Review of the Remote Clinical Assessment of 999 Incidents

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

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EXECUTIVE SUMMARY

As the population grows and ages, the demand for healthcare services increases. The COVID-19 pandemic has also highlighted the need for increased healthcare resources. This demand has caused providers and commissioners to appraise the way in which current healthcare services are designed and delivered. Meeting this demand requires appropriately funded and efficiently managed healthcare systems that can provide accessible and high-quality care to all who need it.

An aspect of clinical care in the Welsh Ambulance Services NHS Trust (WAST) that has been invested in is remote assessment of patients, reducing the requirement for face-to-face assessment, where safe and appropriate, and ensuring patient safety, efficiency and cost-effectiveness. There are several functions within WAST that provide these services already, this review was commissioned to undertake a baseline assessment of the current provision of these functions.

In conclusion, it is recognised;

- There has been investment into these services
- There is a need to align these services, with improved communication between each function and actions that correspond with the Clinical Safety Plan.
- There is a requirement for improved reporting and use of data, both internally and to commissioners
- There has been significant change within these functions and teams have had to adapt to this over the past year

The following recommendations have been produced based on findings.

RECOMMENDATIONS

Recommendation 1 (3.1) – WAST will develop an intelligible operating model for the CSD with clearly aligned resources for each function

Recommendation 2 (3.3.2) – WAST must develop real time measurements for clinician activity

Recommendation 3 (3.3.2) – WAST and Commissioners will collaboratively develop an agreed set of quality and performance measures for the CSD

Recommendation 4 (3.3.3) – WAST must provide a benefits realisation report on the uplift in CSD staff

Recommendation 5 (3.3.3) – WAST will develop reportable metrics for the outcomes of incidents reviewed by the CSD

Recommendation 6 (3.3.4) – WAST will review the CSD activity related to 'Falls' to understand if there is sufficient and appropriate CSD capacity to meet demand

Recommendation 7 (3.3.4) – WAST will provide a detailed review of demand, activity and outcomes of Mental Health Practitioners within the CSD

Recommendation 8 (3.3.4) – WAST will provide a gap analysis of pathway variation across Wales

Recommendation 9 (3.3.5) – WAST will record a patient identifier (i.e NHS Number) in order to support data linking for understanding clinical outcomes

Recommendation 10 (3.5) – WAST must confirm how they are or intend to make use of the enhanced reporting functions provided by ECNS

Recommendation 11 (3.6) – WAST will undertake a benefits realisation review of the ECNS investment

Recommendation 12 (4) – WAST will review the impact of the various APP navigator roles in order to share best practice across Wales

Recommendation 13 (5.2) – WAST will review the requirement for PTAS and work with commissioners and health boards to develop a preferred model of implementation

Recommendation 14 (6.5) – It is recommended that the time it takes for a clinician in 111 to undertake remote clinical assessment of a 999 incident be explored.

Recommendation 15 (6.5) - It is recommended that further analysis of data is undertaken to enable sight of the clinical outcomes of incidents passed back from 111 to 999 for an ambulance response

1 INTRODUCTION

The introduction of the Clinical Support Desk (CSD) was a key enabler of the adoption of the Clinical Response Model in October 2015. There has been significant investment into remote clinical assessment of 999 calls since that time and a high performing Clinical Support Desk will be the key enabler of the "Inverting the Triangle" concept being progressed by Welsh Ambulance Services NHS Trust (WAST).

2023/24 will see an increased priority afforded to the further development of the CSD and wider remote clinical support, both through the Emergency Ambulance Services Committee (EASC) (or future committee), and the Six Goals for Urgent and Emergency Care Programme. As part of this, the EASC team will consider the development of a specific, or enhancement of, the existing Quality and Delivery framework for remote clinical assessment. This would look to provide a commissioning mechanism to exhaust the opportunities, and address the challenges which have been identified below and will help us understand each service model, outcomes, referral opportunities, system risk and patient experience.

To enable this, the Chief Ambulance Services Commissioner (CASC) has directed the EASC team to undertake a baseline review of the current provision of 999 remote clinical support.

1.1 Accountability and Governance

The Chief Ambulance Services Commissioner will function as the frameworks sponsoring officer with the work will be led by Sian Ashford.

This work will:

- Report formally to the Emergency Ambulance Services Committee Management Group

- Bring to the Chief Ambulance Services Commissioners attention any significant matters and seek decisions/guidance where necessary.

1.2 Scope

The review will cover all functions that clinically assess 999 calls remotely including:

- WAST Clinical Support Desk
- WAST APP intervention (incident waiting queue)
- Physician Triage and Assessment Services and other similar health board led stack interventions
- 999 incidents passed to 111

1.3 Purpose

The review will aim to capture a baseline understanding for each function area of:

- Current capacity / Capacity Gaps
- Activity levels
- Outputs of additional Investment/capacity
- Performance reporting
- Patient dispositions
- Information availability

With the magnitude of change which has taken place both internally and externally over the past few years, this review will recognise the pace at which improvement activity has already taken place, and offer recommendations to support the next steps in delivering whole system benefits.

1.4 Contributors

Contributions were sought for specific aspects of the work and these were provided by:

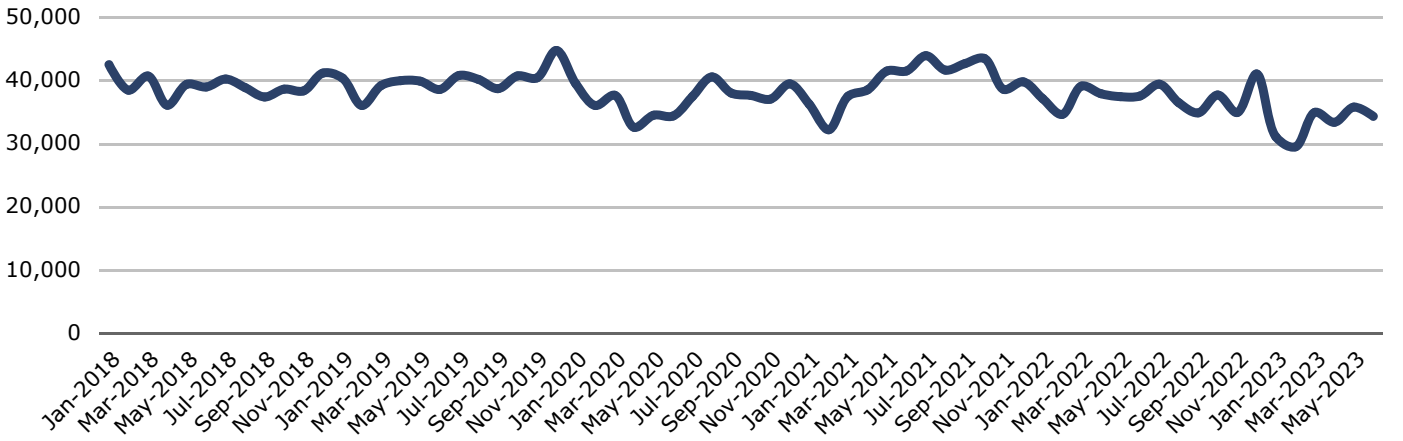
Stephen Clinton- Assistant Director of Operations, Integrated care
Jonathan Chippendale- Consultant Paramedic, Urgent Care
Mike Brady- Consultant Clinician, 111
Paula Jeffrey- Interim Consultant Clinician, Clinical Support Desk
Penny Durrant- Service Manager, Clinical Support Desk
Pete Brown- Head of Service, 111
Deborah Armstrong-Head of Education, Professional and Clinical Practice 111

2 BACKGROUND

2.1 Demand

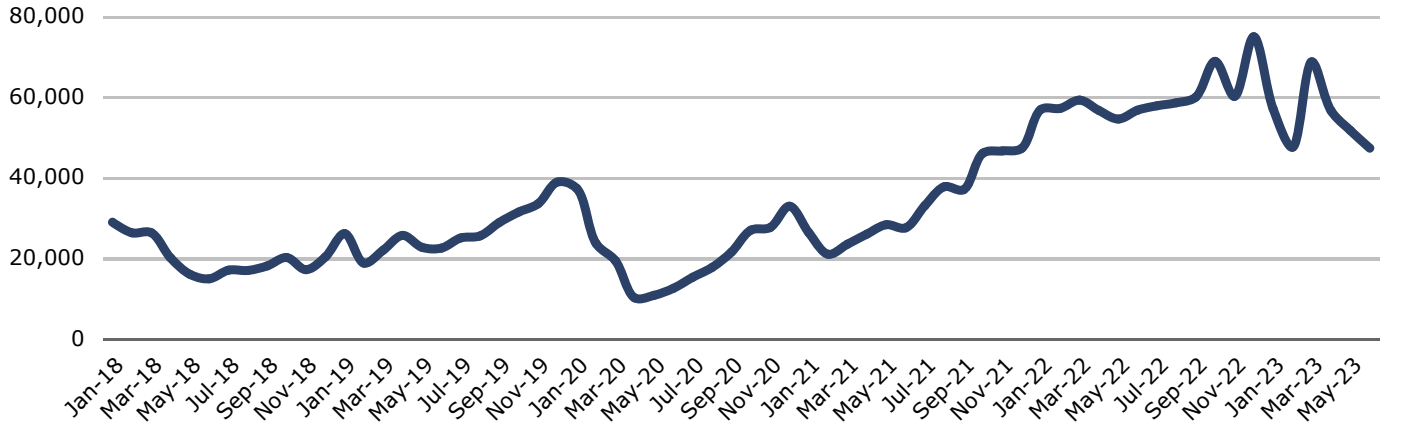
Over the past five years demand upon the ambulance service in Wales has changed. As we seek opportunities to get patients to the right place of care first time and to provide the best chance at improved clinical outcomes, it is important to review where demand comes from, how it is prioritised and what response has the biggest impact on value, experience and outcomes.

Graph 1: Verified 999 Incidents



The number of verified incidents has reduced over the past five years; however, resource availability has also reduced which has resulted in longer waits for ambulances. Whilst this is not a desirable position, this has resulted in increased requirement for remote clinical intervention to improve patient safety and reduce harm, and provides more opportunity for a clinician to provide alternative care to patients. Whilst investment has been provided to grow the front line ambulance capacity over the last three years, this has not been at a level to fully compensate for the lost hours to outpace the delays which have grown at an accelerated rate as demonstrated below (Graph 2).

Graph 2: NHS Wales Notification to Handover (minutes)



This is reflected in table 1, which shows the median wait by year. The table shows increased wait times across all categories, which presents significant opportunity for remote clinical intervention.

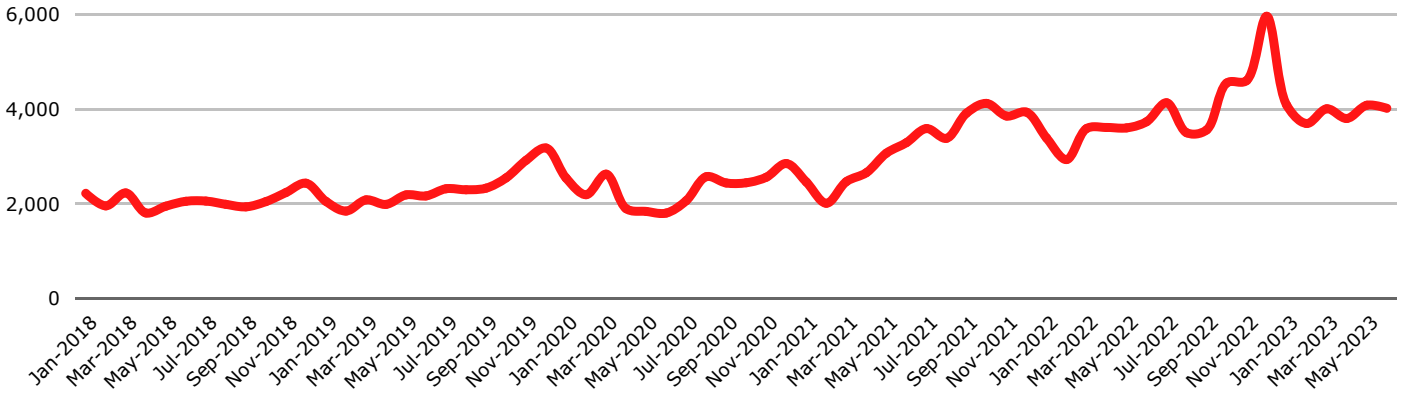
Table 1: Median Response Times

Year	RED Median	Amber Median	Green Median
2018	00:05:09	00:25:11	01:09:52
2019	00:05:45	00:29:55	01:12:06
2020	00:06:18	00:32:19	00:59:54
2021	00:07:11	00:55:47	02:15:00
2022	00:08:05	01:33:51	02:17:00
2023*	00:07:48	01:04:16	01:16:17

*The data for 2023 is incomplete, six months of data has been used from Jan-Jun inclusive.

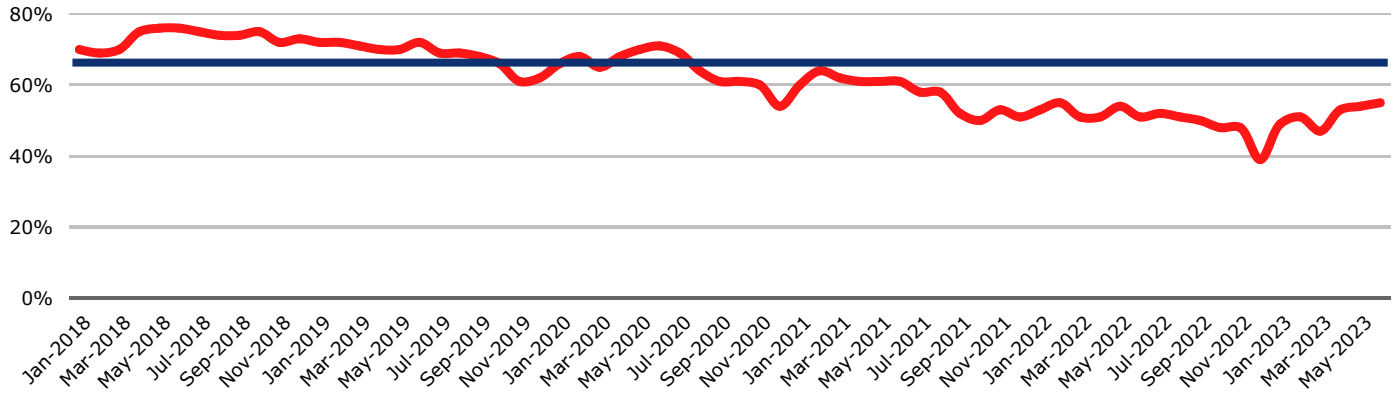
There has also been a significant increase in demand for those calls prioritised as 'RED'. Due to the nature of these incidents, there is often a need for multiple resources to be sent, again impacting on resource availability. This is important to consider in this review when looking at incidents upgraded to 'RED' as well as the role of remote clinical assessment in this demand area.

Graph 3: Number of Red verified incidents



In Wales the Welsh Government target for responding to an incident classified as Red - Immediately Life-Threatening within 8 minutes 65% of the time, the blue line below in Graph 4 represents the 65% target with the red line showing the actual percentage achieved.

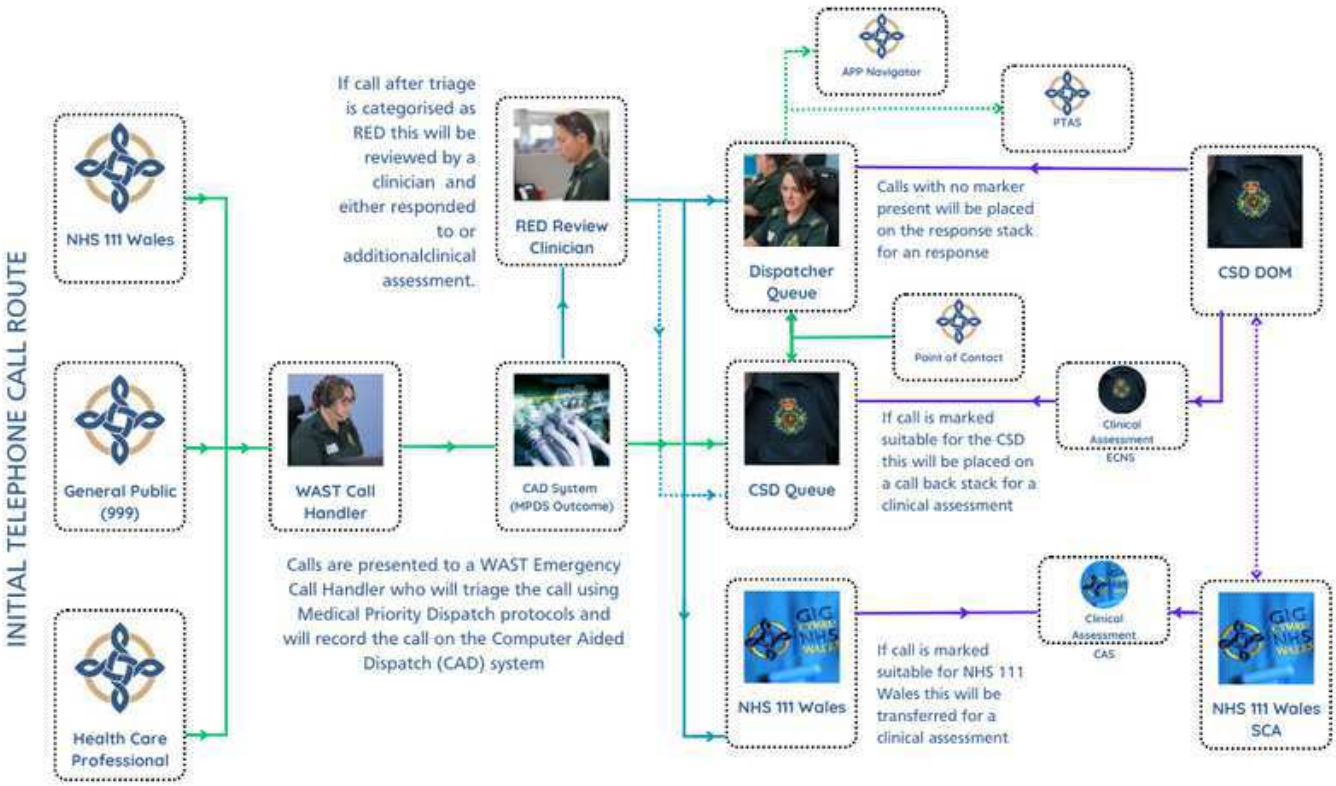
Graph 4: 65% Response Time Target



2.2 Remote Clinical Assessment Opportunities

Upon receiving a 999 call there are several opportunities for remote clinical assessment. The route for a patient to contact a clinician remotely is detailed below.

Figure 1: Call processing process map



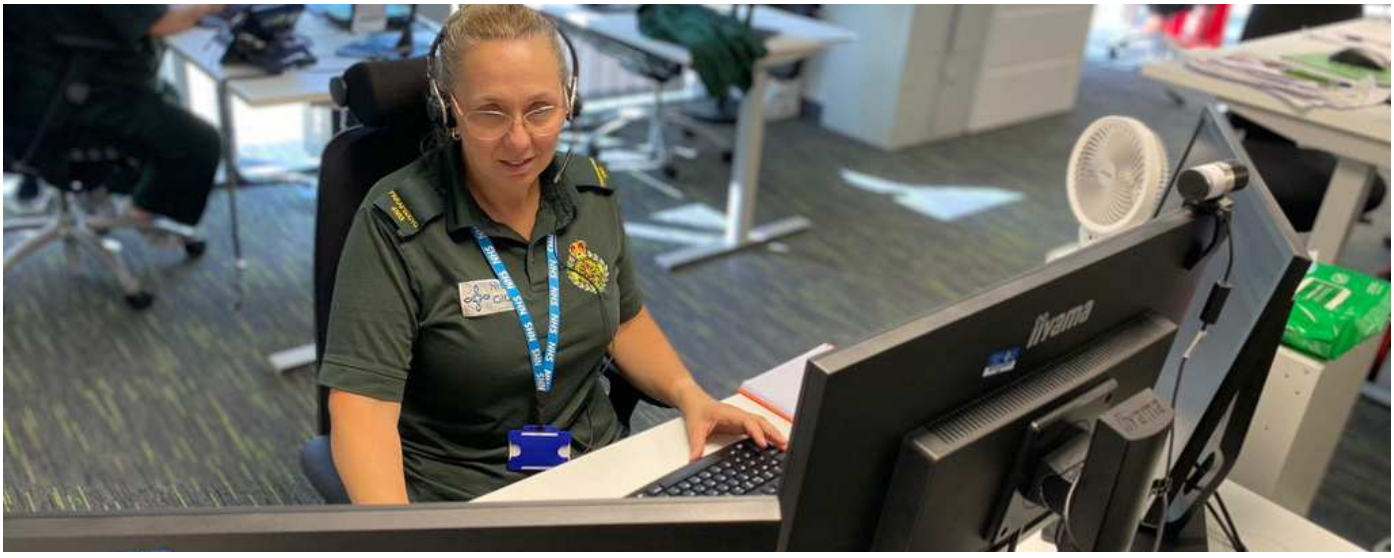
Clinical Support Desk (CSD): in this review describes a service in WAST staffed with a range of health professionals with a primary role of remote clinical assessment of 999 incidents. The CSD encompasses many roles which are explained in section 3.

Advanced Paramedic Practitioner (APP) Navigator: in this review describes a service staffed with WAST APP's who undertake remote clinical assessment from a health board location, primarily offering attending crews alternative options to taking a patient to the nearest Emergency Department (ED).

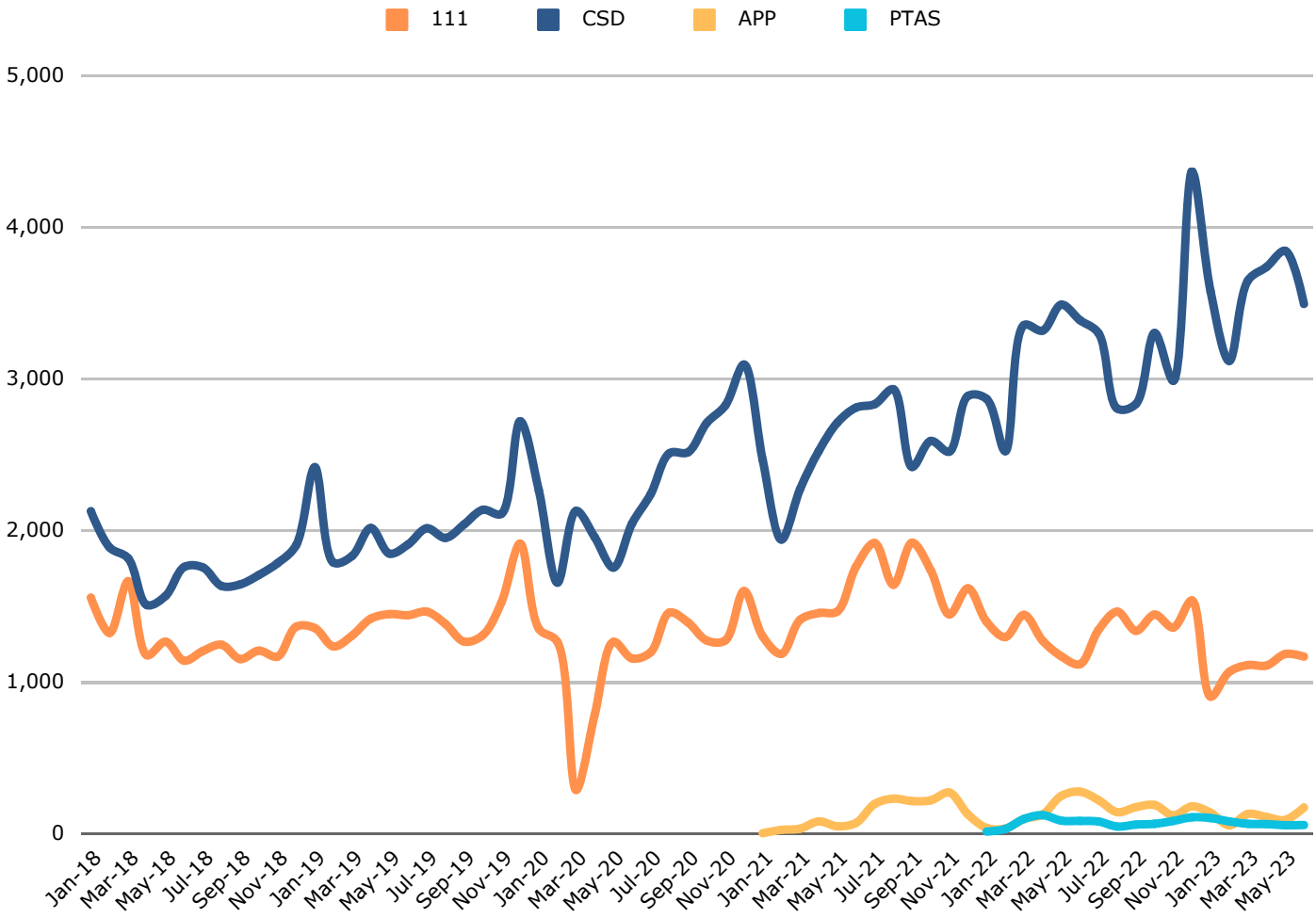
Physician Triage and Streaming (PTaS): in this review describes a service staffed with health board professionals who undertake remote clinical assessment of 999 incidents in their health board area.

111: in this review describes a part of NHS 111 Wales, within WAST, staffed with a range of health professionals who routinely undertake remote clinical assessment of Green 3 999 incidents which are passed to the service electronically, in addition to their primary role in 111. Other incidents of a higher priority may also be passed for remote clinical assessment.

Commissioned Primary function of remote clinical assessment: historically the success measure for an intervention for a remote clinical assessment within the 999 system has been the resolution of the incident without the requirement for a vehicular response. This measure, previously known as 'Hear and Treat' but now more frequently referred to as 'Consult and Close'. This may include advice, self-care, a referral or signposting to other urgent care services (including Emergency Departments) by a healthcare professional, remotely.



Graph 5 below shows the number of verified incidents closed by 111, Clinical Support Desk (CSD), Advanced Paramedic Practitioners (APP) and Physician Triage and Streaming (PTaS).



Graph 5: Successful Consult and Close volumes by CSD, 111, APP and PTaS

Since the implementation of the CSD in 2014 it has been identified that in addition to resolving patients episodes of care remotely there is also great value in providing remote clinical advice to patients who contact 999 from a quality and safety perspective by providing an early opportunity to improve clinical outcomes, value and patient experience.

3 CLINICAL SUPPORT DESK

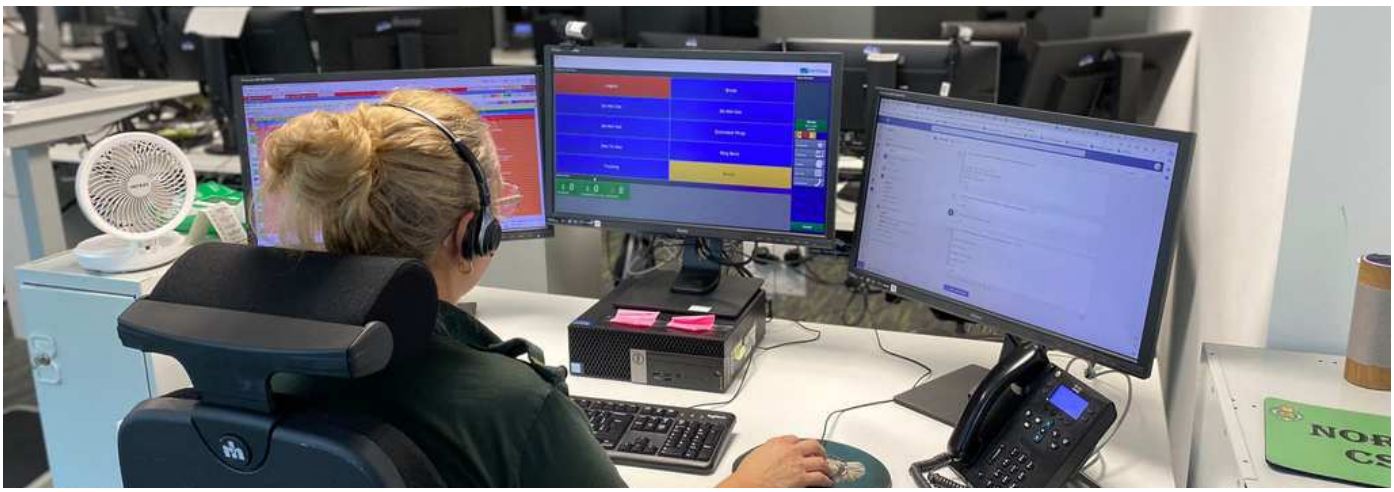
3.1 Background

The CSD was formed in 2014 as a response to increasing ambulance demand, with an initial establishment of 18 Full Time Equivalents (FTE). The CSD was staffed with a mix of nurses and paramedics who used the Manchester Triage System (MTS) for telephone triage and advice, approved by the Advanced Life Support Group (ALSG). During the initial phase of implementation, the CSD staff had two main functions, the clinical assessment of Red calls and the clinical assessment of incidents which may not need an ambulance to take them to ED. With the implementation of the clinical response model (CRM) in 2015 the role of the CSD broadened.

The 2015 CRM provided the opportunity for more patients to benefit from receiving remote clinical assessment by the CSD, however this wasn't always possible due to physical resources being dispatched and arriving before a clinician had chance to review the incident.

The implementation of C3, a new Computer Aided Dispatch (CAD) provided the opportunity for a set of 'ideal' incidents to be passed to a queue to wait for remote clinical assessment which wasn't visible to the dispatch team, with the aim of reducing the incidence of resources arriving prior to remote assessment. Currently the CSD queue is auto populated with around 90 incidents per day (roughly 30% of all CSD activity), the remaining 70% of workload is passed to the CSD queue manually.

By 2019 the CSD had increased to 41 FTE across Wales, and the team reviewed 16-20% of all 999 incidents, stopping the dispatch of a vehicle in 25% of incidents reviewed. The role of the CSD had broadened and there were several areas of focus for clinicians, with conflicting priorities.



Some of these areas are listed below:

- Stopping the dispatch of resources to incidents appropriately
- Directing patients to alternatives to ED
- Undertaking remote assessments for people who have fallen.
- Identifying and managing high intensity service users
- Call taker advice and support
- Providing remote advice for non-registrant health workers and volunteers
- Providing advice and support for newly qualified paramedics
- Providing advice and support to Police
- Undertaking review of Health Care Professional Calls
- Red review
- Calling back people who have previously been assessed but waited a significant amount of time.
- Identifying patients who have taken an overdose and determining the clinical risk, adjusting the priority of the response accordingly.
- Undertaking a stack safety role, intervening and upgrading incidents that may have increased clinical risk.
- Providing advice, support and signposting to End of Life patients

Recommendation 1 (3.1)
WAST will develop an intelligible operating model for the CSD with clearly aligned resources for each function

In March 2020, as a response to the Covid 19 pandemic, the CSD adapted to allow remote working capabilities for some high-risk staff. This function was one which was being explored, however keeping staff safe was a priority, therefor the function was expedited and the ability to work remotely has developed and will continue to develop.

In 2021 a case was put forward which identified a mechanism to improve the structure, clinical acumen, integration, quality and safety of 999 secondary triage undertaken by the CSD, Low-code remote clinical triage system, often referred to as Emergency Communications Nurse System (ECNS). Section 3.6 explores the implementation of ECNS.

In addition to describing the benefits of ECNS, the business case also identified the need for improved clinical governance, chiefly the need for education, training, audit and procedural improvement, and funding was requested for a senior professional practice educator (band 7) with a team of five professional practice educators (band 6) to address these concerns. A second business case was also submitted which discussed the need for mental health practitioners in the CSD, indicating that assessment, triage and intervention over the phone was the best approach for most mental health calls to UK ambulance Services.

In October 21 it was confirmed that funding was facilitated for the implementation of the new system, an additional 36 FTE band 6 clinicians (funded by redirecting from ACA2 roles) and 6 FTE band 7 Mental Health Practitioners.

In May 2022, ECNS went ‘live’, and the new substantive positions were filled with every clinician operational by July 2022.

3.2 Clinical Support Desk Processes

3.2.1 The CSD clinician working from the CSD queue

The CSD clinician is a nurse, paramedic or mental health practitioner, and one of their main roles is to work from this queue. When commencing shift the Point of Contact (PoC) or Duty Operations Manager (DOM) will undertake a review of staffing and demand and allocate roles accordingly. The CSD clinician may be asked to work from a specific area of the queue, often taking the next incident in time order, this process is described below:

- A 999 call is made, and the call is routed to an EMD Call Taker by BT Call connect.
- The EMD Call Taker uses MPDS to determine the priority of the call. Every MPDS outcome is matched to an appropriate action, all these actions are stored in a spreadsheet called the Dispatch Cross Reference (DCR) Table.
- There are 2,460 MPDS codes in the DCR Table with associated actions, and out of these 254 codes have an action set to route to the CSD automatically. Out of these codes, 8 are Amber 1, 58 are Amber 2, 39 are Green 2 and 149 are Green 3.
- In addition to the automatic population of this queue, it is also possible for incidents to be manually transferred into or out of the queue if appropriate. This queue is not monitored by allocators or dispatchers and as such incidents will not receive a vehicular response while they are in this queue.
- The incident is opened and the details are reviewed, taking into account the location of the incident, previous calls, existing frequent caller plans, specific needs of the caller (Age/ language, disability), the reason for the 999 call and any notes the EMD call taker has made.
- When the clinician is ready to call the patient back, an ECNS assessment is launched and upon answering the clinician will try their best to speak with the patient. The clinician will confirm the patients name, address, telephone number, past medical history, medication history and allergies, once this section is complete the patient will be asked to describe the reason for the 999 call.

- The clinician will launch an ECNS algorithm to assist in their clinical decision making. All attempts to obtain information from the patient will be made by using good communication techniques and verbalising the questions as written in ECNS.

- ECNS algorithms will be used to select the most appropriate recommended care level for the patient, however the clinician will select the final disposition. There are 80 final dispositions to choose from ranging from stay at home with the advice provided to upgrading the call to the fastest response (Red).

- Should the incident not require a vehicular response, it is closed and counted towards overall Consult and Close figures.

- Should the incident require a vehicular response, it is passed back to the main stack of incidents waiting for an ambulance with some notes regarding the triage. The clinician may suggest a certain type of response (e.g., a falls vehicle) and in this instance the clinician would put a warning on the incident which alerts the EMD Allocator / Dispatcher that the incident is suitable for such a response.

3.2.2 Mental Health Practitioners

Mental health practitioners (MHP's) work directly from the CSD queue aiming to assess patients presenting with mental health needs. They cover between the hours of 1300 and 0100, seven days a week with one or two practitioners. The MHP's use the same process as the CSD clinician to assess a patient and are also on hand for EMD and crew advice and support. Whilst psychiatric / suicide attempt is the 10th biggest reason for a 999 call in Wales, it is also the 3rd most common type of call closed by the CSD.

3.2.3 Point of Contact (POC)

The POC is a CSD Clinician who co-ordinates the shift. The POC will review queue safety, allocate roles to clinicians, allocate areas of focus and answer the telephone to incoming calls. There are currently three incoming lines to the POC or DOM, one for Police, one for crew support and one for Community First Responders.

3.2.4 Duty Operations Manager (DOM)

The DOM is a band 7 nurse or paramedic responsible for the operational management of the shift. This manager has a team of band 6 clinicians to line manage and is responsible for audit, feedback and policy implementation.

3.2.5 Clinical Screening

Clinical screening takes place by a CSD clinician during periods of escalation. When level 3B is reached in the Clinical Safety Plan (CSP) a specialist clinical queue is populated with Amber 2 incidents which wouldn't normally go to the CSD queue (see supporting documents).

The clinical screener is responsible for opening these incidents, reviewing the information presented and deciding as to whether the incident requires an ambulance response or clinical triage. If the incident requires a response, it is passed back to the main stack for a resource when available, if the incident does not obviously require an ambulance it is passed to the CSD queue for triage.

3.2.6 Enhanced Clinical Screening (ECS)

During periods of escalation, incidents in the CSD waiting queue are reviewed by an ECS clinician with a quick consultation, explaining the current status of the service and exploring alternative options with 999 callers. This process is referred to as enhanced clinical screening.

3.2.7 Red Review

Red review is a process undertaken by a CSD clinician. This is a 24-hour function of the CSD. Upon populating a Red response, the Red review clinician can listen in to the Emergency Medical Dispatch (EMD) call taker. Once the EMD call taker has finished reading the script to the caller, the clinician can type further questions into the notes for the call taker to ask. If the clinician feels that the incident is appropriately categorised, they will leave the call and not intervene any further.

If the clinician feels the patient does not warrant a red response, the incident is passed to the CSD stack, downgraded to an Amber 1 and passed back to the main stack for a vehicular Amber 1 response. If the clinician feels the patient would benefit from a remote clinical assessment there is also the option of leaving the downgraded Amber 1 incident in the CSD queue for remote clinical assessment by a CSD clinician working from the CSD queue.

3.2.8 Connected Support Cymru

Connected Support Cymru was initially designed to utilise NHS and voluntary-sector resources and responders to enable patients to be supported in their own home whilst waiting for an urgent healthcare need to be managed. The service aims to employ digital health technologies to connect patients, communities and clinicians to achieve better health outcomes. The initiative will improve patient experience and safety, while supporting the healthcare system in directing patients to the right pathway at an appropriate time for their care need. It is expected this will help reduce unnecessary demand upon Emergency Departments.

The service is currently in a Plan, Do, Study, Act cycle and is supported by St John Ambulance Cymru. Responders are providing cover between the hours of 1800—2200, five days a week with potential for extended hours on weekends. There are currently up to 4 crews available from different areas across Wales. These units are assigned to an allocator covering the area in which they are working. The POC or DOM will routinely review incidents and alert the allocator to suitable incidents for dispatch. When the responder arrives on scene, they call the CSD for further clinical assessment, utilising the ability to provide the clinician with a set of clinical observations.

3.2.9 Practice Educators

Practice Educators are band 6 registered nurses and paramedics who undertake quality assurance roles and training. They work between the hours of Monday-Friday 0900-1700.

3.3 Clinical Support Desk Activity

3.3.1 Demand

Approximately 20% (230) of all verified incidents are passed to the CSD queue for remote clinical assessment per day.

The number of incidents 'reviewed' by CSD is measured by taking the number of incidents passed to the CSD Queue, however it should be noted that not all of these incidents receive a call back from a clinician. Information within the record may indicate that a phone call from a clinician will not add any benefit to the patient and therefore the priority may be altered or notes may be added before passing the incident back to the main stack for a response.

3.3.2 Performance

Currently sufficient information related to calls per hour undertaken by each clinician is not available, we understand this measurement is not accurate enough to report on.

Recommendation 2 (3.3.2)
WAST must develop real time measurements for clinician activity

This review takes into consideration the following performance metrics:

Table 2: Performance Metrics

#	Metric	Output
1	Demand type (incoming calls to CSD for advice / support vs calling patients back – push or pull demand)	*The number / type of incoming demand is not routinely measured.*
2	The number of incidents whereby a clinician has had oversight but has not undertaken a remote clinical assessment with the patient	*The number of incidents 'reviewed' is not separated from the number of incidents whereby a remote clinical assessment takes place.*
3	Time to triage (arrival on CSD stack until start time of conversation)	*The length of time patients wait in this queue is not routinely measured.*
4	Assessment time start to finish with patient only (talk time)	*The length of time it takes to undertake this not routinely measured.*
5	Start of assessment time until completion of incident (including note taking time)	*Time taken between start of assessment and completion of incident is not routinely measured.*
6	Total CSD completion time (arrival on stack to closure of CSD intervention)	*The length of time between arrival on CSD queue and closure of CSD intervention is not routinely measured.*
7	Dispositions	*See section 3.3.3*
8	The number of High Intensity Service Users and how this contributes to overall CSD activity (Frequent callers).	*Whilst overall frequent caller activity is measured, the CSD time or contribution to overall Consult and Close is not routinely measured.*
9	Re-contact rates with outcomes	*Not routinely measured.*
10	Clinician utilisation	*Clinician utilisation is not routinely measured.*
11	Clinician productivity (CPH) per role	*The productivity per CSD function by clinician is not routinely measured.*
12	Post production lost hours	*Post production lost hours for CSD is not routinely measured.*

Recommendation 3 (3.3.2)
WAST and Commissioners will collaboratively develop an agreed set of quality and performance measures for the CSD

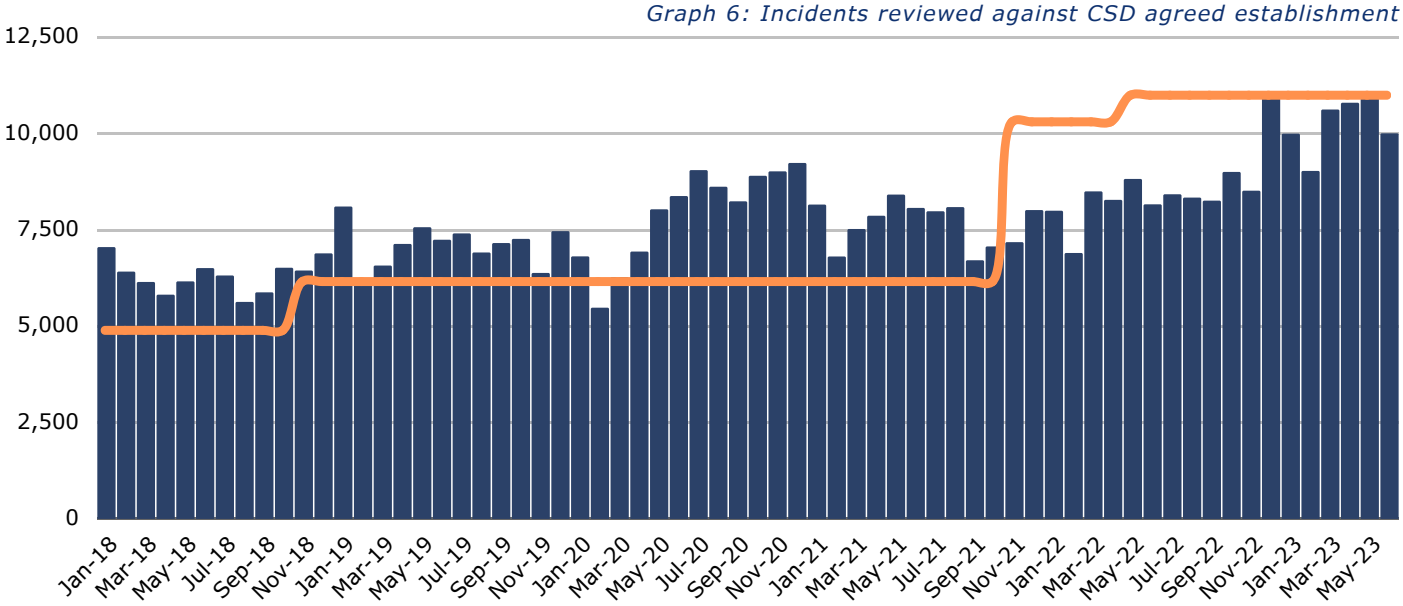
3.3.3 Dispositions

Graph 6 below shows the number of incidents reviewed by the CSD since January 2018. It should be noted that 'reviewed' does not mean a remote clinical assessment has taken place, however it does reflect the number of incidents whereby a disposition can be traced back to the CSD.

In January 2018 the CSD was staffed with 30 FTE, in November 2018 WAST had recruited to 41 FTE. November 2021 saw an increase to 77 FTE and in May 2022 there was a further increase to 83 FTE.

In graph 6 below, the agreed establishment is shown as a line, against a backdrop of the number of incidents reviewed by the CSD (bar chart).

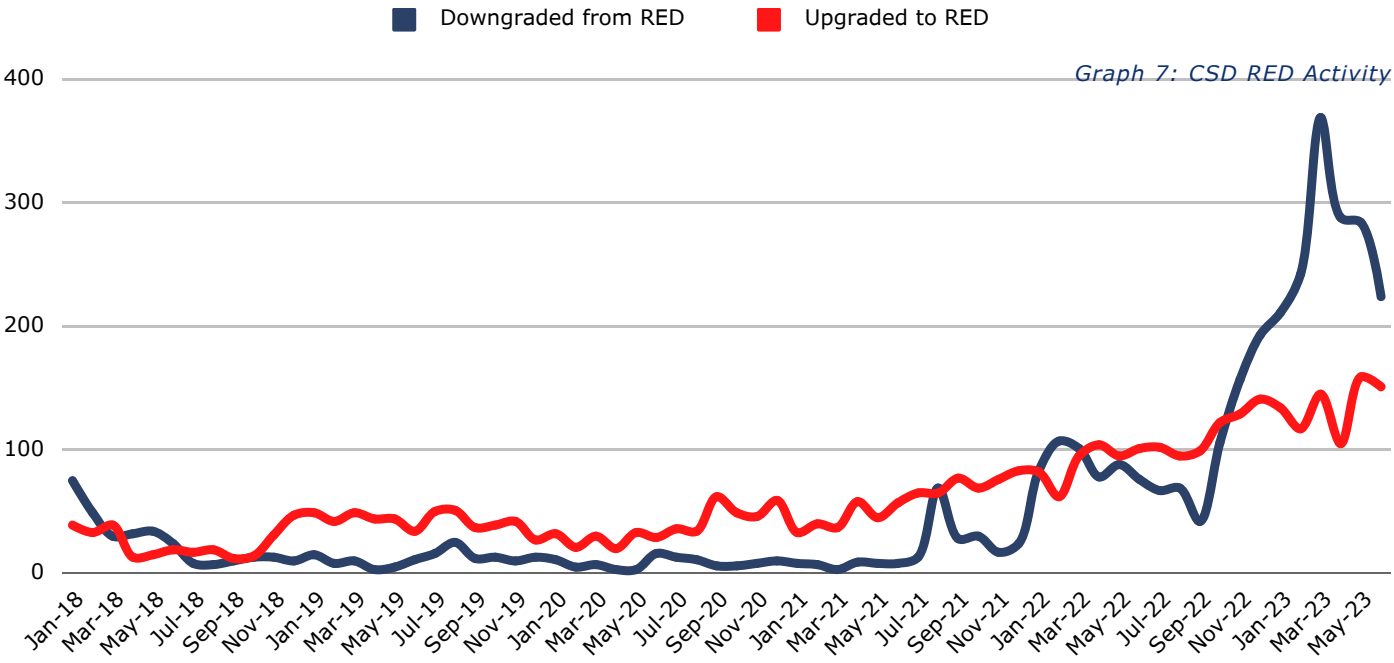
Graph 6: Incidents reviewed against CSD agreed establishment



Recommendation 4 (3.3.3)
WAST must provide a benefits realisation report on the uplift in CSD staff.

Recommendation 5 (3.3.3)
WAST will develop reportable metrics for the outcomes of incidents 'reviewed' by the CSD

CSD clinicians determine the response category of incidents in line with the CRM following review, however it should be noted that not all incidents undergo a remote clinical assessment before the disposition is altered. This is most prevalent when the 'Red Review Clinician' undertakes Red downgrades based on information they have observed from the EMD Call Taker. Below, the data shows how the role became a core function of the CSD in the latter part of 2022, with 24 hour cover in this role from early 2023.



Graph 7: CSD RED Activity

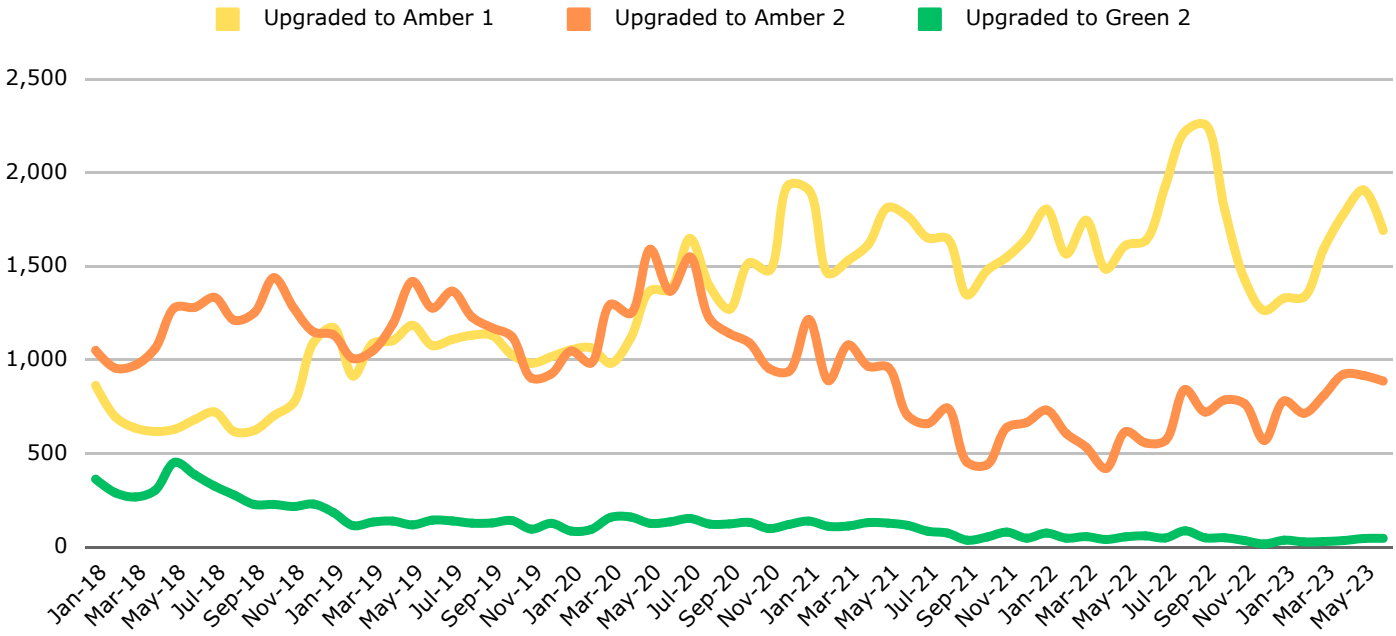
The above data also shows the number of RED upgrades. In the data period 4,000 incidents were upgraded to Red. Whilst clinical outcomes of upgraded incidents are not routinely reported, table 3 reviews 'stop codes' associated with the 4,000 upgraded incidents.

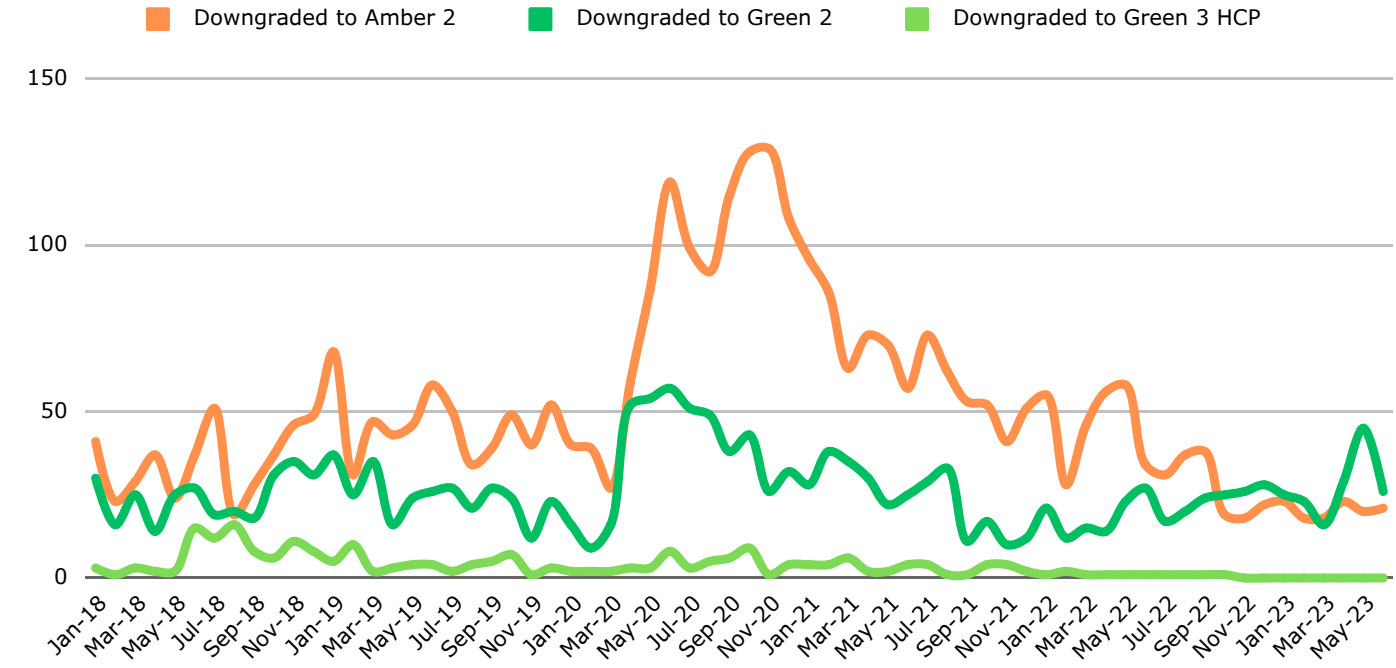
Table 3: Stop Codes

Stop Code Group	Number of Incidnts
Cancelled by patient	*202*
CSAT	*1*
Downgraded	*1*
No Patient / Hoax	*12*
NS	*1*
Own Transport	*19*
Patient Condition Changed	*1*
Patiient Treated at Scene	*159*
Police / Fire Dealing	*26*
Physician Triage Assessment Streaming (PTAS)	*2*
Referred to Alternative Provider	*159*
Recognition of Life Extinct (ROLE) Policy Implemented	*83*
Telephone Triage	*1*

In addition to the upgrading of incidents to Red, graphs 8 and 9 below, show the number of incidents upgraded and downgraded by the CSD to Amber and Green. The original category and the clinical outcome of these incidents is not routinely recorded.

Graph 8: CSD Upgrades (AMBER and GREEN)





Graph 9: CSD Downgrades (AMBER and GREEN)

3.3.4 CSD Consult and Close

The top ten reasons for a 999 call over the last two years are detailed in table 4. Whilst the biggest reason for a call is 'Falls', the greatest number of 'consult and close' comes from incidents categorised as Amber 2, Falls. The number of these incidents whereby a Falls response vehicle is on scene is not routinely recorded.

Recommendation 6 (3.3.4)
WAST will review the CSD activity related to 'Falls' to understand if there is sufficient and appropriate CSD capacity to meet demand

It is unclear due to the lack of data analysis what the impact of mental health practitioners has been on patients presenting with a need for this service, however it should be noted that the third biggest reason for a 'consult and close' is psychiatric / suicide attempt'.

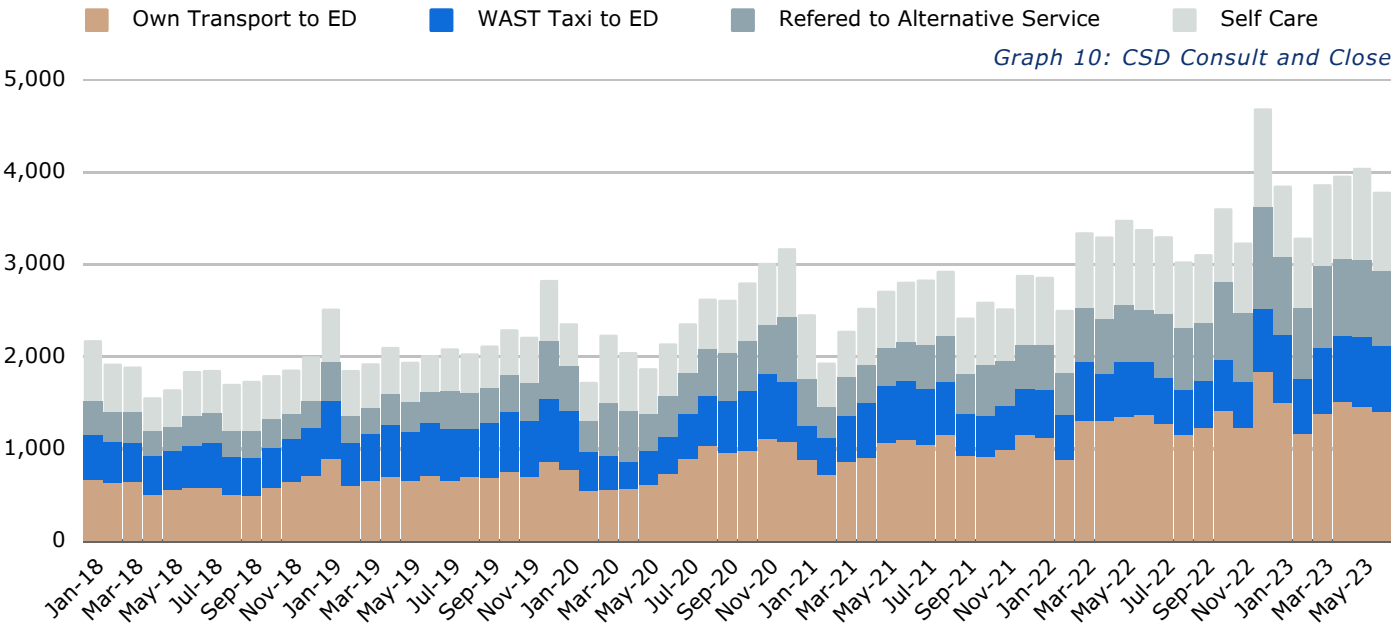
Recommendation 7 (3.3.4)
WAST will provide a detailed review of demand, activity and outcomes of Mental Health Practitioners within the CSD

Data taken from Jun 2021- June 2023

Table 4: CSD Calls Closed

#	Top 10 reasons for a 999 call	Top 10 calls closed by CSD (C&C)
1	Falls	Falls (A2, G2, G3, A1)
2	Chest Pain	Chest Pain (A1)
3	Breathing Problems	Psychiatric / Suicide Attempt (A2)
4	Sick Person	Sick Person (A1, A2, G3)
5	Pandemic / Flu	Breathing Problems (A1, G2, A2, RED)
6	Unconscious / Fainting	Pandemic / Flu (A1, G3, A2)
7	Health Care Professional Call	Overdose / Poisoning (A1,A2)
8	Stroke (CVA / TIA)	Unconscious / Fainting (A1)
9	Haemorrhage / Laceration	Haemorrhage / Laceration (A1)
10	Psychiatric / Suicide Attempt	Stroke (CVA / TIA) (A2)

The below graph details consult and close rates for CSD since January 2018. There is a marked dip in the number of consult and close incidents in May 2022, recognising ECNS was introduced at this time, this is reflected in growing confidence and competence levels since.



Graph 10: CSD Consult and Close

Approximately 50% of incidents closed by the CSD are incidents whereby the patient has been advised to make their own way, or a Taxi (paid for by WAST) has been provided to take the patient to an Emergency Department.

Approximately 25% are referred to an alternative care provider and 25% are given self-care advice. It is unclear if more patients are being directed to specific health board pathways in particular health board areas.

Recommendation 8 (3.3.4)
WAST will provide a gap analysis of pathway variation across Wales

Over the last year, Mental Health practitioners who work as part of the CSD close an average of 56% of what they assess.

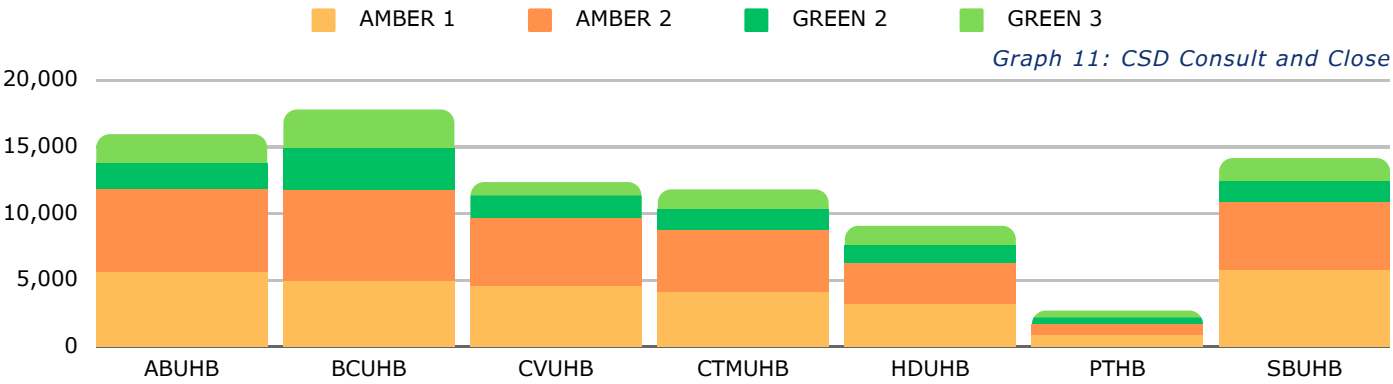
Table 5 below shows the largest amount of 'Consult and Close' comes from Amber 1 incidents.

Consult and Close by CSD – Jun 2021- June 2023

Table 5: Consult and Close

AMBER 1	
15,246	Alternative transport to ED
5,970	Referral to community based service
6,473	Self care
AMBER 2	
10,945	Alternative transport to ED
7,916	Referral to community based service
11,119	Self care
GREEN 2	
4,795	Alternative transport to ED
2,908	Referral to community based service
3,655	Self care
GREEN 3	
3,421	Alternative transport to ED
3,519	Referral to community based service
4,329	Self care

Graph 11 below, shows the CSD consult and close impact detailed by health board from Jun 22- Jun 23.



Graph 11: CSD Consult and Close

3.3.5 Outcomes

Of those incidents that were passed back to the main stack for a vehicular response, approximately 50% were taken to hospital.

- 51% - Hospital
- 14% - Cancelled Pre-Arrival
- 9% - Patient Treated at Scene
- 8% - Patient Refused Treatment
- 4% - Nothing found, no patient on scene (assume made own way)
- 4% - Referred on to GP after face-to-face assessment.
- 3% - Referred to GP Out of Hours following face to face assessment.
- 2% - Dealt with by Police
- 5% unallocated

Due to the lack of data linkage it is difficult to analyse the outcome of consult and close incidents.

Recommendation 9 (3.3.5)
WAST will record a patient identifier (i.e NHS Number) in order to support data linking for understanding clinical outcomes

3.4 The Clinical Support Desk Structure

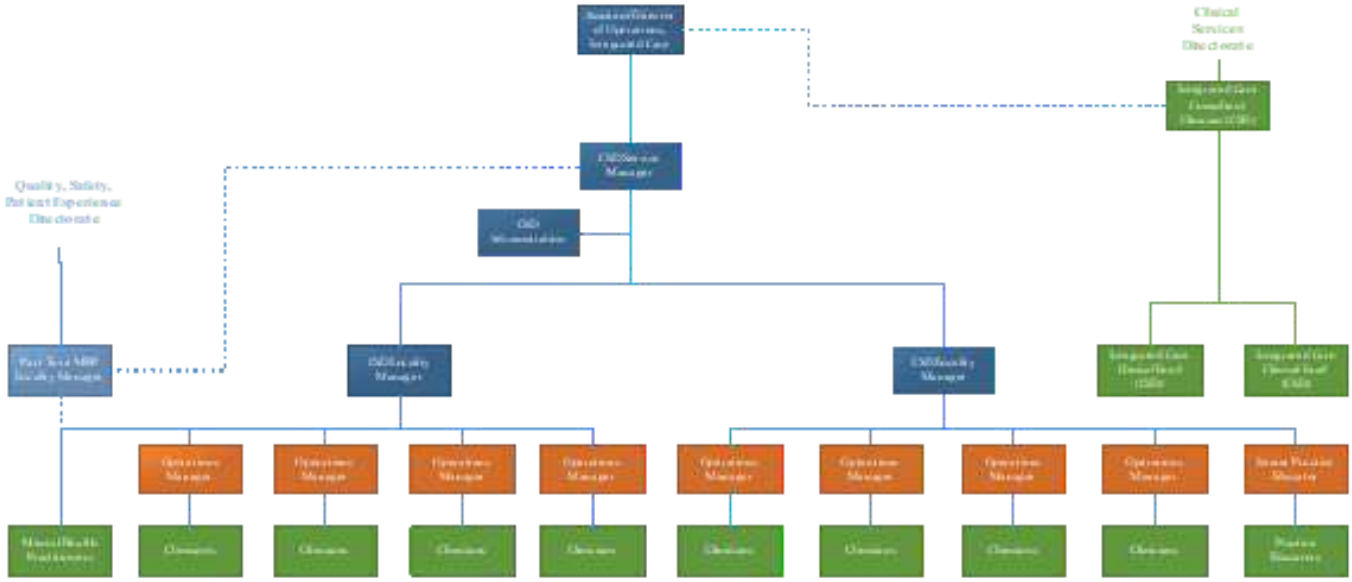


Table 6: CSD Establishment

Role	FTE Funded	FTE in Post	Heads
Service Manager	1	1	1
Locality Manager	2	2	2
Administrator	1	1	1
Operations Managers	8	8	8
CSD Clinicians	77	68.12	73
Mental Health Practitioners	6	6	6
Senior Practice Educator	1	1	1
Practice Educators	7	6.8	7

The CSD is currently staffed with 68.12 FTE band 6 clinicians made up of 47 paramedics and 26 nurses with funding for 77 FTE. These staff are line managed by 8 FTE operational managers and supported by 6.8 FTE band 6 practice educators and 1 FTE band 7 senior practice educator. Recruitment has commenced for further CSD clinicians.

There are 6 FTE band 7 mental health practitioners (3 nurses and 1 social worker).

These posts are managed by two Locality Managers and one CSD Service Manager.

The clinical services arm of the structure has recently been approved and is currently in the recruiting phase.

Operationally this translates to the below hours of clinician cover along with 9-5, Mon-Fri practice educator and Locality Manager cover and Operational Managers working 24 hours except for between 0200-0600 Tuesdays, Wednesdays and Thursdays.

Table 7: CSD Operational Coverage

0	1	2	3	4	5	6	7	8	9	10	11
10	10	7	7	7	7	7	7	10	10	10	10
1	1	3	3	3	3	3	3				
*	*										
12	13	14	15	16	17	18	19	20	21	22	23
10	10	10	10	11	11	11	11	11	11	11	10
	*	*	*	*	*	*	*	*	*	*	*

KEY	
	Hour
	Total Clinicians
	Additoonal Staff (Fri/Sat Nights)
	Mental Health Staff Cover (1 or 2)

3.5 Key Performance Indicators

ECNS is a relatively new function in WAST. Whilst it is recognised that there is room for improvement in terms of output from CSD, it is also recognised that the team has grown rapidly and undergone complex change in the way they work over the past year. There is now an opportunity to explore how activity can be increased and what is required to support this.

One area of particular concern is the lack of resource to undertake reporting, data analysis and act upon findings. Telephony reporting, dashboard creation and the implementation of Key Performance Indicators are required in order to learn and grow, all of which require the resource to support this. Regular DCR table reviews are also required to ensure the right incidents are being remotely assessed.

Recommendation 10 (3.5)
WAST must confirm how they are or intend to make use of the enhanced reporting functions provided by ECNS

3.6 Emergency Communications Nurse System

WAST IMTP 2016/17 identified the need to replace its current remote assessment tool, and this was presented in a discretionary funding bid in 2017/18. Further to this, the CCC Clinical Review, and its subsequent COVID-19 Lessons Learned report, identified, amongst many things, that Manchester Triage System (Telephone Triage Assessment) was outdated and in need of replacement. This identification was based on the lack of information relating to performance, productivity and clinical governance, as detailed below.

Performance and Productivity

In order to determine productivity, effectiveness, manage poor capability and celebrate great performance, the following are required:

- Key Performance Indicators for remote clinical care
- Real-time data on dispositions, referral rates, and outcomes
- Real-time data on Hear & Treat rates per clinician per centre.
- Average call time call to triage time and call to disposition time.

Clinical Governance

In order to ensure a high-quality clinical call audit, the following are required:

- A database of calls for random call audit.
- Digitally automated identification of themes and trends
- Individual, centre, and organisation clinical outcome metrics
- System that allows easy pan wales access to clinical audit data
- System that allows easy pan wales access for audit levelling

Patient Safety & effectiveness

In order to ensure that more patients and more patient presentations can be assessed robustly, the following are required:

- Digital integration for video consultation
- Pandemic and seasonal flu capabilities
- Legal and clinical governance protection and support
- A pathway for accreditation as a centre of excellence

On 13 May 2021 a business case was presented which addressed the above, to a closed session of finance performance in WAST, indicating the benefits of new clinical decision making support software which has the ability to integrate with clinical audit software.

Other benefits presented included;

- Increased CSD capability
- Reduced number of ambulances being sent.
- Reduced number of patients attending an ED
- Reduced pressure on ED thus reduced handover delays.
- Increased ambulance availability
- Improved safety of long waiting patients
- System resilience

ECNS provides a heavily evidence-based set of clinical triage questions, set out in a reductionist way that considers factors such as age and gender.

The ECNS system has the ability to link the patient across the entire patient journey through Emergency, urgent, primary, and secondary care. ECNS can capture unique patient IDs such as NHS numbers and import data from platforms such as Welsh Clinical Portal, or Summary Care Record System, to ensure the clinician has the most up-to-date robust clinical information required for assessment (Audio or Video Assessment).

On the 27 May 2021 the business case was again presented to a closed trust board, recognising the proposed benefits and alignment with the trusts Integrated Medium Term Plan (IMTP), the board endorsed the business case for submission to the Emergency Ambulance Services Committee (EASC).

On 22 October 2021 Welsh Ambulance Services NHS Trust (WAST) received an allocation letter from Welsh Government for the sum of £409,445 on a non-recurrent basis for the implementation of ECNS.

This review takes into consideration the following documented benefits of ECNS;

Table 8: CSD Considerations

Consideration	Output
Significant triage time saving per patient	Not evidenced
Full system integration	Whilst internal system integration is identified, wider system integration is not evidenced
Ability to treat more patient groups	*Not evidenced (more algorithms does not evidence more patient groups)*
Ability to audit, review and monitor	AQUA integration - 1500 audits completed and WAST achieved Accredited Centre of Excellence (ACE) for ECNS
Improved 'Hear and Treat'	*Not evidenced based on the significant increase in the workforce*
Reduced numbers of patients requiring an ambulance response	*Not evidenced*
Lower numbers of patients attending ED	*More patients than ever attending ED*
Primary and secondary care integration	*Not evidenced*
Improved patient experience	*Not captured*
Improved staff experience	*Not captured*
Safer care	*Substantial auditing figures with ACE outcome*
Right care first time	*Not evidenced*
Digitally enabled patient, including the effects and benefits of video calling	*Not evidenced*

Recommendation 11 (3.6)
WAST will undertake a benefits realisation review of the ECNS investment

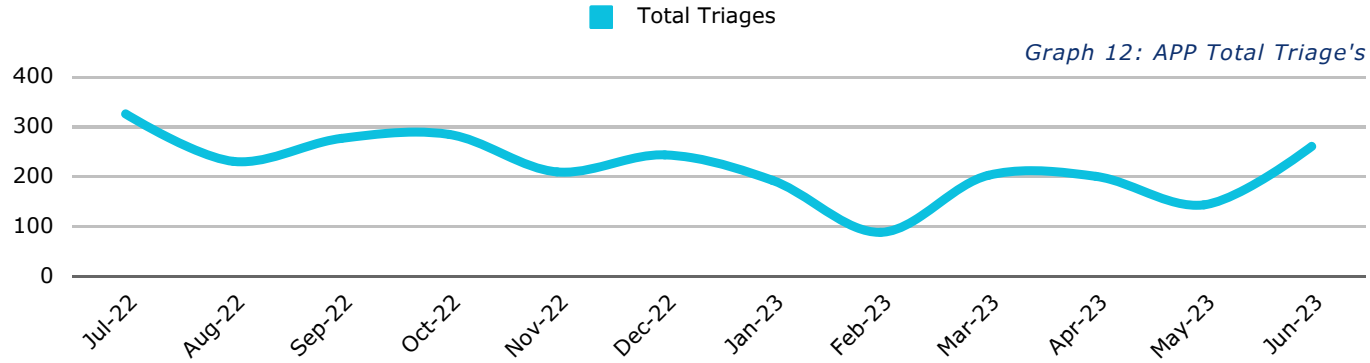
4 APP NAVIGATIOR ROLE

There are currently Advanced Paramedic Practitioners (APP's) in the navigator role in two health board areas, Hywel Dda and Swansea Bay.

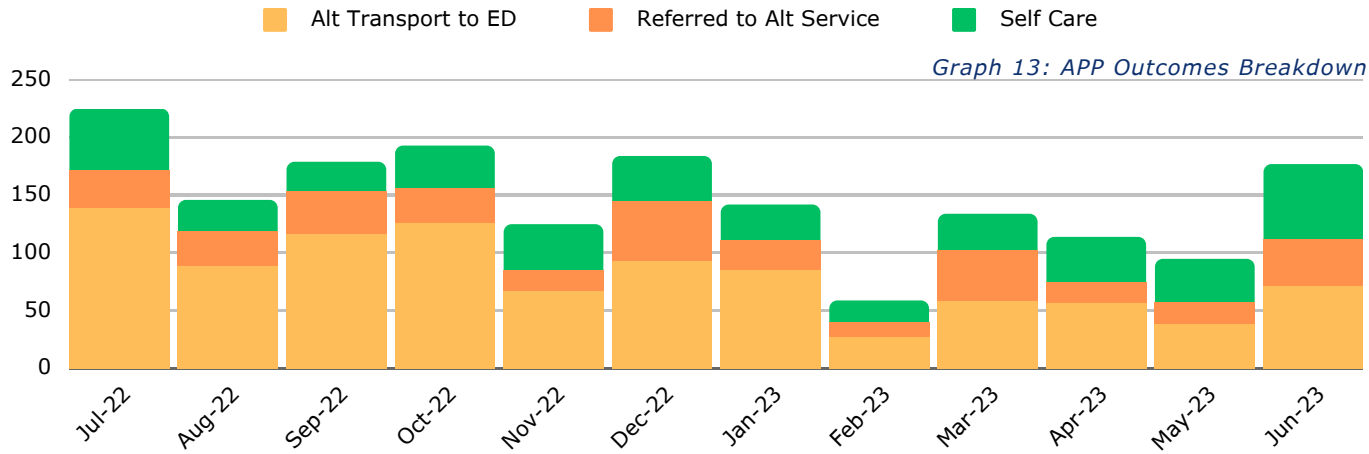
The primary function of the APP in this role is to provide remote support to crews on scene, offering support and alternatives to conveying patients to ED where appropriate. In Hywel Dda the APP sits alongside the health board frailty team and in Swansea Bay they sit alongside the SDEC team. These roles do not cover 24 hours per day or 7 days a week. The areas where they are most successful at providing crew advice are thought to be influenced by the team they sit alongside, however there is lack of evidence to support this.

Recommendation 12 (4)
WAST will review the impact of the various APP navigator roles in order to share best practice across Wales

In addition to the primary function, APP navigators also undertake remote clinical assessment of patients who are waiting for a vehicular response. The below graph shows APP Navigator activity over the past year.



Graph 12: APP Total Triage's



Graph 13: APP Outcomes Breakdown

APP Navigators close an average of 66% of the incidents they pick for remote clinical assessment. The number of incidents per hour per clinician is not routinely recorded.

5 PTaS

5.1 Background

The principal roles of PTaS physicians are to:

- Provide remote clinical assessment and support to patients to ensure that they can access the most clinically appropriate care for their needs. This may mean providing self-care advice, referring the patient to their own GP service, minor injury unit, urgent care center, or referring them back to the ambulance waiting stack.

- Provide a streaming service for patients who are being admitted to an acute hospital but for whom the accident and emergency department is not necessary.

- Provide a streaming service for patients for whom admission to an acute hospital would normally be required but for whom a community service is now appropriate (such as rapid response nurses, community intravenous medication teams, and community frailty teams).

Table 9:PTaS Go Live Dates

Health Board	Go Live Date	Trained Users
Aneurin Bevan University Health Board	28/04/2022	*13*
Betsi Cadwaladr University Health Board	25/01/2022	*8*
Cardiff and Vale University Health Board	Not live Yet	0
Cwm Taf Morgannwg University Health Board	04/05/2023	*10*
Hywel Dda University Health Board	09/09/2021	*6*
Powys Teaching Health Board	Not Live Yet	*0*
Swansea Bay University Health Board	06/12/2022	*7*

5.2 Activity

In Wales over the past year (Jul 22- Jun 23), 2,984 incidents have received a remote clinical assessment by a PTAS clinician, of which 905 incidents have been closed by physician triage and streaming (PTaS). The chart below shows at least a third of these patients being referred into alternative community services, compared to a 50% alternative transport disposition by other remote services.

All Wales

Over the past year PTaS has contributed 0.2% towards consult and close. Some health boards have previously accessed the WAST stack remotely and continue to this, however this is not the preferred and approved method for PTaS. To ensure governance, safety and quality is provided to service users it is recommended that the agreed process is followed.

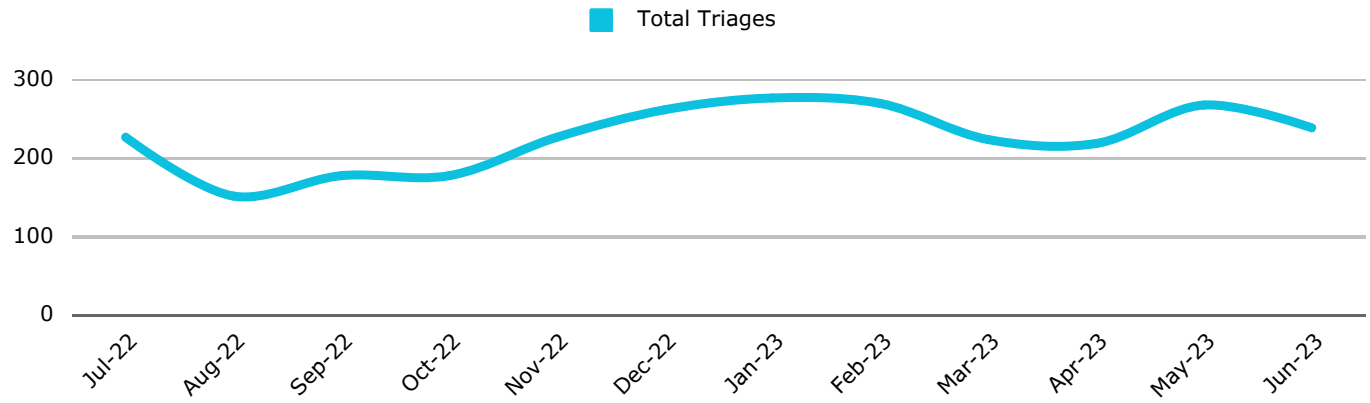
The PTaS function is sporadic across Wales, with little to no contact with the CSD. A clear line of communication between WAST and the PTaS function in each health board 24/7 should be established to ensure all resources are available during times of increased demand.

There is currently no data available for Aneurin Bevan and Cwm Taf.

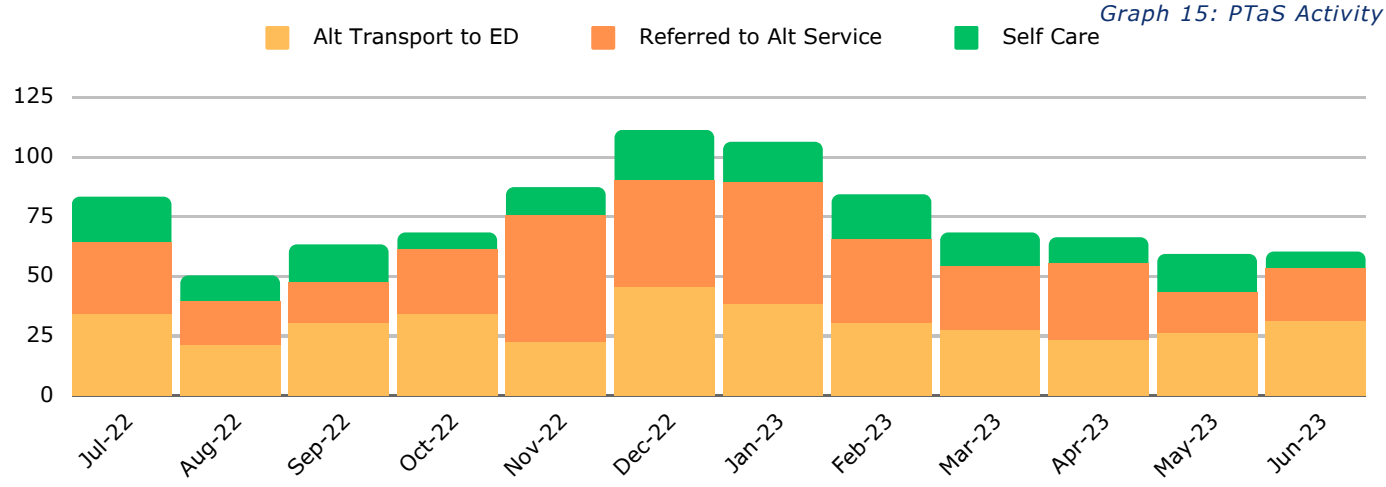
Recommendation 13 (5.2)
WAST will review the requirement for PTaS and work with commissioners and health boards to develop a preferred model of implementation

Cardiff and Vale University Health Board and Powys Teaching Health Board are yet to take part in the PTaS function.

Graph 14: PTAS Total Triage's



Graph 15: PTaS Activity



Betsi Cadwaladr University Health Board (BCUHB) was the first health board to access the WAST stack and undertake remote clinical assessment, using a process called Single Integrated Clinical Assessment & Triage (SICAT). This involved the GP working closely with Advanced Paramedic Practitioners.

The model moved to PTaS in January 22 and activity continues to increase, however as this is not the primary role for this group of GP's, this is not a 24/7 service and there is a lack of integration with other remote clinical assessment services undertaken by WAST.

On average, PTaS clinicians in BCUHB stop the dispatch of 60 ambulances per month.

Physicians in Hywel Dda University Health Board (HDdUHB) were the first to use the PTaS function. Again the service is sporadic as this is not a primary role of the GP and there is no clear line of communication 24/7 between WAST and the PTaS function.

On average, PTaS clinicians in HDdUHB stop the dispatch of 7 ambulances per month.

Physicians in Swansea Bay University Health Board (SBUHB) previously had access to the WAST stack and undertook remote assessment of calls and offering support to paramedics on scene. This function was regarded very highly in the Swansea Bay area.

On average, PTaS physicians in SBUHB stop the dispatch of 1 ambulance per month.

Whilst recorded PTaS numbers are low, health boards feel they are doing more, further analysis of this should be explored.

6 999 Incidents Passed to 111

6.1 111 Overview

111 is a triage, assessment and signposting service which operates 24 hours a day, every day and serves the population of Wales. Members of the public are encouraged to use this service if they are feeling unwell and are unsure what to do, or for health information on a wide range of conditions, treatments and local health services. 111 acts as the front door to health services in Wales and is staffed with call takers, health information specialists, specialist nurses and paramedics and multidisciplinary teams to provide health advice and support and best direct patients to the most appropriate place of care.

In addition to the main function of the service described above, 111 also routinely takes low acuity ambulance calls, and during periods of high demand on ambulance services has flexed to enable higher acuity calls to be managed through this service. This function was previously the responsibility of NHS Direct Wales but now sits with 111 as the service provider, (hosted by WAST).

6.2 Background / Arrangements

In 2015/16, NHS Wales Chief Executives, supported by Welsh Government, confirmed their intention to work together to fully implement the NHS 111 Service across Wales. The NHS 111 Wales National Programme was developed to implement a new service model which aligned NHS Direct Wales (a core function of WAST) with the Urgent Primary Care (Out Of Hours) Services provided by Health Boards (which is a core function of LHBs). The National rollout of NHS 111 Wales concluded in March 2022 when the service was fully implemented and operational in every health board area in Wales.

WAST act as a provider organisation in relation to the delivery of component parts of the NHS 111 Wales Service, in particular WAST undertake the initial call handling and clinical assessment.

Health Boards provide the wider Urgent Primary Care service (out-of-hours) to those patients and/or individuals who reside in their respective areas and who have a need for those services.

Aneurin Bevan, Swansea Bay and Betsi Cadwaladr act as host organisation's for the South East, South West and North National Clinical Support Hubs. All Health Boards act in support of the NHS 111 Wales National Clinical Support Hub.

6.3 Process for remote clinical assessment of 999 calls by 111

- A 999 call is made by a member of the public, and the call is routed to an Emergency Medical Dispatch (EMD) Call Taker by BT Call connect.
- The EMD Call Taker uses Medical Priority Dispatch System (MPDS) to determine the priority of the call. Every MPDS outcome is matched to an appropriate action, all of these actions are stored in a spreadsheet called the Dispatch Cross Reference (DCR) Table.
- There are 2,460 MPDS codes in the DCR Table with associated actions, and out of these 321 MPDS codes have an action set to route to 111 automatically. The 314 codes are listed in supporting information. Out of these codes, all of them are Green 3 incidents.
- A list of exclusions to passing incidents to 111 can be found in supporting information. These exclusions can be entered to override the system from electronically passing the call to 111.
- The call is transferred by an electronic link between the ambulance Computer Aided Dispatch (CAD) and 111's Clinical Assessment System (CAS).
- The incident lands on a queue called the Encounter Initiation Queue (EIQ), which is being constantly monitored by the 111 Senior Clinical Advisors.
- Upon opening the incident, the information is reviewed and the priority of the call is set and the call is manually transferred to the first advice queue.
- The first advice queue is a queue of patients waiting for a clinician to call them back. The next available clinician will open the incident and contact the caller.

- The clinician will confirm that the patient is present and try their best to speak with the patient to gather and confirm demographics and the reason for the call.

- The clinician will then launch an appropriate algorithm to help provide structure to their clinical assessment.

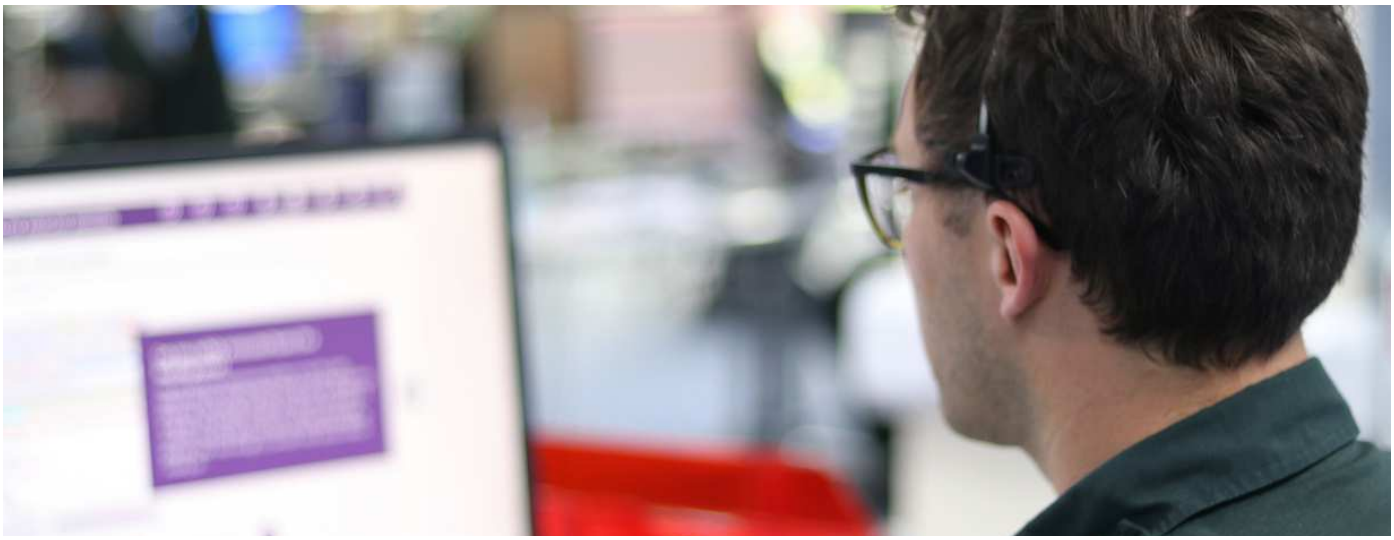
- Once the clinician feels they have adequate information, and their clinical assessment is complete a final disposition will be given to the patient along with advice about the next steps in managing their health complaint.

- There are 188 final dispositions available for clinicians to choose from, ranging from ‘stay at home with the advice provided’ to ‘stay on the line, I will pass you back to my colleague for an ambulance response’, with a range of alternatives in between supported by the Directory of Services.

In addition to the automatic transfer of incidents, there is also the ability to manually transfer agreed incidents to 111. This process takes place following a discussion between WAST managers (DCM / NDM / On-Call Team/ CSD DOM and the 111 SCA).

If the incident is a Green 2 / 3, the details can be passed via the CAS / CAD link as described above, however if the incident is Amber 1 or 2, the incident remains on the ambulance CAD with a note attached advising of the request, the demographics are passed to a 111 call taker who sets up a record in CAS.

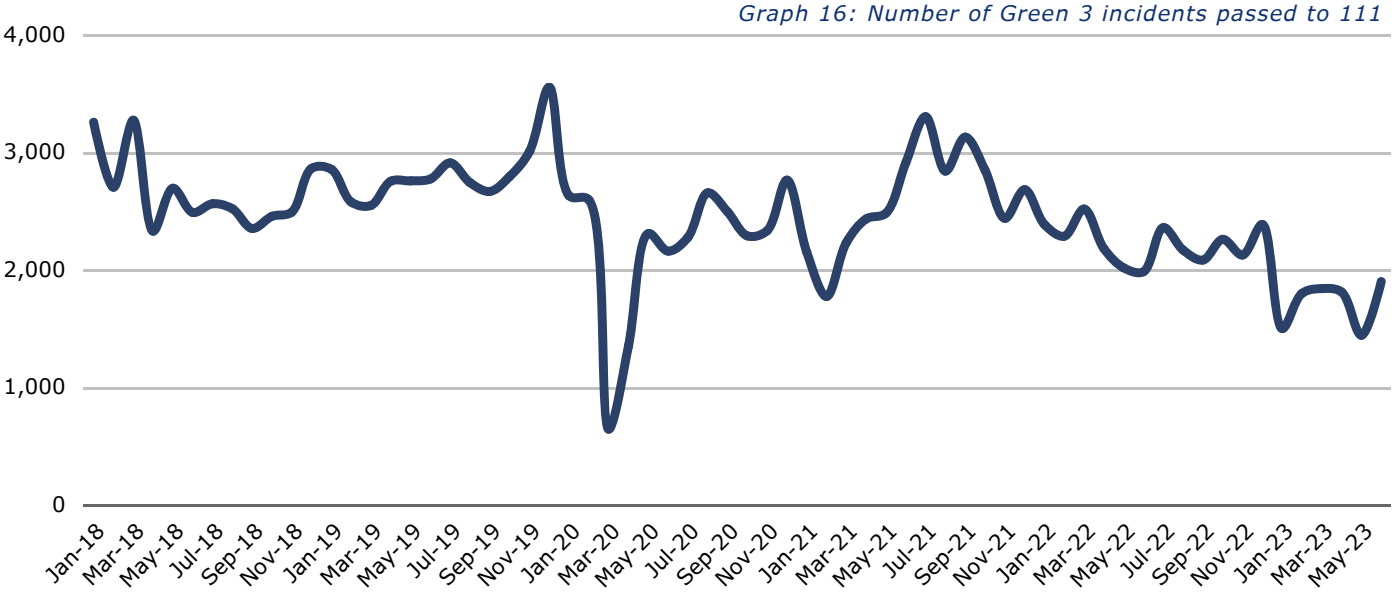
Once a final disposition is reached, the 111 clinicians can contact ambulance to advise them of the outcome, at this point the incident in the ambulance system can be amended to reflect the advice of the clinician.



6.4 Demand

Note information in this section relates only to 999 incidents transferred to 111.

Graph 16: Number of Green 3 incidents passed to 111



In quarter 1 (23/24), an average of 60 incidents per day were transferred from 999 to 111 for remote clinical assessment.

6.5 Performance

The time a patient waits from making a 999 call to receiving a call back from a clinician in 111 is not routinely measured. As the EIQ is constantly monitored, it is unlikely the incident will wait more than 5 minutes before being accepted onto the First Advice Queue (FAQ). Once the incident is prioritised as a P2 and moved across to the FAQ, it arrives on a stack of other P2 incidents in time order. The average wait for a clinical assessment in this area is 1 hour 15 minutes.

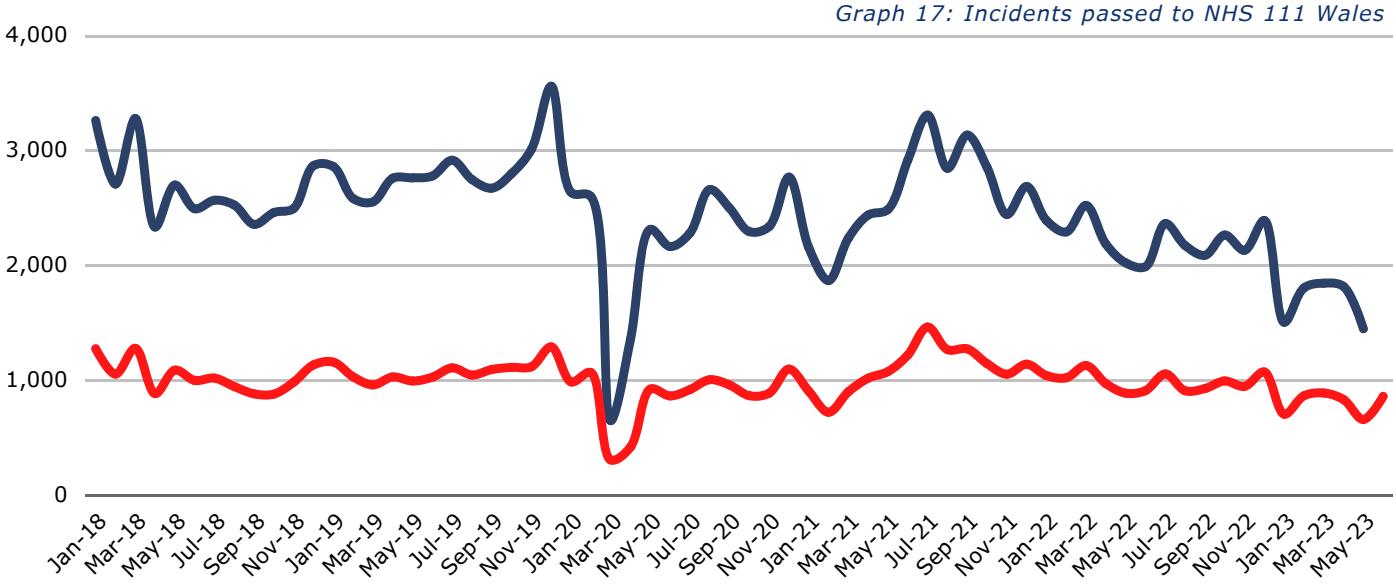
Recommendation 14 (6.5)
It is recommended that the time it takes for a clinician in NHS 111 Walesto undertake remote clinical assessment of a 999 incident be explored.

Whilst the average length of time it takes for a clinician in 111 to undertake a remote clinical assessment is recorded, the length of time it takes to undertake an assessment specifically related to incidents which originated in ambulance, is not routinely recorded.

Recommendation 15 (6.5)
It is recommended that further analysis of data is undertaken to enable sight of the clinical outcomes of incidents passed back from 111 to 999 for an ambulance response

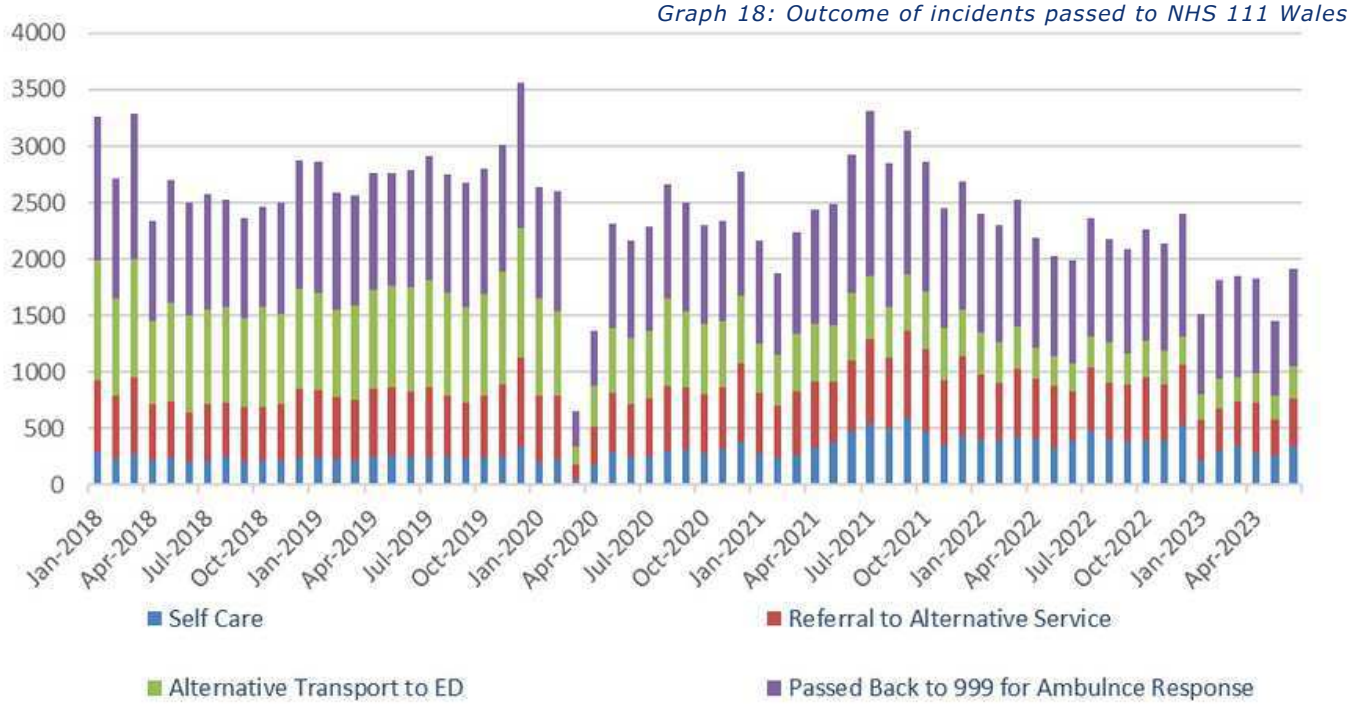
6.6 Outcomes

Graph 17: Incidents passed to NHS 111 Wales



Over the past year 111 has consistently dealt with over half the incidents sent from 999, currently averaging 44% passed back for an emergency response.

Graph 18: Outcome of incidents passed to NHS 111 Wales



This results in an average overall contribution to WAST's 'consult and close' of 3.1%.

The outcome of incidents passed back to 999 for an emergency response following 111 clinical assessment is not routinely measured.

6.7 Quality Assurance in NHS 111 Wales

All members of staff involved in the remote clinical decision making of 999 incidents passed to 111 are registered health care professionals. The staff members that usually deal with these incidents are Nursing and Midwifery Council (NMC) registered nurses or Health Care Professionals Council (HCPC) registered paramedics. In addition to these staff groups, occasionally a registrant from the 111 clinical hubs could also pick the incident up for remote clinical assessment. Registrants are governed by their professional body, and advised to undertake regular learning, audit and reflective practice to enable safe care.

In addition to offered and voluntary continuing professional development opportunities, a Remote Clinical Decision Making (RCDM), level 7 module is advertised to this group of staff on a yearly basis. There are limited numbers of spaces so applicants must express a letter of interest and the training / developmental team undertake a selective process. Whilst feedback from the course is positive, there is no current measures in place to understand the impact of the course or the share the learning, however this is something in development as part of a wider career framework.

Senior Clinical Advisors (SCA's) complete audits on clinician calls to quality assure the services offered, provide learning to clinicians and inform organisational learning.

Supporting Documents

Dispatch Cross Reference (DCR) Table: the code allocated by the AMPDS software to identify a specific complaint/set of symptoms.
https://nccu.nhs.wales/web-documents/dcr-codes/

ECNS Quality Assurance Policies and Procedures: provides standardised interrogation questions, ECNS Recommended Care Levels (RCLs), Points of Care, instructions and supplemental information for the users, such as topic overviews and clinical rationales.
https://nccu.nhs.wales/web-documents/ecns-quality-assurance-policies-and-procedures

Remote Clinical Support Systems Business Case: telephone triage, remote clinical decision making (RCDM), or Hear & Treat (H&T) is an established strategy used within Emergency and primary care settings to manage an increasing patient demand. Many professionals undertake telephone triage, such as nurses, paramedics, midwives, doctors, and psychiatrists.
https://nccu.nhs.wales/web-documents/ecns-quality-assurance-policies-and-procedures

Exclusion Criteria for NHS111 Wales
https://nccu.nhs.wales/web-documents/exclusion-criteria-for-nhs-111-wales/

The Clinical Safety Plan matrix

CSP (Response)	RED	AMBER 1	AMBER 2	GREEN	HCP (Non-Emergency)
1	Business as Usual				
2a	Respond	Respond	ETA - Alt Transport	ETA - Alt Transport Respond to	ETA - Alt Transport
2b	Respond	Respond	ETA - Alt Transport	ETA - Alt Transport Respond to	ETA - Alt Transport
2c	Respond	65th ETA Script Alt Transport	65th ETA Script Alt Transport	65th ETA Script Alt Transport	65th ETA Script Alt Transport
3a	Respond	65th ETA Script Alt Transport	65th ETA Script Alt Transport	Can't Send Respond to exceptions	Can't Send Pass to ROU or EMG
3b	Respond	90th ETA Script Alt Transport	Clinician Screening	Can't Send	Can't Send
4a	Respond	Clinician Screening	Can't Send	Can't Send	Can't Send
4b	Clinician Screening		Can't Send	Can't Send	Can't Send

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