) 'Quadruple Aim' are being progressed.
Link to Main WBFG Act Objective	ALL are relevant

5. RECOMMENDATION

5.1 The Emergency Ambulance Services Committee is asked to:

- **APPROVE** the final report.