NOT PROTECTIVELY MARKED

Public Board Meeting	**November 2018** **Item No 06**

THIS PAPER IS FOR DISCUSSION

REVIEW OF RECOMMENDATIONS FROM LORD CARTER'S REPORT

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Action required	The Board is asked to discuss the review of recommendations from Lord Carter's Operational Productivity and Performance in English NHS Ambulance Trusts Report:- 1. **Note** the Service's current position against Lord Carter's recommendations 2. **Discuss** the Service's proposed priorities for further improvement against Lord Carter's recommendations.
Key Points	In 2016, Lord Carter of Coles published a review into the operational productivity of Acute Non-Specialist NHS Hospital trusts. As a direct response to this piece of work Ambulance Trusts in England requested that a similar review of their services be undertaken. The resultant report entitled Operational productivity and performance in English NHS Ambulance Trusts: unwarranted variations was published on 27 September 2018. This paper is a review of the Service's position against the 9 recommendations made in Lord Carter's review. Many of the recommendations made by Lord Carter are in areas where work is already progressing within the Service.
Timing	This paper is presented to the Board for discussion and feedback on the proposed priorities for further improvement.
Link to Corporate Objectives	The Corporate Objectives this paper relates to are: 1.1 Engage with partners, patients and the public to design and co-produce future service. 1.2 Engaging with patients, carers and other providers of health and care services to deliver outcomes that matter to people. 1.3 Enhance our telephone triage and ability to See and Treat more patients at home through the provision of senior clinical decision support. 2.1 Develop a bespoke ambulance patient safety programme aligned to national priorities. Early priorities are Sepsis and Chest Pain.

	2.4 Develop our mobile Telehealth and diagnostic capability. 3.1 Lead a national programme of improvement for out of hospital cardiac arrest. 3.2 Improve outcomes for stroke patients. 4.1 Develop appropriate alternative care pathways to provide more care safely, closer to home building on the work with frail elderly fallers - early priorities being mental health and COPD. 5.1 Improve our response to patients who are vulnerable in our communities. 6.2 Use continuous improvement methodologies to ensure we work smarter to improve quality, efficiency and effectiveness. 6.3 Invest in technology and advanced clinical skills to deliver the change.
Contribution to the 2020 vision for Health and Social Care	This programme of work underpins the Scottish Government's 2020 Vision. This report highlights the Service's proposed priorities for further improvement to compliment the continued work under the 2020 strategic vision.
Benefits to Patients	This 'whole systems' programme of work is designed to support the Service to deliver on the key quality ambitions within Scottish Government's 2020 Vision and our internal Strategic Framework "Towards 2020: Taking Care to the Patient", which are to deliver safe, person-centred and effective care for patients, first time, every time. The priorities set out in this report seek to complement the existing work.
Equality and Diversity	In terms of the overall approach to equality and diversity, key findings and recommendations from the various Equality Impact Assessment work undertaken throughout the implementation of Towards 2020: Taking Care to the Patient are regularly reviewed and utilised to inform the equality and diversity needs.

Foreword

In 2016, Lord Carter of Coles published a review into the operational productivity of Acute Non-Specialist NHS Hospital trusts. As a direct response to this piece of work Ambulance Trusts in England requested that a similar review of their services be undertaken. The resultant report entitled Operational productivity and performance in English NHS Ambulance Trusts: Unwarranted variations was published on the 27th of September 2018. The report makes nine recommendations:

1. NHS Improvement should make operational data routinely available to ambulance trusts to enable them to effectively benchmark their services starting in autumn 2018, and trusts should take action to review levels of variation.
2. Delivering the right model of care and reducing avoidable conveyance to hospital.
3. Ambulance trusts should maximise resource availability and reduce lost hours to ensure an ambulance response is available for patients that need it most.
4. The ambulance service should develop a 5 year workforce, recruitment and staff well-being plan; to improve well-being and reduce sickness absence; encourage leadership at all levels of the organisation; improve staff engagement; and minimise vacancies.
5. NHS Improvement should work with trust boards and the Association of Ambulance Chief Executives (AACE), to agree proposals to rapidly move to a standard specification for new fleet across England and deliver significant improvements in the way fleet is managed.
6. Ambulance Trust Boards should take steps to improve performance in their control centres and have plans in place to provide a resilient service in the event of a major incident or system failure by winter 2018.
7. Developing the digital ambulance. Ambulance Trust boards must utilise available resources and invest in future technology within their control centres to enable an interoperable service with maximum resilience and improve operational efficiency.
8. Ambulance trusts should review their estates to match modern demand and optimise their corporate services functions through improved collaborations.
9. NHS Improvement and NHS England must work with ambulance trust boards, AACE and other national bodies to take the action required to implement these recommendations and agree a clear delivery plan for taking this forward.

Purpose

The purpose of this paper is to compare and contrast to the position of the Scottish Ambulance Service (SAS) in relation to the report and to align the SAS with any of the recommendations which will result in increased productivity by reducing variation.

Background

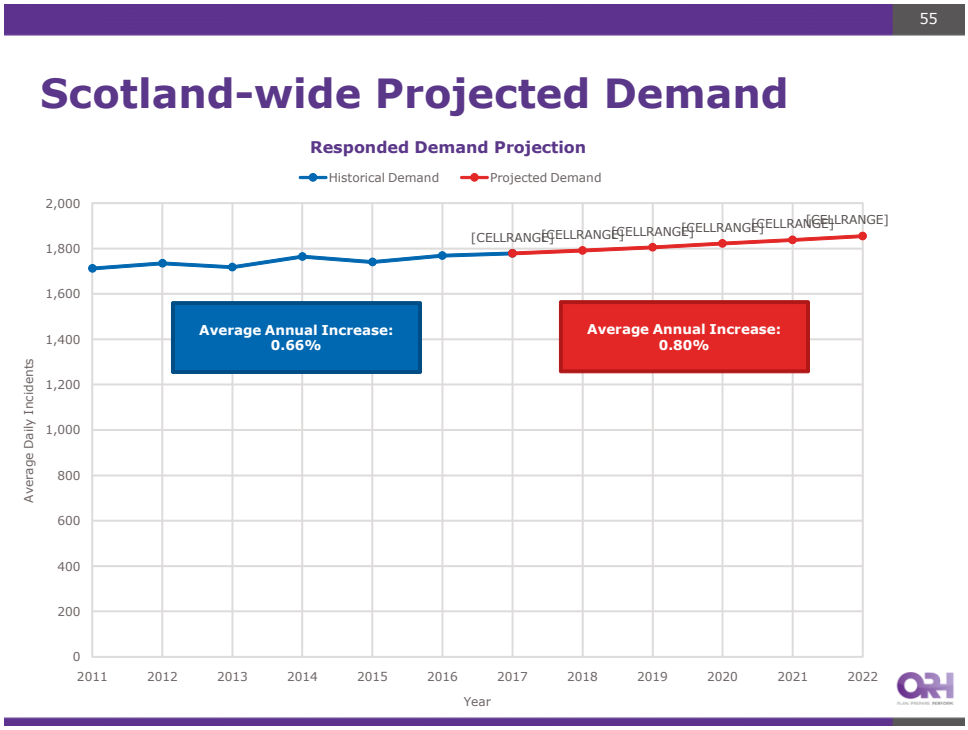
It should be noted that as health is a devolved power to the Scottish Government, as a result of differing methodologies a straight forward read across of performance measures and financial governance is not always possible, particularly in relation to the commissioning and funding of services.

There is also variation in the delivery of primary care and urgent services. The report makes several references to Urgent Care Centres which are primary care facilities often run by General Practitioners; such facilities are not widely available within Scotland. Despite the urgent care infrastructure that currently exists in England there are almost 2,700 A&E attendances per 100,000 of population more than in Scotland. Given that levels of deprivation, morbidity and mortality in Scotland are greater one may have expected to see the converse.

Lord Carter noted that providers of Primary Care and Mental Health Services felt that they could contribute more if there was a more cohesive, joined up approach, this would result in fewer admissions to hospital and individuals receiving care possibly in a primary care setting or indeed at home. There are a number of initiatives which are currently being undertaken by SAS which could contribute to a more cohesive approach but more work is required as part of the health and social care integration process at national and regional levels. The report and comparisons contained within the report demonstrate that SAS is well placed to occupy a role within primary care, but only within a fully integrated system.

Within the context of Lord Carter's report, ambulance services in England are reporting a 6% annual increase in demand. Further analysis of this data would suggest that the figure quoted in the report relates to call numbers rather than incidents. There is a variance between call demand and operational demand and that is simply because some calls may not illicit a response or on occasions there may be multiple calls relating to the same incident. This was referenced to within the National Audit Office (NAO) report in 2017 NHS Ambulance Services. The 6% quoted for English services was mostly related to a large rise in NHS 111 transfers which started in 2011/12.

The same report benchmarked activity across the UK and SAS call numbers for the corresponding period had increased by 1%. This then is in keeping with the data from the Demand and Capacity Review undertaken on behalf of SAS by ORH which was completed in April 2018. The demand and capacity review demonstrated that overall activity in the previous 6 years has risen 0.66% per annum rising towards 0.8% as we move towards 2020 and beyond.



Recommendation 1

NHS Improvement should make operational data routinely available to ambulance trusts to enable them to effectively benchmark their services starting in autumn 2018 and trusts should take action to review levels of variation.

Current Situation

SAS has undergone major changes over the past two years in particular in the way we present data. We have more data than most Ambulance Services and we are improving both how we use and present it. Much of this work is being led by our Quality Improvement and Analytical staff. As an organisation we accept that there is further work to be done particularly around accessibility and visualisation. These issues are currently being addressed in a number of programmes, the building of a new data warehouse, development of measurement frameworks and the introduction of a data visualisation product, in this case Tableau. However, we can offer some comparison against the metrics within the Report. For the sake of this exercise will use comparative data based on the report as the information is not available from NHS Improvement (England) as suggested in the recommendation.

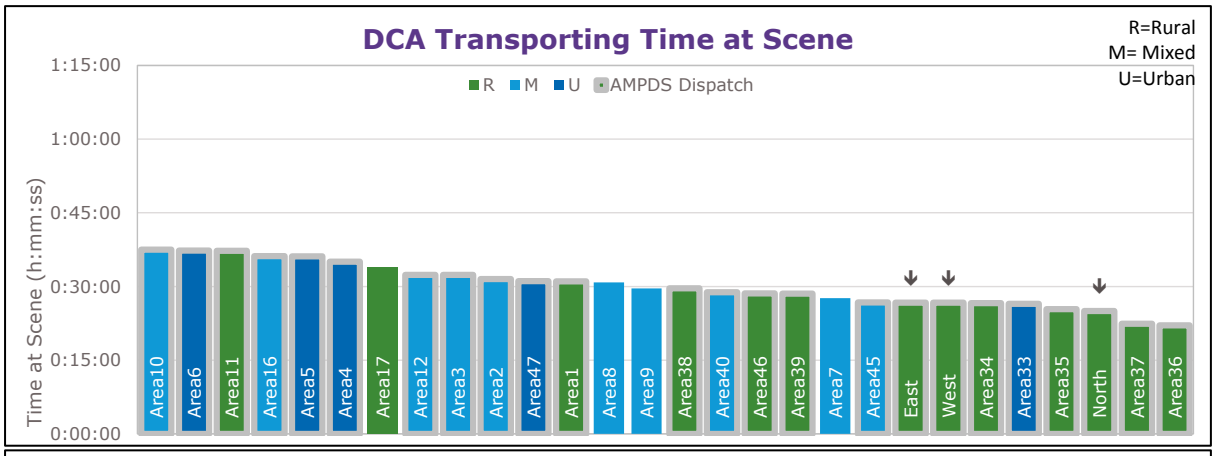
The Carter report makes reference to Ambulance Trust's job cycle times. To measure these accurately the types of calls are split into the 2 categories of see & treat and see & convey. In terms of benchmarking Scotland favours well against the English average in both these categories.

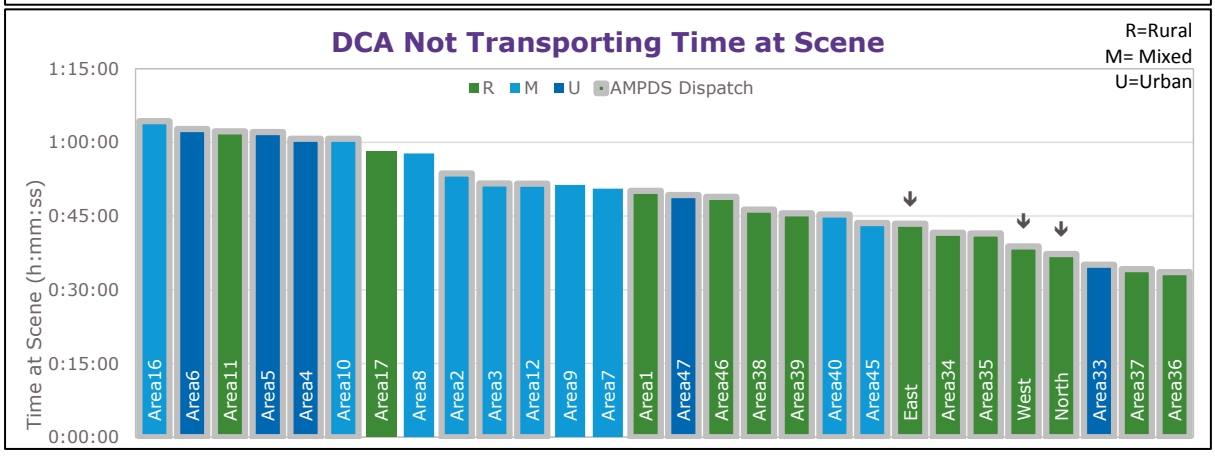
Job Cycle Time - Dec 2017 to May 2018		**English Ambulance Trusts**	**Scottish Ambulance Service**
See & Treat	Average	Approx. 65 mins.	56 mins. 36 secs.
	Range	Not available	Not applicable
See & Convey	Average	Approx. 95 mins.	90 mins.
	Range	Approx. 90 mins. to 105 mins.	Not applicable

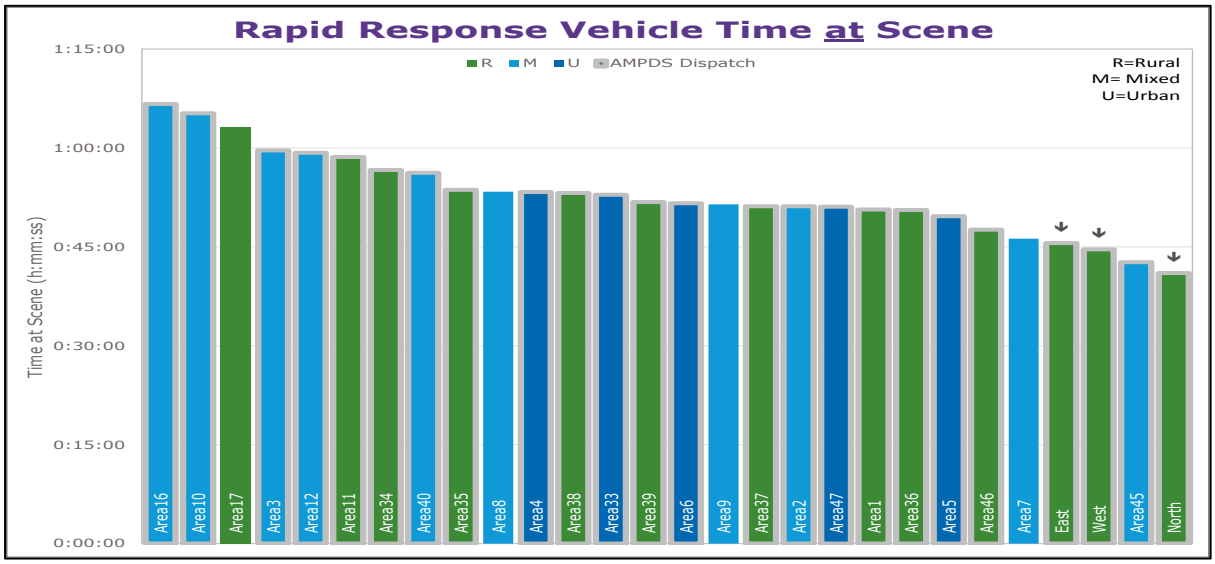
The Demand and Capacity review contained a section on benchmarking. It demonstrated that SAS has many of the same issues highlighted within the report, but in many key components such as hospital turnaround times, time on scene for both conveyed and non-conveyed patients SAS performing better than the majority of English services.

Key

DCA: Double Crewed Ambulance (A&E vehicle)
RRV: Rapid Response Vehicle crewed with single paramedic responder.



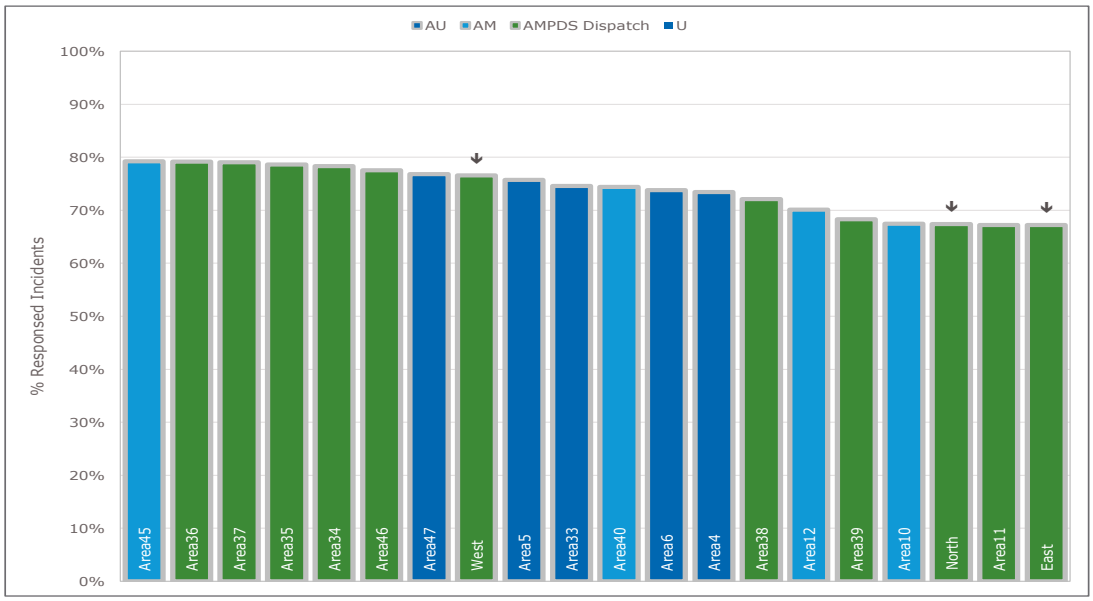




The conveyance rates for the East and North regions are among the lowest in the UK and although the rate is higher in the West it is still at the lower end of

comparative geographic areas. Ambulance utilisation is lower across Scotland than the rest of the U.K.

Conveyance Rate for Emergency Calls



Areas where productivity which were highlighted for possible improvement:

- Vehicle Activation times: SAS ranked in the middle and the report highlighted two key factors, resource availability and control room processes.
- Hospital turnaround times: Although SAS has the lowest in the UK it does create considerable numbers of unproductive hours and issues commonly occur during periods of high demand. However, caution should be taken in relation to the interpretation of this particular metric as Lord Carter acknowledged this measurement is perhaps a barometer as to the pressure in the wider system.
- In England the cost per head of population ranges from approximately £30 (North East Ambulance Service) to approximately £37 (South East Coast Ambulance Service). In Scotland in 2016/17 the Ambulance Service operated at £36.64 per head of population (source: Scottish Health Services Costs).

Priorities for Further Improvement

I. Resource availability: SAS is about to embark on a national roster review process as a direct result of the demand and capacity review findings. A tender will be issued in November 2018 inviting interest from external parties to undertake the work on the organisations behalf. The process will be overseen by a project board. This will result in the realignment of resources to demand, however to achieve SAS's key performance indicators additional resources will be required. Through both demand and capacity studies and the national review of rosters the actual resource required will be identified by staff grade, location and hour of day and this will inform our new strategy which extends beyond 2020. This approach is similar to that adopted by the London Ambulance Service and South West Ambulance Service Trust.

II. Control Room Processes: There are several references within the report not only to control room processes but also to making the best use of automation and technology. The tender document for the demand and capacity support does contain a clause which would allow the Service to conduct a full review of the control room function. Secondly, it would also be worthwhile to develop a measurement framework for the key aspects of the control function.

III. Hospital Turn Around Times: The initial concept of our current Hospital Ambulance Liaison Officer (HALO) roles was to assist with flow within the hospital. It was recognised then and borne out by Lord Carter's findings that locating ambulance officers in A&E units to manage flow is of little value. Creating capacity by improving the discharge function will yield better results. The report does clearly highlight the requirement for robust escalation policies. Within the recommendation it makes clear that escalation policies should be in place at a local level when handover delays exceed 30 minutes. SAS has ensured that as part of the winter plans such escalation policies exist and will be adhered to by all parties. The report suggests that improvements may be delivered by having senior clinicians at the front door to triage the patients and having staff maintaining ownership of handovers, rather than Ambulance officers. Alternatives should be considered and the report quotes the "fit to sit" initiative where, if clinically safe to do so, the patient can be left in a chair releasing the ambulance crew following handover.

IV. Mental Health: SAS is currently involved in a collaborative piece of work with Police Scotland and NHS 24. The work is funded through the Scottish Government Mental Health Strategy (Action 15). The intent is to create a Mental Health Hub will triage calls from the three services which do not require an emergency response from either SAS or Police Scotland, and where appropriate offer support or refer the individual to an appropriate service, which in many cases may be non-clinical.

Recommendation 2

Delivering the right model of care and reducing avoidable conveyance to hospital.

Current Situation

Our current strategy has an ambition of achieving, 30% Hear and Treat, 30% See & Treat and 40% conveyance. At the time the economic case was that for every £1 invested in SAS the wider health economy could expect a return of approximately £4.50. The charts above demonstrate that SAS is making good progress towards these targets, and the ORH report noted that conveyance rates in Scotland were among the lowest in the UK. The targets set within Lord Carter's report in many cases are currently being exceeded by SAS.

A number of projects are underway within the Clinical Services Transformation programme to support the provision of high quality care using a range of Hear, See and Treat pathways:

i. The Clinical Decision Making Framework aims to support our clinicians to make safe, effective and person-centred decisions with patient and carers in both emergency and urgent scenarios. The framework was distributed in October 2017 and the content is being taught as part of the Learning in Practice training.

ii. We are developing more effective tasking of Specialist Paramedics, who are able to offer a greater range of treatment and interventions directly for patients to support provision of more comprehensive care at home in a safe and effective manner, and to support access to alternative care pathways that are integrated with communities and the wider health and social care service. We are redesigning clinical telephone triage within our ACCs with the aim of improving the experience, safety and efficiency for people accessing care through 999 who do not require an emergency ambulance response and can be provided with self-care advice or discharge to an alternative care pathway.

Hear and Treat pathways

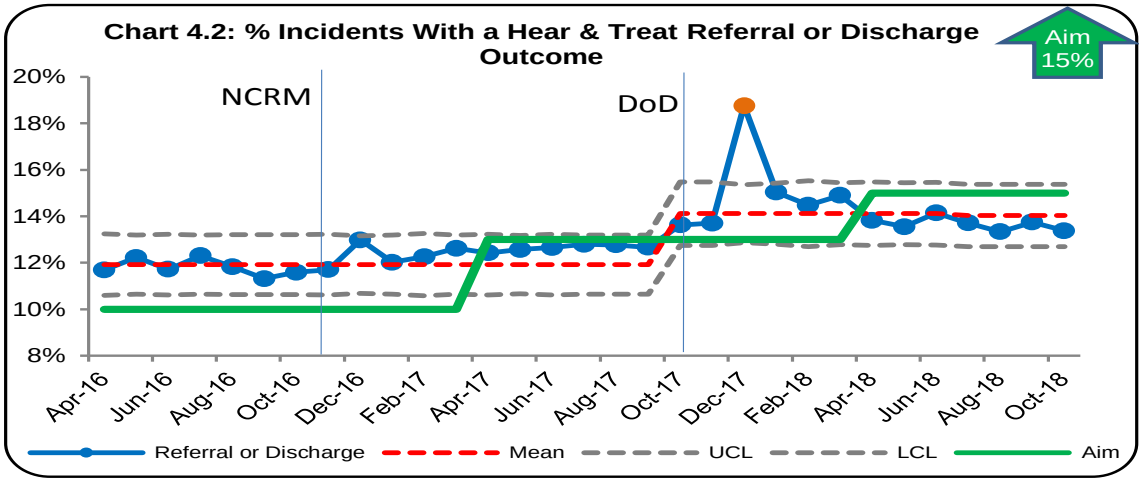
People calling 999 have a range of health and social care needs. Not all callers require an emergency response and telephone triage (both primary telephone triage by emergency call handlers and secondary telephone triage by clinical advisors) is important to ensure the right response is provided at the right time for people calling. The benefits of telephone triage include:

- improved effectiveness of ambulance resource allocation

- improved experience for those with low clinical acuity by providing self-care advice and referral to more appropriate and less urgent care
- improved clinical outcomes for patients with complex needs who present as low acuity but may deteriorate if the response is prolonged or delayed
- reducing demand for ambulance conveyance and emergency department attendance.
- safety netting of calls where there are no available resources to attend through clinical assessment to detect any red flag symptoms that may be masked by a complex clinical history and require a higher level of ambulance response.

Hear and Treat performance and trajectory modelling

Our performance over time for all Hear and Treat definitions is shown below. We have seen an upward shift from 11.4% in 2015/16 up to 13.7% for 2018/19 to date. The spike seen in December 2017 is due to special cause variation and was made up of a number of factors, such as callers hanging up and/or making their own way to a care provider due to the winter pressures.



We have a strategic target to provide Hear and Treat outcomes for 30% of our 999 patients by 2020. One of the recorded risks within the CST programme is that there are not enough patients that are suitable to be treated/referred by secondary telephone triage resulting in an inability to safely meet the 30% Hear and Treat target.

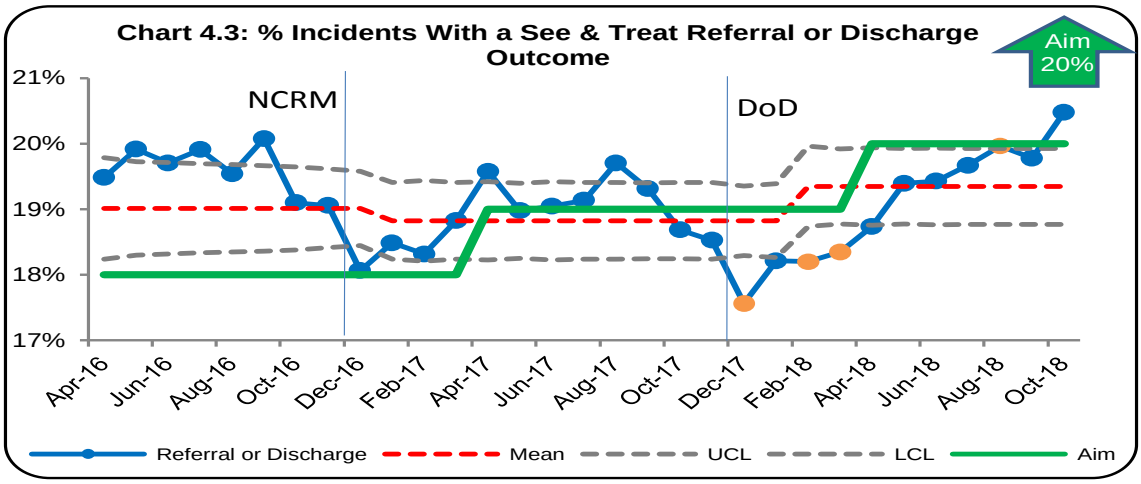
Our daily emergency demand, excluding demand from HCPs and IHTs, is approximately 1250. We would need 375 of these patients each day to receive a Hear and Treat outcome to meet our 30% target.

A number of work streams are underway to ensure the right response is provided at the right time for people calling 999 which include improving Hear and Treat outcomes:

- A review has taken place to identify additional patients that can be safely referred to NHS 24 to support people access the care they need in a timely manner.
- A similar process was undertaken to analyse the patient cohorts sent to the Clinical Services Desk in order to optimise use of the Clinical Advisor time (for example remove those codes that are regularly upgraded to an emergency response) and remove waste in the process.
- A review has taken place of potential patient cohorts within the yellow response category that have reduced higher rates of alternative care referral following Clinical Advisor intervention, when providing welfare calls to patients who are continuing to wait for an ambulance response.
- Continue to work towards attaining ACE accreditation and standardising MPDS practice for our emergency call handlers to reduce variation in call taking to a tolerable level, thereby reducing the risk that patients are inappropriately referred for secondary telephone triage.
- Development of an integrated mental health hub as mentioned previously.
- Clinical Advisor roster review has completed providing a 6 week roster including 1 week of training/CPD which will allow for a robust 12 month training plan. Implementation date of February 2019.
- The impact of a successful recruitment process for Clinical Advisors will bring 6 further Clinical Advisors into post in November 2018 who will be trained and working independently ahead of the winter pressures.
- Development of an integrated clinical hub across SAS and NHS 24 to ensure a safe, seamless and efficient experience for people whether they dial 111 or 999 was discussed at joint NHS 24/SAS workshop on 27 August 2018 and agreement to develop a joint project group to take forward.

See and Treat pathways

Our performance for See and Treat outcomes over time is shown below. We have seen variation over the past two years with a recent upward trend over 2018 to 21% of patients receiving an alternative care pathway to transport to the ED following face to face assessment.



The Clinical Decision Making Framework was distributed in October 2017 and aims to support our clinicians make safe, effective and person-centred decisions with patients and carers. The content of the framework is currently being taught as part of the Learning in Practice training.

There has also been a recent focus on developing more effective tasking of Specialist Paramedics, who are able to offer a greater range of treatment and interventions directly for patients to support provision of more comprehensive care at home in a safe and effective manner, and to support access to alternative care pathways that are integrated with communities and the wider health and social care service.

Patient outcomes following Specialist Paramedic assessment and treatment

One of the challenges associated with the Specialist Paramedic role has been the lack of available data about their impact. Work has taken place to better identify and pull information through the data warehouse about Specialist Paramedic activity and this data has been available since April of this year.

For the selected patient groups, this results in Specialist Paramedics providing 54% of patients with an alternative care pathway to the Emergency Department, compared to 39% for A&E crews.

As well as providing an improved experience for patients, this is resulting in more effective use of ambulance resources with conveying resources being made available for more critically ill patients who are likely to require transport to hospital.

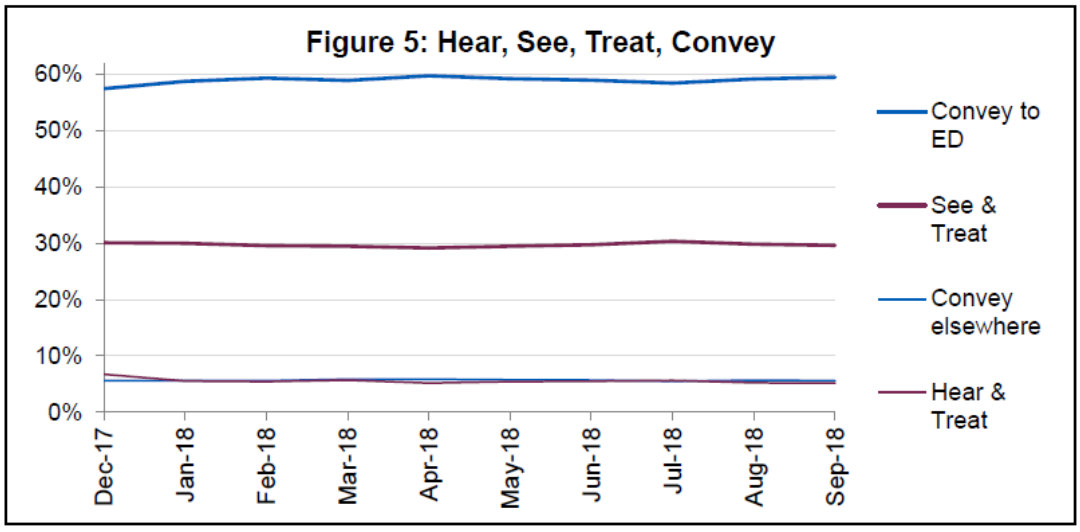
The data will continue to be analysed alongside the dispatch tests to better understand which groups of patients Specialist Paramedics make the biggest impact to.

Non Conveyance comparison with ambulance trusts in England

NHS England publishes Ambulance Quality Indicators every month. For September 2018 the average Hear and Treat rate across England was 5.2%. NHS England use a similar Hear and Treat definition to us including all calls with no vehicle response, although they now exclude responses cancelled by caller and calls not resolved with telephone advice and do not receive a response on scene due to demand management arrangements associated with surge pressures . This change to the definition has resulted in lower Hear and Treat rates reported across all ambulance trusts in NHS England since September 2017.

SAS's Hear and Treat rate is comparable to the average seen across NHS England when using a similar definition.

In September 2018, NHS England reported 59.5% of patients were transported to the ED, 5.6% of patients were transported elsewhere, 29.7% of patients were attended but not transported (See and Treat) and 5.2% of patients were treated or referred by phone (Hear and Treat) – see chart below.



Priorities for Further Improvement

I. A significant body of work is being progressed to improve quality clinical care for our patients, including providing care for patients at home or in the community by phone or following face to face assessment.

II. In Scotland there are 32 Integrated Joint Boards and 14 NHS Boards which provides a challenge to SAS to engage with all areas. All parties will therefore require to consider how constructive engagement should take place, this could include the use of technology and cloud based functions where draft strategies could be viewed and commented upon before documents or plans are completed. Early sight of such drafts would also facilitate better cross-sector planning and when meetings are required they could be much more structured and focussed.

III. SAS has an excellent record in relation to mobile technology. Our staff can already access the Key Information Summary (KIS) and Emergency Care Summary (ECS). Additionally, the SAS app is under development which will provide additional information to crews. It is understood that a Directory of Services is held by NHS 24 but is currently unavailable to crews. It is recommended that SAS progress discussions around ensuring the accuracy of the directory and enabling crews to access it.

IV. Developing nationally agreed protocols or pathways is a clear ambition. The Scottish Government currently has clear expectation in relation to frailty/falls, C.O.P.D. and Mental Health. A Clinical Pathways group has been established within SAS, but we require to do more to support ongoing pathway development and share good practice. The design and introduction of clinical pathways will impact positively in relation not only to the strategic intentions of SAS but to the Scottish Government of treating the patient in the most appropriate setting which may be either in primary care or at home. The development of such pathways will require planning at national, regional and local levels. It is essential that SAS engages with Integrated Joint Boards around planning in primary care, to ensure that the development and support for pathways is featured at both strategic and operational planning levels. This may result in the relocation of resources from an acute a primary care setting, as referred to in many SG documents.

V. SAS requires to develop clinical supervision capacity and capability. This is essential for the delivery of clinical pathways/protocols. The supervisory function can assist and guide crews in relation to the application of the pathways, giving confidence and encouraging good clinical decision making. It can also provide feedback in relation to performance against agreed pathways, particularly in instances on non-compliance. This support promotes confidence in practitioners and will lead to better clinical care. It is recommended that individual staff have access to their clinical data and be aware of their individual performance. Recently SAS has migrated to the TURAS appraisal system. It is much easier to use than its predecessor. Via this medium and by granting individuals access to their own clinical data it is envisaged that this supervision can be achieved.

Recommendation 3

Ambulance trusts should maximise resource availability and reduce lost hours to ensure an ambulance response is available for patients that need it most.

Current Situation

The outcomes from the demand and capacity review are progressing through the Demand and Capacity Implementation Programme Board. This Board contains representatives from across SAS including estates, fleet, HR and finance. The aim of the board is to review current working patterns and realign them with demand in such a manner that productivity is maximised and staff governance issues such as disturbed or late meal breaks are reduced. By realigning the demand and capacity it is also expected that there will be a reduction in overtime, this benefits staff and has a positive impact financially,

The aims of the New Clinical Response Model (NCRM) are to accurately identify patients with immediately life threatening symptoms and dispatch appropriately in order to save more lives. The NCRM development focused on the identification and triage of patients into more specific response categories, and link to the appropriate anticipated clinical pathway. At the same time, the optimal clinical skill and resource is allocated to deliver care as effectively as possible. For those patients with less immediate care needs, the aim is to better understand their needs and dispatch the most appropriate resource in a timely fashion improving outcomes and reducing the number of inappropriate allocations.

The Carter report found that West Midlands Ambulance NHS Foundation Trust reduced the number of hours where clinical staff prepared vehicles by 60% through the full implementation of the make ready system. The make ready system employs non-clinical staff to ensure vehicles are ready for the start of each clinician's shift.

Priorities for Further Improvement

There are various areas of work ongoing in relation to control room processes which it is recommended are progressed.

I. Ensuring Urgent activity is managed more effectively through improved identification of scheduled care appropriate patients, optimal utilisation of Urgent resources and seamless management of suitable low acuity patients.
II. Development and implementation of a new triage process to streamline the demand from other Health Care Professionals.
III. Introduction of an Alternative Despatch Desk responsible for the dispatch of First Responders including BASICS responders.

IV. Enhanced despatch performance management including despatch bay reconfiguration and monitoring of decision making.
V. Scheduled care planning process improvements including improved use of the AutoPlan function.
VI. The electronic passing of calls between SAS and NHS 24.
VII. The identification and implementation of workstreams to help improve the availability of resources is being progressed as part of SAS's Best Value program.

Recommendation 4

The ambulance service should develop a 5 year workforce, recruitment and staff well-being plan; to improve well-being and reduce sickness absence; encourage leadership at all levels of the organisation; improve staff engagement; and minimise vacancies.

- The report clearly references the requirement for a staff appraisal system. This should include appraisal of quality measures.
- Develop a health and well-being framework to improve key indicators such as sickness absence.
- Staff in England are being encouraged to interface with a platform known as #Project A. This platform allows both staff and members of the public to submit ideas on how to improve Ambulance services. The concept being that a working group will condense the pool of ideas into a workable number which can then be progressed. The initiative is supported by AACE.
- SAS must work with others, including Police Scotland, to reduce bullying and harassment and ensure that where staff are subjected to abuse of any kind that the toughest sanction is sought.
- There must be a clear workforce plan which addresses long term recruitment issues.
- Reasons for staff turnover should be clear and addressed within the workforce plan.
- With NES develop a national core training package, which where possible can be delivered as locally as possible.

Priorities for Further Improvement

I. SAS has introduced the TURAS Appraisal system in 2018 which provides an updated platform for the recording and monitoring of all employee review, objectives and personal development needs. Having adopted this more user friendly system, we are working to enhance appraisal practice with refreshed performance management guidance. As part of this we are aligning our leadership development activity to ensure that managers are confident in handling appraisal discussions and ensuring that time is dedicated to ensure that review process is meaningful. Further enhancement to our workforce systems through national collaboration will further integrate the new Turas system with learning management functionality to inform effective organisational tracking of development to support mandatory and statutory training, CPD and career development.

II. To support and enhance both appraisal and clinical supervision SAS also requires to further develop access to the individual practitioner's clinical performance.

III. SAS currently has a Employee Wellbeing Strategy, with supporting Wellbeing Implementation plans proposed and agreed annually in partnership and approved by the Staff Governance Committee. The strategy focuses on support we currently offer and will maintain, plans to enhance existing services, improvements to present services and potential additional developments for the benefit of our employees' wellbeing Many of the lessons of recent major incidents have been implemented, e.g. chaplaincy arrangements and access to specialist counselling services, with new pilot work underway to test Trauma Risk Management (TRiM) provisions. All Regional and National Operations directorates are engaged in the Healthy Working lives initiative with the aim of achieving the gold standard across SAS. Additional work has been progressed to pilot mindfulness programmes which have been well received and the feasibility further expansion is being considered by the Executive team. Our wellbeing work will be assessed through alignment to our workforce data measurement framework which includes absence.

IV. Early intervention in attendance management cases, particularly in relation to stress, is proven to reduce overall absence levels at organisational level. Through application of our Attendance Management Policy, staff are reviewed and supported by managers who can refer to relevant occupational health and counselling services. This proactive management is beneficial in terms of employees feeling supported and ensuring individuals get early access to the right services to facilitate recovery and return to work. As well as ensuring consistent management through case management monitoring, SAS's Attendance Action Plan focuses on a range of interventions that target improvements in absence rates. This work will be complemented by work at NHS Scotland level to develop a Once for Scotland Policy suite and employment practices to underpin the aspiration to be seen as an employer of choice, SAS will review and update its practice as these changes progress to implementation.

V. SAS has made significant progress over the last three years in fully implementing the NHS Scotland iMatter staff engagement improvement initiative. Through our annual staff questionnaire and team action planning cycle we have been encouraging team level improvement work which is driven by ideas from the staff and owned by local teams and their managers. While we focus on both consolidating this progress and building engagement, we will consider any lessons learned from the #project A approach within England and consider the adoption of any complementary and/or enhancing practices into our approach.

VI. Like our counterparts in England bullying and harassment has been a significant topic in past staff survey results. As part of our Wellbeing agenda we continue to promote cultural shift to ensure that bullying and harassment is reduced through changed behaviours. Our Leadership development agenda has people management as a core element to ensure that are staff are managed appropriately. Our approach will involve developing our management practice to include the elements of Compassionate Leadership to reinforce strong manager/employee relations. This will support open dialogue and feedback to ensure issues are dealt with through early intervention.

VII. Violence against any member of staff of any type is totally intolerable. SAS should work with Police Scotland and the Procurator Fiscals office to ensure that the legislation relating to the emergency services is applied fairly across all of the "blue light services". Staff should be encouraged to prosecute offenders and give support through the process. We will build on lessons learned through our work on targeted campaigns at key times of the year, e.g. the festive period, to make it clear that this type of behaviour will not be tolerated and that factors such as alcohol will not be accepted as an excuse.

VIII. We have completed detailed workforce planning in support of our present 2020 Workforce Strategy and have been reviewing our workforce aspirations in light of the outcome of our comprehensive Demand and Capacity Review completed this year. This work will be crucial going forward, not only to deliver the 2020 strategy but also to inform our next strategy. For this to happen we will reassess changes required to deliver our enhanced clinical skills developments relating to the span of clinical practice for Specialist and Advance paramedics. We will ensure these developments supports our own strategic plan, and work in collaboration with Board partners to identify how we can support broader health system change. Our planning will be updated to include recommendations for evolution of our workforce model arising from the Demand & Capacity review. As part of our monitoring of the workforce plan, we constantly monitor turnover levels at organisational and regional level. We make provision for turnover rates in our annual recruitment and training planning to ensure we meet our workforce targets.

IX. The Report highlights the substantial spend by Health Education England of £9.3M since 2016 in relation to up skilling the paramedic workforce to degree level. Our workforce planning is pivotal to the work currently being undertaken between SAS and National Education Scotland (NES) in relation to the future of paramedic education. to support transition paramedic education to degree status by 2021 in line with HCPC registration requirements. Our Head of Education and Professional Development is presently seconded to work with NES on this work stream.

X. The work noted above and the development of new models of care links to the production and implementation of the new national Paramedic job description. This is an area which SAS will explore as expansion of the scope of clinical practice at paramedic level would increase job satisfaction for staff and potentially supplement our Specialist and Advanced Paramedic deployment in support of healthcare system change.

XI. SAS currently have a robust and well accepted model for training technicians which is delivered within the regions and has clear links with the SQA qualifications framework. This underpins our career progression options in to Paramedic practice, and as the education model develops we will define how these pathways will operate to maintain our succession planning arrangements.

Recommendation 5

NHS Improvement should work with trust boards and the Association of Ambulance Chief Executives (AACE), to agree proposals to rapidly move to a standard specification for new fleet across England and deliver significant improvements in the way fleet is managed.

For SAS this is probably the most contentious section of the report. It should be taken into consideration that only English Ambulance Services were consulted.

- There should be standardisation not only of ambulance vehicles but also of the equipment carried on board.
- Centralisation of vehicle procurement.
- Development of robust stock inventory and asset tracking systems.
- Revue of fuel arrangements, including governance arrangements
- Standardisation of Fleet data
- Utilisation of technology including CCTV and black boxes

Current Situation

SAS's A&E fleet has a planned replacement age of 7 years giving a theoretical average age of 3½ years, however, the current fleet is significantly newer than this and, relative to the data in Lord Carter's report, SAS currently has a significantly younger fleet than any English service.

Less that 1 year old	88
1 year old	150
2 year old	8
3 year old	0
4 year old	108
5 year old	36
6 year old	38
7 year old	7
	435

The specification of a smaller number of SAS's fleet of A&E vehicles is likely to require a number of full size and mid sized vehicles based on van conversions. This will be driven by operational needs aligned to the geographical challenges of remote, rural and island communities and the physical restrictions of access and egress to patient locations and clinical services. The current and future fleet is also likely to rely on a relatively small number of vehicle with four wheel drive and/or increased ground clearance vehicles.

The report expresses a preference of van conversion over custom built vehicles. As stated previously the geography, demand or experience of SAS was not taken into account. This type of vehicle both in terms of design and operational reliability was found to be very problematic. The operational lifetime costs operating the van conversion experienced by SAS are £0.2272 per mile which is 56.7% higher than the £0.1450 per mile cost of operating the custom built vehicle.

One of the most significant factors in the success or our current fleet strategy is the consideration given to the requirements of staff. There is a design group and access for staff to comment on @SAS. This also assists with over all staff engagement where staff feel that their opinions are being valued and acted upon.

Fuel economy figures do not match those experienced SAS. In normal operational use, the fleet average for the van conversion was 18.89mpg which dropped to 18.29mpg with the introduction of Euro 5 compliant vehicles(Note: this did increase to 19.47mpg when vehicles were later reassigned to Urgent Tier duties). The comparable fuel economy for custom built Euro 6 vehicles in the front line operational emergency role was 18.17mpg, a difference of 0.12mpg. While this saving would be welcome, it does not offset the additional maintenance costs of operating the van conversion as experienced by SAS.

Priorities for Further Improvement

I. There is an argument for the standardisation of equipment in vehicles and work has been carried out within SAS led by the Head of Service group to address this issue. It had a limited impact, but is worth revisiting in light of the value for money initiatives. However, with the advent of specialist practitioners there is a requirement for additional equipment and to standardise this onto all frontline vehicles would be costly and result in a lot of unused items, particularly costly disposables.

II. SAS's fleet is currently fuelled through the ALLSTAR card supplied through the contract facilitated by the NHS Commercial Alliance. The use and management of these cards has been a focus in the last year to optimise potential cost reductions and ensure best value. There may be potential for further savings through on site bunkered fuel. SAS estate generally has very little available space to house the tanks and interceptors that would be necessary but it may be viable in some locations where space and vehicle numbers/use would realise a saving. In relation to governance the Service does receive exception reports and reports on suspicious transactions.

Recommendation 6

Ambulance Trust Boards should take steps to improve performance in their control centres and have plans in place to provide a resilient service in the event of a major incident or system failure by winter 2018.

- Development of standard operational procedures (including performance metrics) and models to reduce variation.
- Review of disaster recovery plans.
- Review control centre capacity for next three to five years, to ensure they are adequate to meet demand.
- Ensure control staff are included in the organisations workforce plans.
- Delivery of National CAD.

Current Situation

I. SAS currently liaises with other Ambulance Trusts in relation to operating procedures and also with international standards (AMPDS).

II. Disaster recovery plans are in situ. Due to work within the two main call centres aspects of these plans have been tested this year including relocation. In both instances there was no significant operational impact.

III. SAS has already upgraded the Control Centre facility at Norseman House and plans are in place to increase capacity at Cardonald.

IV. Since 2014, SAS has operated a national Computer Aided Dispatch system which gives a national picture of demand and resource availability.

Priorities for Further Improvement

I. It would be beneficial to undertake a Demand and Capacity review similar to A&E services for the control centres. This would identify current requirements and could be aligned to future developments. This could also link into the workforce plan.

II. The report makes specific mention with regards to the use of automation and artificial intelligence. These are areas which SAS should explore, particularly in relation to early identification of Immediately Life Threatening calls.

III. SAS requires to explore options with NHS 24 with regard to increasing collaboration and where possible working across agencies at times of peak demand.

Recommendation 7

Developing the digital ambulance, Ambulance Trust boards must utilise available resources and invest in future technology within their control centres to enable an interoperable service with maximum resilience and improve operational efficiency.

- This action relates to the rapid adoption of technology assessed through the digital exemplar programme (NHS England) and identifying digital ready technologies that should be implemented.
- Develop a vision of a digitally enabled ambulance and call centre and how this would connect to wider patient services potentially reducing admissions.

Current Situation

SAS has a very good pedigree in relation to embracing new technology. SAS has already trialled some near patient diagnostics. The current fleet of vehicles are possibly as digitally enables as possible with both 4G and Wi-Fi enablement. (This can be limited by geographic location at times.)

Priorities for Further Improvement

I. SAS will be reviewing the recently published Digital Health Strategy in Q1 of 2018/19. This will identify potential links and opportunities which may also form part of SAS's strategy beyond 2020.

II. Like most services SAS requires to look at the initial interface with patients and the use of digital platforms. We will require to develop capability to respond to requests which do not necessarily originate from a telephone.

III. A review of the current Global Digital Exemplar (GDE) initiatives against the SAS position is included below. The current SAS position stated in the table is based on a quick, high-level assessment from an ICT / Enabling Technology perspective. A more definitive position statement would require more in-depth analysis of the GDE initiative.

Current GDE Initiative	Brief Summary	Current SAS Position (From ICT / ET Perspective)
Vehicle as a Hub	Improvements to digital capability in ambulances.	The Enabling Technology has delivered this capability.
LiveLinks / VC	Video Conferencing capabilities for Ambulance staff to Operations Centre Video Conferencing capabilities for Ambulance staff and Operations Centre to Care Homes. Video Conferencing capabilities for Ambulance staff and Operations Centre to remote clinicians across the wider health system.	This is an area which should be considered for development in future strategy.
EPR Acute Interface / Transfer of Care Messaging	To integrate our electronic patient care record (ePCR) solution with the wider community to support the electronic sharing of patient data through the use of standards based interfaces e.g. Relevant Transfer of Care Information passed into Primary Care, Acute and Urgent Care systems.	The current ePR data transfer solution provides a similar capability. Actual take-up requires buy-in from relevant 3rd parties.
EPR Developments	Significantly enhance our digital ePCR capability for specific clinical interventions including Major Trauma, Sepsis, Asthma and Stroke	The revised SAS ePR provides similar capability.
Business Intelligence	Evolve our modelling and forecasting capability through the better exploitation of operational and clinical data	SAS MI Team and data warehouse provide a similar capability.
Integrated Urgent Care	Enhance Clinical Co-Ordination Centre (CCC) capability through a series of system integration, application and infrastructure enhancements	Needs more investigation, current Ambulance Control Centre (ACC) developments may be providing similar functionality.
Automation	Focus on automation and improvement of existing systems and processes through a range of A&E and PTS Computer Aided Despatch (CAD) developments, resourcing initiatives and other efficiencies	Needs more investigation, current ACC developments may be providing similar functionality.

Telephony Enhancements	Replacement and enhancement of our communications capability in CCCs and wider locations through a new virtual telephony system and various layered developments.	SAS is well placed in terms of telephony maturity, functionality & integration.
NHS Number Retrieval	Retrieval of the NHS Number into 111, 999 and ePCR systems,	SAS currently have a capability to retrieve CHI, the Emergency Care Summary (ECS) & the Key Information Summary (KIS)
Child Protection Information	Retrieval of Child Protection Information for 111, 999 and ePCR systems.	There are processes in place to react to any potential issues, further consideration should be given technological solutions to assist staff and join data across agencies.
Summary Care Record	Retrieval of Summary Care Record Information for 111, 999 and ePCR systems	SAS currently have a capability to retrieve CHI, ECS & KIS
Medical Interoperability Gateway	Retrieval of Medical Interoperability Gateway Information for 111, 999 and ePCR systems.	Needs more investigation, may not be applicable in Scotland
National Record Locator Service	Retrieval of Mental Health Information and submission of pointers to Ambulance information for 111, 999 and ePCR systems via the National Record Locator Service (NRLS)	Needs more investigation, may not be applicable in Scotland
Directory of Service Integration (Access to Information Service)	Access and integration to the Directory of Services within 111, 999 and ePCR systems.	Some work ongoing to use NHS 24 Directory of Services, although this is more limited than the scope of this GDE project. Would need further investigation.
Pathfinder Application	Adoption or development of a mobile application capable of supporting the Pathfinder – Manchester Triage System.	This should be considered in parallel with developments in clinical supervision.
Information Exchange Engine	Adoption, procurement or development of an information exchange engine capable of transforming information to and from the ambulance service in standard and non-standard formats and structures.	Needs more investigation, current Ensemble product used for ePR Transfer capability may offer similar functionality.

Defibrillator Bluetooth Integration	Integration of the Zoll defibrillator into the ePCR over Bluetooth wireless technology.	Planned for delivery as part of current Defibrillator replacement programme
Simulation Software (Ambulance Service)	Development of ambulance service 999 software simulation tool for demand / capacity planning etc.	The resource planning function within SAS is encompassed within the current analytical review.
Enhanced Business Intelligence	NEAS Intranet refresh to include easier access to key information.	There is an ongoing project underway to rebuild data warehouse and enhance Business Intelligence function across S
CARE software development	Further development of the Trusts Clinical monitoring tool. The NEAS CARE project aims to inform ambulance staff about their compliance with best practice whilst delivering care bundles	SAS currently reports on care bundle compliance. Plans are in place to extend this and allow individual practitioners access to their compliance figures.
RFID equipment tracking	Introduction of a RFID tracking system within an ambulance for key equipment	Consideration should be given under future statregical developments in relation to fleet and equipment.
ePCR barcoding tracking	Introduction of a barcoding system within the ambulance ePCR for medicines, consumable management and stock control.	Consideration should be given under future strategically developments in relation consumables and drugs.
SNOMED Coding	SNOMED coding of key ambulance information.	New ePCR is SNOMED compliant.
EPR solution for Community First Responders (CFR)	CFRs are often the first responder on scene and most will start their patient record on paper. The aim is to start the patient journey digitally and therefore keep off paper and provide the benefits of EPR to our CFRs as part of the care delivery.	Consideration should be given to this within new Service strategy.
EPR Patient Portal	Patients get limited information when the ambulance service leaves them (at home or hospital). The aim is to provide key data to patients so that they can better understand the care that has been provided in their own time and share this with others.	Consideration should be given to this within new Service strategy.

Major Incident Management	Current major incident process (primarily for mass casualty incidents) is paper based working from pre-planned decision cards. The major incident solution will enable digital scene management, access to information about patients (quantity and condition), information on available resources and awareness of provider capacity. The system will be designed to work across providers and platforms for multi-agency responses.	A Major Incident module is being developed as part of Ambulance Telehealth Programme
Patient side diagnostics	Building on the success of transmission of ECGs, WMAS believe that there is opportunity to extend the patient side testing. This may open up alternative pathways or allow results to be ready for review on arrival at hospital. An example would be assessment of blood gases (a common hospital practice for specific conditions). Supports the challenge of managing demand and use of alternative pathways by providing information to crews that aids decision making.	Needs further investigation, current defibrillator and ePCR work may offer similar functionality.
EPR DoS lookup	The EPR supports standalone access to Directory of Services. This project will integrate clinician impression with available services to provide an online prompt to appropriate pathways. Supports the challenge of managing demand and use of alternative pathways by providing information to crews that aids decision making.	Some work ongoing to use NHS 24 Directory of Services, although this is more limited than the scope of this GDE project. Would need further investigation.

Regional Docman	WMAS have regional capability to send notifications to willing GPs regarding treatment given.	The current ePCR data transfer solution provides a similar capability. Actual take-up requires buy-in from relevant 3rd parties.
EPR: Safeguarding	Our current reporting process requires a crew to speak to a trust call centre to pass details of a concern. This can require a crew to travel back to station/hub to make the referral (it takes 30-90 minutes to make the referral). Moving to a digital solution will provide accuracy and speed.	SAS currently has a process in place which may benefit from an electronic solution.
EPR Digital Pocket book	Crews carry reference materials in their pocket. These are difficult to maintain. Moving to a digital solution will ensure current information is in the hands of our staff.	May not be exactly the same thing, but SAS is looking to adopt the 'app' version of JRCALC and are developing the SAS app. Would need further investigation.

Recommendation 8

Ambulance trusts should review their estates to match modern demand and optimise their corporate services functions through improved collaborations.

Current Situation

I. The Reform Collaboration Group currently has a work stream looking at co-location as a potential solution in the future where suitable facilities are available.

II. In relation to cost, improvements are being driven through the value for money programme, including improving energy efficiency by looking as newer, greener options, reducing maintenance costs using schemes such as the "handyman" system to perform lower level maintenance.

With reference to corporate services, SAS is part of the "Once for Scotland" initiative which is reviewing support functions. The payroll function has already been centralised.

Priorities for Further Improvement

I. The demand and capacity review can assist to inform the Estates strategy. The model constructed for the process is capable of identifying the ideal location and size of stations. This also gives an indication of the utilisation of space within current locations. The next phase of the review will look at maximising vehicle resources not just by increasing the productivity of rosters but by ensuring vehicles are at the correct locations, this may be challenging for some facilities, particularly in the urban areas to accommodate.

II. The procurement function is being progressed as part of the Best Value programme, overseen by the Director of Finance. Current procurement functions which are under review include travel and accommodation whereby SAS deals directly with the company, often getting a cheaper rate and avoiding booking fees.

III. The document makes reference to a make ready system for both an increase in productivity and savings on the estate function. This may be beneficial for SASS in large urban areas but would fail to reach economies of scale in rural areas. It has been discussed previously within SAS but introductory costs would be prohibitive. The report quotes costs of £6.2M for the introduction of such a system in one ambulance service. It is recommended that a full cost benefit analysis should be undertaken for such a scheme.

Recommendation 9

NHS Improvement and NHS England must work with ambulance trust boards, AACE and other national bodies to take the action required to implement these recommendations and agree a clear delivery plan for taking this forward.

The comparison against each of the recommendations clearly demonstrates that SAS has identified the majority of the concerns raised in the report and has work streams in place to take forward the issues. That is not to say that SAS would not benefit from some of the benchmarking mentioned within the report, through organisations such as AACE.

It would be productive to have a more detailed section for some of the areas, similar to the fleet report appended. Due to the time span requested for this report that detailed level was not possible for all the areas.

In summation, against all the recommendations SAS measures up favourably. This is backed up by the bench marking carried out through the recent demand and capacity review. SAS should recognise that it is a leading ambulance service, performing at significantly higher levels than most of its peers and use aspects of this report such as digital transformation to shape our next strategy and maintain our position as a leader.

It is proposed that this report and the recommendations which have been identified are presented to SAS Board, the National Partnership Forum and the Scottish Government for support to move forward and implement these recommendations.