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| **Public Board Meeting** | **November 2018**<br>**Item No 05** |

**THIS PAPER IS FOR DISCUSSION**

# TOWARDS 2020: TAKING CARE TO THE PATIENT AND QUALITY IMPROVEMENT

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| **Lead Director**<br>**Author** | Pauline Howie, Chief Executive<br>Executive Directors |
| **Action required** | The Board is asked to discuss progress within the 2020 delivery programme and:-<br><br>1. Discuss actions being taken to make improvements.<br>2. Discuss work being taken to transform the Service in the 3 strategic work streams. |
| **Key points** | This paper highlights performance for our Hear and Treat and See and Treat performance measures and includes updates from the Clinical Services Transformation Programme, Enabling Technology and Workforce Development strategic work streams. Each programme has active risk registers which are reviewed at each of the Programme Boards.<br><br><u>Clinical Services Transformation</u><br><br>• Over 33% of patients were managed at home or an alternative to hospital in October 2018.<br><br>• Developments continue to be made to the New Clinical Response Model. Changes have been approved to introduce additional prompts to dispatch a Specialist Paramedic response for patients triaged as a yellow call where this skillset has been identified as appropriate.<br><br>• A system upgrade to the Call Handling system (MPDS v13.1) will happen mid-November.<br><br>• Adult Major Trauma Triage Tool is now embedded in the Electronic Patient Record (ePR) and is live in the North of Scotland following go live of the North Trauma Network Region in October, supporting triage of trauma patients to the most appropriate definitive care.<br><br>• New roles of Advanced Practitioners (Critical Care) to support the extension of the Advanced Practitioner trial into the South East Trauma Region are in place with 6 post holders commencing on 5 November. |

- New roles of Advanced Practitioners (Urgent and Primary Care) are in place with 5 post holders commencing on 5 November.

- Additional Clinical Advisors have been recruited bringing the total to 29.5 WTE. All will be in post and practicing independently prior to Christmas 2018.

<u>Enabling Technology</u>

- Ambulance Telehealth Programme – The end-to-end testing of the Content Management System (CMS) for the SAS app highlighted issues which required re-working by the supplier. This work has now completed and the system has been re-tested. Training for staff to maintain the CMS is underway and a pilot has begun in Dunfermline. If the pilot is successful, the full rollout will commence with a view to having it complete by the end of the year. Specification of the Major Incident module for the ePR (Electronic Patient Report) continues. The Team are expecting the final software version to be delivered for testing in December 2018 and rollout completed by March 2019.

- Emergency Service Network (ESN) Programme – Local programme timescales are not yet known due to significant timescale slippage in the GB wide Emergency Service Mobile Communications Programme (ESMCP). The programme has been 'reset' with a new management team and an agreement for a phased incremental approach to deliver the various ESN products. The UK Government Full Business Case (FBC) is being refreshed. The Service has replied, through Scottish Government (SG), to the first iteration of FBC and the underlying financial mode. A Scottish working group involving SG and the three emergency services has been set up to provide FBC assurance to the ESMCP Team.

- Provision of an ESN compatible Integrated Communications Control System (ICCS) – The ICCS replacement Business Case has been approved by the Board, discussions are ongoing to agree and sign a Memorandum of Understanding with the Ambulance Radio Programme (ARP) to enable work with the supplier to commence. Rollout is currently scheduled for 2019/20.

- Fleet Replacement Project – The vehicle replacement programme is progressing in line with agreed plans.

- Defibrillator Replacement – The evaluation of the tender has completed and a preferred bidder identified. The Full Business Case (FBC) was approved by the Board in September and by the Capital Investment Group in October 2018. Meetings are arranged with the winning bidder to kick-off the implementation project.

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| | Workforce Development<br>• Our Service resourcing plan for 2018/19 has broadly been delivered and outputs have been assessed to inform recruitment and training targets for 2019-21;<br>• The clinical training prospectus for 2019/20 is being finalised to allow our workforce target delivery to be planned. We are completing learning needs analysis to identify and deliver on other priority development needs. |
| **Timing** | The Board receive an update at every meeting on the key programmes of work for the 2020 Strategy. |
| **Link to Corporate Objectives** | The Corporate Objectives this paper relates to are:<br>1.1 Engage with partners, patients and the public to design and co-produce future service.<br>1.2 Engaging with patients, carers and other providers of health and care services to deliver outcomes that matter to people.<br>1.3 Enhance our telephone triage and ability to See and Treat more patients at home through the provision of senior clinical decision support.<br>2.1 Develop a bespoke ambulance patient safety programme aligned to national priorities. Early priorities are Sepsis and Chest Pain.<br>2.4 Develop our mobile Telehealth and diagnostic capability.<br>3.1 Lead a national programme of improvement for out of hospital cardiac arrest.<br>3.2 Improve outcomes for stroke patients.<br>3.4 Develop our education model to provide more comprehensive care at the point of contact.<br>3.5 Offer new role opportunities for our staff within a career framework.<br>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.<br>5.1 Improve our response to patients who are vulnerable in our communities.<br>6.2 Use continuous improvement methodologies to ensure we work smarter to improve quality, efficiency and effectiveness.<br>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 national priority areas and strategy progress to date. These programmes support the delivery of the Service's quality improvement objectives within the Service's annual Operational Delivery Plan. |
| **Benefit to Patients** | This 'whole systems' programme of work is designed to support the Scottish Ambulance 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 |

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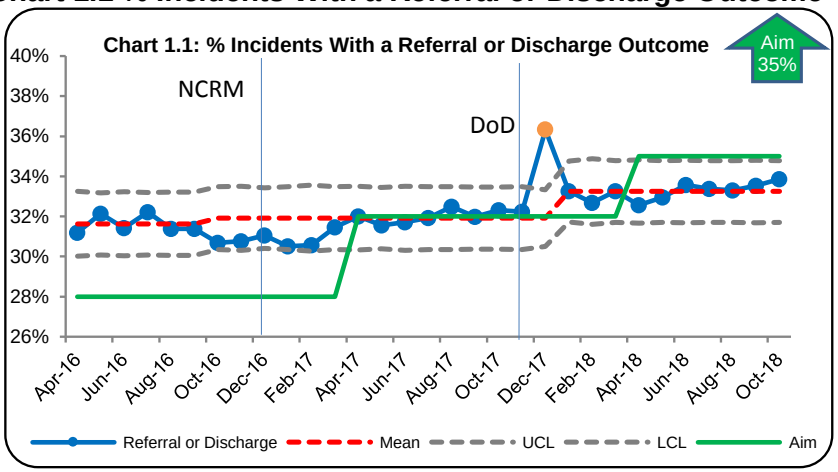
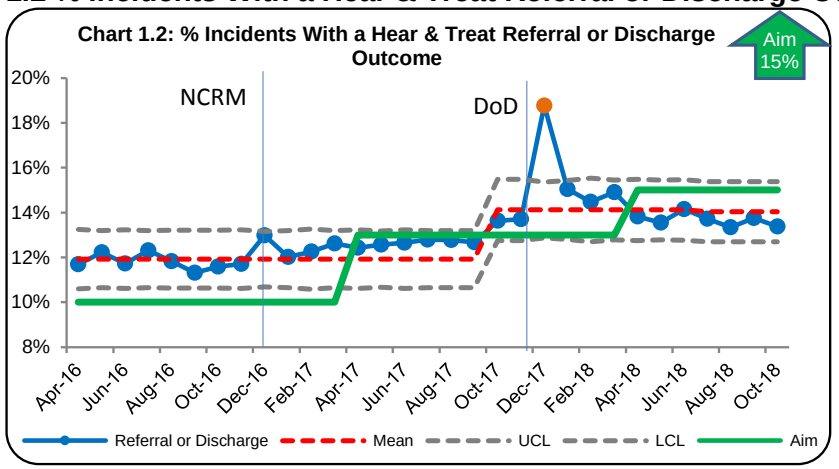
| | deliver safe, person-centred and effective care for patients, first time, every time. A comprehensive measurement framework underpins the evidence regarding the benefit to patients, staff and partners and supports the Service's transition towards 2020. |
| **Equality and Diversity** | This paper highlights progress to date across a number of work streams and programmes. Each individual programme is required to undertake Equality Impact Assessments at appropriate stages throughout the life of that programme.<br><br>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. |

## SECTION 1 - SAS T1 Reduce hospital admissions - % of unscheduled calls not conveyed

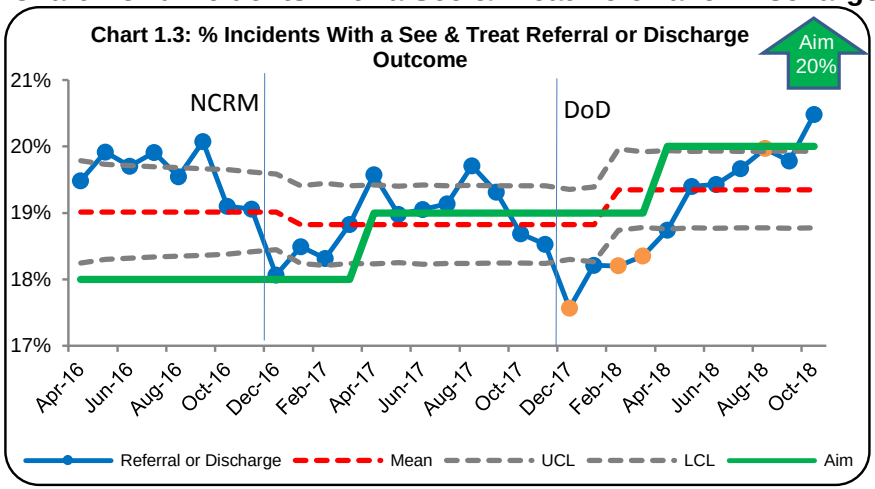
### Chart 1.1 % Incidents With a Referral or Discharge Outcome




### Chart 1.2 % Incidents With a Hear & Treat Referral or Discharge Outcome




### Chart 1.3 % Incidents With a See & Treat Referral or Discharge Outcome




NCRM = New clinical Response Model  DoD = Dispatch on disposition

**What is the data telling us** – For incidents with a referral or discharge outcome (Chart 1.1) the data demonstrates that performance stabilised following winter when special cause variation was observed. In October 33.86% of patients were managed at home or by an alternative to the Emergency Department.

For incidents with a Hear and Treat referral or discharge outcome (Chart 1.2) the data shows variation within normal limits between January and October. For 2018/19 the aim has been increased from 13% to 15%. In October 13.38% of patients received a Hear and Treat referral or discharge outcome, and although performance has decreased slightly since the winter pressures, performance is still higher than the period of stability seen in summer 2017.

For incidents with a See and Treat referral or discharge outcome (Chart 1.3), the October data of 20.48% exhibits special cause variation as it is outside the control lines. This is the highest data point seen since we began reporting in 2015 and exceeds our 20% aim. This is the sixth month with data points above the mean. Two more data points above the mean will represent a statistical shift.

**Why** – After the significant winter pressures, the Service has made sustainable improvements in transferring calls to NHS 24 for patients to receive the most appropriate care, as well as creating capacity for clinical advisors to provide clinical assessment by telephone.

Further work is currently underway to understand the recent decrease in the Clinical Services Desk Hear and Treat outcomes as no further system changes have been made in this period.

**What are we doing and by when** - Programmes of improvement and transformation are underway for both Hear and Treat and See and Treat outcomes through the Clinical Services Transformation (CST) programme in 2018/19.

A test of change targeting Specialist Paramedics to patients with low acuity illness and injury, that are likely to be able to be safely treated at home or in the community, has been underway since 17 July 2018. A second system change is planned for 14 November 2018 to increase the cohort of low acuity patients that Specialist Paramedics will be dispatched to within the green and yellow response categories.

We have recently recruited 15 new trainee Specialist Paramedic posts and 5 new trainee Advanced Practitioners (Urgent and Primary Care) who commenced in post in September and November 2018 respectively. A further round of recruitment for Specialist Paramedics is currently underway with the aim for an additional cohort to begin training in January 2019. These roles can offer a range of treatment and interventions directly to patients to support the provision of more comprehensive care at home in a safe and effective manner. As a Service we aim to enhance our support to access alternative care pathways that are integrated with local communities and the wider health and social care service. We believe that working and developing these enhanced roles will improve patient care and experience and ensure more efficient and effective clinical services. In addition over 70% of staff have now completed their learning in practice annual training which this year includes development in clinical decision making.

## Section 2 Clinical Services Transformation

1. **Out of Hospital Cardiac Arrest** - Lead a national programme for improvement for Out Of Hospital Cardiac Arrest

**Background –** Out Of Hospital Cardiac Arrest (OHCA) remains a significant healthcare challenge in Scotland. Approximately 3,000 patients undergo attempted resuscitation each year after OHCA. The survival rate in Scotland from this condition is approximately 8%, compared to the UK average of 9%, with some other European centres claiming to return almost a quarter of all OHCA victims home alive.

**Aim -** In response to this, the Service chaired a multi partner group hosted by Scottish Government to develop a national Out of Hospital Cardiac Arrest Strategy. Out of Hospital Cardiac Arrest - A Strategy for Scotland was published in 2015 and sets out the following high level aims:

- We aim to increase survival rates after OHCA by 10% across the country within five years. Reaching this level of performance would mean around 300 more lives being saved every year compared to recent years, with a 1,000 additional lives saved by 2020.
- We aim to equip an additional 500,000 people with CPR skills by 2020. Increasing the rate of bystander CPR is the cornerstone of improving outcomes because prompt bystander CPR can increase the likelihood of survival after OHCA by 2 or 3 times.

**Status** - A programme of work is underway across the following areas:

1. **Cardiac Arrest Registry:** Linking ambulance service data with other datasets to allow patient outcomes to be measured and system performance and Service changes to be monitored.

2. **Telephone CPR, telephone dispatch and PAD utilisation.** The Ambulance Control Centre (ACC) is the hub of the co-ordination of all the resources involved in the pre-hospital care of out of hospital cardiac arrests. ACC call handlers need to be effectively trained and supported and then reliably use the best triage tools available so that they can rapidly identify OHCA, initiate telephone Cardiopulmonary resuscitation (CPR) and task appropriate resources. ACC call handlers also need up to date and accurate information about available resources requiring the mapping of community first responders and defibrillators.

3. **High performance CPR, Feedback and Second-tier response**. Rapid deployment of responders with the appropriate skills to perform high quality resuscitation. Robust clinical governance and feedback systems to maintain skills, motivation and morale. The use of second-tier responding by Specialist Paramedics where appropriate.

4. **PAD programme, Bystander CPR, Community Engagement.** Concerted effort to increase bystander CPR rates by supporting and strengthening existing community assets. Engaging with partner organisations through a full partnership in the Save a Life for

Scotland (SALFS) initiative. Developing systems to ensure that best use is made of Public Access Defibrillators (PADs) including: governance for mapping and maintenance, encouraging servicing and maintenance in the community, ensuring PAD mapping is kept up to date, review of public information available about PADs.

5. **Co-responder model.** Working with partner organisations such as Police Scotland and the Scottish Fire and Rescue Service (SFRS) to optimise early response to OHCA by using community assets.

6. **Culture of Excellence.** It is essential that we emphasise through our internal communications to all staff that OHCA is potentially survivable and that we need to focus on continuous improvement of clinical performance and patient outcomes.

Through the above actions we are optimising our process to provide highly reliable care. We are embedding practice to ensure that SAS staff are supported through the challenging experiences they face. Communication and recognition of our improvement and achievements are being highlighted through national and international forums.

**Improvement** - Implementation of the Out of Hospital Cardiac Arrest programme will save more lives. We continue to perform above the 42% aim with 51.5% of VF/VT patients achieving return of spontaneous circulation in October. There are now 8 consecutive data points above the mean which demonstrates a statistical shift in improving the rate of ROSC and saving more lives.

Colleagues from across the Scottish Ambulance Service as well as those of our partner agencies, continue to work extremely hard to improve our response to, and management of, OHCA patients. With reference to our strategic aims, we are now 6 months into year 4 of the OHCA Strategy for Scotland. To date more than 300,000 members of the public have received bystander CPR awareness and Scotland continues to work towards being recognised as centre of excellence for OHCA outcomes.

**Planned activities** –

- Appoint Clinical Outcomes Analyst to develop the Cardiac Arrest Registry
- 3RU training in Dundee and Inverness. Development of a faculty strategy to enable sustainability and spread of 3RU.
- Continue to develop End of Life Care workstream in partnership with MacMillan Cancer Support Scotland
- Develop and agree strategic direction for co-responding with Scottish Fire and Rescue Service and Police Scotland
- Contribution to Resuscitation Academy Faculty and Laerdal RQI conference

**Other considerations -** There are a number of inter-dependencies with the Enabling Technology programme, particularly the Defibrillator Replacement project, and the New Clinical Response Model which are supporting identification of cardiac arrest patients earlier in the call cycle and dispatching three resources to provide the best pre-hospital care.

2. **Developing a Scottish Trauma Network – Implementation of Scottish Ambulance Service/Pre-hospital minimum requirements** - Support NHS Scotland to deliver a high quality major trauma service.

**Background** - Trauma remains the fourth leading cause of death in western countries and the leading cause of death for people under 40. Each year in Scotland, around 4000 people are seriously injured, with around 800-1000 cases being defined as 'major trauma'. The Scottish Trauma Network has been established to meet the needs of the population of Scotland. The Service is a crucial partner of the Trauma Network and responsible for ensuring patients are taken to the most appropriate facility for their injuries and receive quicker access to expert specialist care and intervention.

**Aim** - Improve triage and response to major trauma patients, thereby saving more lives and improving outcomes.

**Status** - We have undertaken a number of projects funded through the Scottish Trauma Network. These include the implementation of the Trauma Desk, piloting the use of Advanced Practitioners working closely with Major Trauma Centres and implementation of a Major Trauma Triage Tool for use by ambulance crews to support decision making on where a patient should go depending on the severity of their injuries.

**Improvement -** The trauma desk in the Ambulance Control Centre is fully operational and has improved the identification of major trauma patients and pre-hospital critical care team tasking (data published, Sinclair et al, Injury, 2018). Enhanced trauma equipment has been rolled out to all front line crews. We have provided all our operational staff with ATMIST aide memoire cards to record information and support standardisation of the format in which clinical reports are passed to Trauma desk and hospitals within the trauma network. The Major Trauma Triage Tool is embedded within the ePR and being used to support the North of Scotland Trauma Network which went live on 1 October 2018. We have successfully recruited to 6 new Advanced Practitioners in Critical Care to the South East Trauma Region, with the intention of further improving outcomes for patients requiring critical care.

**Planned activities -**

- Continue roll out of Adult Trauma Triage Tool in the East Trauma Region ahead of go-live in November 2018.
- Recruitment of Project Manager (interviews scheduled 26 November) to support planning for North ScotSTAR hub to go live in April 2019. Commence recruitment of Consultant team.
- Induction for the 6 new Trainee Advanced Practitioners (Critical Care) in the South East Trauma Region who commenced in post on 5 November.

**Other considerations** - We are working closely with the four trauma regions and national co-ordinating team to ensure we provide high quality pre-hospital care for trauma patients. This can be challenging to provide a consistent service approach that meets the needs of all regions.

**3. New Clinical Response Model** - Invest in technology and advanced clinical skills to deliver the change.

**Background -** Following a review of nearly 500,000 patient records, a New Clinical Response Model (NCRM) pilot programme was introduced in November 2016. The model focuses on improving patient outcomes, rather than simply measuring the time it takes to respond. Resources are now allocated on confirmation of the severity of the incident, rather than the location of the incident. The model allows us to respond faster to more patients with time-critical, immediately life-threatening conditions, such as cardiac arrest. It also supports our call handlers to better understand our patients' health needs in less urgent cases, so that our dispatchers can more effectively send the right resource first time for patients.

**Aim –**

- More accurately identify patients with immediately life threatening symptoms to ensure the most rapid dispatch of resource, resulting in more lives saved
- Safely and more effectively identify and send the right resource first time for patients, for example dispatching a conveying resource first time to chest pain and stroke patients, resulting in better overall clinical outcomes

**Status -** Phase 1 and 2 of the project are complete. 'Dispatch on disposition' was introduced in October 2017, and subsequently two Pre-Entry Questions were introduced to identify critically ill patients as early as possible. The project is now in phase 3 and 'key phrases' was successfully implemented in April 2018 to further improve identification of critically ill patients earlier in the call cycle.

**Improvement -** We have more accurately identified patients with immediately life threatening symptoms, with a number of patient groups being re-triaged to the highest priority purple response category based on the high probability that resuscitation will be required. We have also improved identification of critically ill or injured patients as early as possible in the call cycle in order to dispatch a resource as quickly as possible by introduction of two pre-entry questions and a list of 'key phrases'.

The new clinical response model supports the dispatch of multiple responses to patients in the highest priority purple response category; the closest resource will be dispatched as well as ensuring the response includes a double crewed emergency ambulance to ensure an effective resuscitation team ('triple response') and if required the ability to transport to hospital. Over the pilot period we have seen an almost 100% increase in patients receiving a multi-resource/clinician response in our highest priority response category, providing a greater chance of survival.

The response model focuses on improving patient outcomes rather than simply measuring the time it takes to respond. We have demonstrated that response times have been maintained to our most acutely unwell patients who require a time-critical response. However, for the majority of patients requiring an emergency response the most important factor in effective care is the ability to target clinical skills to provide treatment and/or refer the patient to the most appropriate care provide for further assessment and treatment – providing the right response first time. While there has been a slight increase in response times to patients that are less acutely unwell, there has been no

increase in clinical deterioration of these patients and the outcomes for these patients have remained stable.

Over the course of the pilot we have consistently identified patients within our amber response category who have a low identified need for resuscitation but a defined and identified need for specific acute pathway care, for example ST Elevation Myocardial Infarction (STEMI) and hyper acute strokes. These patients still require an emergency response and are likely to be transported to the Emergency Department, therefore a response with an emergency ambulance that can transport the patient to hospital is crucial. Over the first year of the NCRM pilot this was achieved for more than 90% of our patients, providing the right response first time.

**Planned activities:-**

- We will continue to develop the Healthcare Professional (HCP) call process so patients receive a response based on their clinical need. Currently calls from Healthcare Professionals are unscripted and taken by non-clinical call handlers. We have developed a systems based protocol for call handlers and a consistent approach for Healthcare Professionals to arrange the most appropriate level of response which will be implemented in early 2019. Ongoing communications with HCPs is planned.
- Embed additional Specialist dispatch prompts in November, and develop improved dispatch processes including through the alternative response desk
- Update system to MPDS v13.1 on 14 November.
- Publication of the comprehensive internal evaluation of NCRM and the commissioned external review by the University of Stirling following feedback from Scottish Government.

**Other considerations** – NCRM underpins most of our service transformation work. To ensure further development of the model it is essential we have alternative pathways available that we can refer for the most appropriate treatment and advice. This includes availability of Specialist Paramedics and Advanced Practitioners in urgent and primary care that can provide more care at home.

4. **Hear and Treat** - Enhance our telephone triage and ability to See and Treat more patients at home through the provision of senior clinical decision support.

**Background** - The Service's strategy aims to enhance the number of patients that can be safely and appropriately dealt with by using alternate treatment pathways as an alternative to a traditional ambulance response.

Hear and Treat is defined by the Service as: The number and proportion of emergency incidents that have been resolved by providing advice over the phone, where no physical response arrives at scene.

**Aim** - To redesign the Service Control Centres Clinical Advisor Hear and Treat outcomes to improve patient experience through effective clinical triage with the view to discharging patients to an alternative care pathway or self-care advice.

**Status –** The Clinical Hub has been strengthened with additional Clinical Advisors – in November we will have 29.5wte Clinical Advisors against a budget of 30wte. A measurement framework has been developed to support improvement. Discussions continue with NHS 24 to increase the number of calls that are transferred as part of business as usual, building on the work undertaken during the winter months. It has been agreed with NHS 24 to establish a project group to take forward a number of joint activities aiming to improve the continuity of care provided to patients by phone whether they call 111 or 999.

**Improvement -** An increase in calls transferred to NHS 24 results in patients with low acuity conditions receiving access to the service they require in a more timely manner, resulting in better clinical outcomes and patient experience. System changes which allow Clinical Advisors to refer to Specialist Paramedics and Advanced Practitioners in urgent and primary care will also provide better clinical outcomes and patient experience.

**Planned activities:-**

- Increase the transfer of triaged eligible 999 calls to NHS 24 which will support patients to access the service they need in a timely manner. This is being progressed through the current proposal building on the process implemented during the winter months with an anticipated increase of 0.8% Hear and Treat (around 12 calls a day).
- Formalise winter plans and refinement of the Clinical Services Desk queue.
- Development of the joint NHS 24/SAS project group.

**Other considerations -** We already work closely with NHS 24 and this will increase over 2018/19 as we seek to create a seamless experience for patients whether they dial 111 or 999, and provide access to the service they need in a timely manner.

5. **Specialist and Advanced Practitioners in Urgent and Primary Care** – Develop our education model to provide more comprehensive care at point of contact, and enhance our ability to See and Treat more patients at home through the provision of senior clinical decision support.

**Background -** Towards 2020: Taking Care to the Patient clearly sets out our aims to transform our clinical model to ensure the right resource gets to the right patient at the right time. This has resulted in the development of our out of hospital clinical service where our clinicians are providing more comprehensive care at home, and supporting access to alternative care pathways that are integrated with communities and the wider health and social care service.

We have developed new roles of Specialist Paramedics and Advanced Practitioners in urgent and primary care with an advanced scope of practice to be able to treat more people at home or in a homely setting.

**Aim** - Our aim by December 2020 is that our Specialist and Advanced Practitioners in urgent and primary care are able to work as a key component of integrated multidisciplinary teams within a rotational model across health and care settings as autonomous practitioners and support care in a home or homely setting.

**Status** - We have approximately 90 Specialist Paramedics in urgent and emergency care. One third of them work in primary care multidisciplinary teams within out of hour's services and GP practices across the country. We have successfully recruited 15 additional Specialist Paramedics and 5 new Advanced Practitioners (Urgent and Primary Care) who commenced in post in September and November 2018 respectively, with a further round of recruitment for Specialist Paramedics underway to begin training in January 2019.

**Improvement** - As well as effectively managing the increasing urgent demand from 999 calls, Specialist Paramedics and Advanced Practitioners in urgent and primary care can play an important role in the Primary Care in hour's multi-disciplinary team. The pilot underway in Inverclyde has indicated 230,000 hours of GP time could be saved if the model was adopted nationally, 65% of home visits are suitable for Specialist Paramedics and Advanced Practitioners. This represents improved clinical outcomes and patient experience, as well as a potential financial benefit of up to around £56 million per year.

**Planned activities:-**

- Completion of medicines usage review.
- Continue to improve dispatch of Specialist Paramedics to patients with low acuity illness and injury that are likely to be able to be safely treated at home or in the community. An initial test has been in place since 17 July for a subset of patients within the yellow and green response categories. Dispatch prompts for an additional subset of patients will be added to the system in November 2018.
- The joint test of change with NHS24 in primary care in Musselburgh will go live in January 2019.
- 4 Advanced Practitioners will commence the Non-Medical Prescribing course in February 2019.
- Further guidelines governance will be developed and agreed for Specialist Paramedics and Advanced Practitioners in Urgent and Primary Care.

**Other considerations -** Specialist Paramedics and Advanced Practitioners in urgent and primary care are crucial to achieve further development through the New Clinical Response Model, so that patients with lower acuity needs are provided with the right response and are treated at home where safe and appropriate to do so.

6. **Scheduled Care Service** - We continue to develop our scheduled care service in partnership, supporting outpatient services and effective discharge and transfer to improve patient flow, and deliver a better experience for patients.

**Background** - Transformation in health and social care delivery across Scotland aims to reform Scheduled Care by supporting patients to attend the most appropriate centre of care or return home from care centres. The Service plays a fundamental role to achieving improved patient flow and experience. During 2017/18, a wide range of tests of change have provided clear direction in how we respond to requests on the day of travel for urgent admissions to acute hospital sites and urgent transfers between acute hospital sites. Some patients may require a quick response to get to definitive care without necessarily requiring any clinical intervention en route. Therefore, a proportion of these requests could safely be undertaken by the Scheduled Care Service.

**Aim** - Provide an agile and responsive scheduled care service that makes best use of resources and provides improved patient care and experience.

**Status** - Work is continuing to review the use of PTS and Low Acuity resources to handle same day requests for admission. A short life Focus Group, led by a Clinical Governance Manager, has reviewed the process including the scope of practice of PTS staff and its match to the patient profile.

Another group, chaired by the ACC Head of Operational Delivery is reviewing the ACC aspects of the process including how patients are identified as suitable for PTS and how the calls are received and allocated by Control.

Work has also been done to measure the volume of calls deemed suitable for PTS and the proportion of this demand actually handled by such resources. This has revealed wide variation in how the process is used and how productive Low Acuity resources are in different areas. This has highlighted the need to identify the reasons for this variation and take steps to promote best practice and increase utilisation. This will remove some of this workload from A&E crews, reducing lengthy delays on non-ILT emergency calls, improve compliance with rest breaks and reduce the number of shift over-runs, thus improving both staff and patient experience.

**Improvement** - An improved scheduled care service will provide better patient flow across acute hospital sites, support reduced hospital bed days and provide an improved patient experience.

**Planned activities:-**

- Further testing of PTS 24 hour cover in Lothian.

- Continue testing the use of a Patient Needs Assessment matrix system to determine the quality of information passed from GPs at booking - this has already identified the requirement to enhance the GPs knowledge and comprehension of the SAS skill set and resource type.
- Continue to identify the high number of patients that do not require the assistance of A&E resources
- Agree a work plan to take forward the recommendations of the PTS/Low Acuity review.

## 7. Clinical Data Set Development

**Background -** All UK ambulance services have traditional performance measures predominantly based on time based response. This approach has limitations as it does not reflect the clinical abilities of the modern ambulance clinician workforce or provide a framework for the measurement of best clinical practice across the entire patient pathway. There is now a need and opportunity to re-design this measurement framework and shift the culture from historic time targets to optimal patient care.

**Aim -** To re-design how the Service uses clinical and operational data to allow for the measurement of clinical effectiveness across the entire patient pathway of different clinical acuities.

**Status**

- Clinical Data Group formed and has met three times.
- Development of clinical data sets aligned to key areas of practice and strategy – in final testing.
- Electronic Patient Report completion quality framework in final testing.

**Improvement –** this will allow us to understand the quality of care we provide to patients, alongside the time it takes us to respond. It will also support feedback to frontline staff on the care they provided and any areas where improvements could be made.

**Planned Activities -** Development of a national clinical effectiveness implementation plan. A key element of measurement of clinical practice is to have the ability to feedback areas of success and areas of improvement. At present there is an opportunity to develop the Service's systems so this could be delivered, identifying resource and structures to take ownership of this information.

## Section 3 Enabling Technology

### 1. Ambulance Telehealth Programme

**Aim** – The aim of the Ambulance Telehealth Programme is to replace and enhance the cab-based technology in the unscheduled care (emergency) ambulance fleet. The programme is being delivered over two overlapping phases and will be complete during Q1 2019.

**Status** - **Ambulance Telehealth Phase 1 (Hardware Replacement) –** Completed – New tablets, communications hubs and printers were installed throughout the unscheduled care ambulance fleet (approx. 525 vehicles) during 2016.

**Ambulance Telehealth Phase 2 (Electronic Patient Record & Supporting Software)** - Phase 2 involves the procurement and design of a new electronic patient report (ePR) application and other supporting software including a new SAS app. The roll out of the new ePR was completed in December 2017. The Enabling Technology Programme Board approved the formal closure of the (ePR) Project following submission of a comprehensive End of Project Report. A SAS 'app' pilot has completed at Coatbridge Station with positive results. An issue relating to the network connectivity has been resolved and the Virtual Private Network (VPN) connectivity that is required before app rollout has now been made available across the emergency fleet. End-to-end testing highlighted fundamental issues with the Content Management System (which updates the app), this has now been resolved following re-development by the supplier. The pilot deployment is now underway in Fife. At the time of writing, the intention is to start the fleet-wide roll out by the middle of November and to have it completed by the end of the year. The Programme Team are planning to formally close the Telehealth Programme during Q1 2019.

**Improvement** - Improved ease of use, additional functionality, increased clinical data collection and data quality, ready access to additional relevant information, increased productivity, improved patient care and experience. Ease of use is being measured through surveying users before and after the new tablets and ePR are rolled out. Data collection quantity and quality is being measured through a combination of automated and manual ePR database analysis. Feedback has been received to advise there has been an increase in reporting of PVC bundles and pre-hospital stroke compliance.

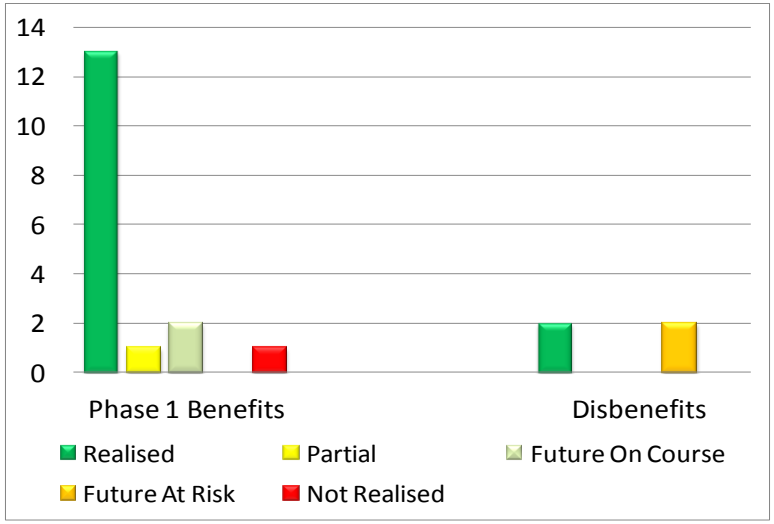
**Planned Activities** - Complete the SAS app development work and roll out during Q4 2018 and then formally close the Programme.

**Other Considerations** - Work continues with colleagues from the Clinical Services Transformation Programme (and others) to further develop the content for the new SAS app and to develop the care pathways required to take full advantage of the new capabilities delivered through the Telehealth Programme. Ubiquitous access to mobile broadband data (as will be delivered by the Emergency Service Network Programme) will be a key enabler for maximising the benefits derived from the Ambulance Telehealth Programme.

**Benefit Realisation / Return on Investment** - Delivery of the expected benefits from the Ambulance Telehealth Programme is overseen by the Enabling Technology Programme Board. Benefits include lower like for like costs, improved electronic Patient Record completion

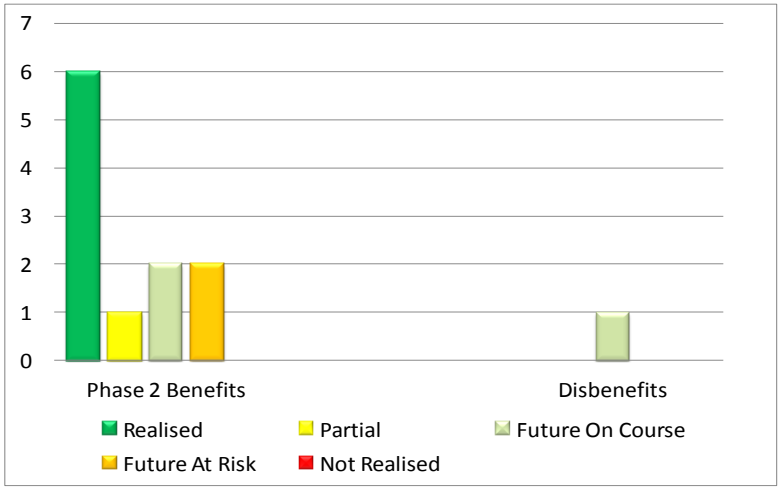
rates and data quality. A comprehensive benefits realisation plan is in place and the delivery of key benefits is being actively progressed by the Programme Business Change Manager. The one benefit that is listed as 'Not Realised' during Phase 1 relates to the interim ePR which was implemented on the new hardware while a completely new ePR was being developed. It was anticipated that the interim ePR would deliver a benefit in terms of the user interface and ease of use. Feedback from staff was less positive than anticipated so this benefit was formally recorded as not realised. The interim ePR has now been replaced by the new ePR.

**Ambulance Telehealth Phase 1 benefits**




1

**Ambulance Telehealth Phase 2 (ePR) benefits**

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## 2. Emergency Service Network Programme

**Background** - Radio and Short Data Communications are provided to the Service, and all other GB Emergency Services through the Airwave network. The original Airwave contracts were due to expire on a phased basis from 2016 to 2020; however, a National Shutdown Date of 31 December 2019 was negotiated for all Airwave customers. The UK Government established the Emergency Service Mobile Communications Programme (ESMCP) in 2011 to identify a replacement for Airwave. The programme will deliver a voice and broadband data network that will be known as the Emergency Services Network (ESN). The main ESMCP contracts were awarded in 2015. The Service was due to transition to the ESN from late 2018 through to late 2019 but this timescale has slipped due to wider ESMCP slippage.

**Aim** - The Emergency Service Network Programme aims to deliver a mobile communications capability that will, as a minimum, match Airwave in terms of functionality, availability and geographic coverage. It also aims to provide a very significantly enhanced mobile

broadband capability.

**Status** – Following a change of ESMCP Programme Director a review by senior UK government civil servants and their specialist advisors and a subsequent programme 'reset', the programme is now being progressed based on an incremental approach whereby new services and capabilities are implemented as they become available. Programme delivery will use a 'product based' approach, these 'products' include 'ESN Assure' which will be used for coverage testing and other testing, 'ESN Direct' which will be a mobile data offering and 'ESN Prime' which will be a full ESN service capable of replacing Airwave. The latest timeline is based on the aforementioned product based incremental approach, it shows that full ESN adoption will take place in Scotland during 2022 with various 'products' being made available before this.

The ESMCP Team had planned to submit the revised FBC for HM Treasury approval during September 2018, however the latest information received suggests that approval for the FBC will slip into Q1 2019. The Scottish Government will seek FBC 'assurance' from the Service and the other Scottish emergency services in Q4 2018 and an FBC Assurance Group has been set up to facilitate this. The very high level summary is that SG and the three Scottish emergency services (3ESS) have significant concerns about the affordability, the assumptions made in the FBC, meeting all user requirements and the robustness of the decision making to arrive at the preferred option (i.e. incremental ESN delivery). A Scottish Finance Sub-Group has also been established with representation from SG and 3ESS. The potential financial pressures presented by ESMCP have been acknowledged by SG but no firm funding decisions have been made. It is now clear that, due to ESMCP slippage, Airwave contract extensions will be longer than first thought. The ESMCP Team are leading on negotiations with Motorola (Airwave owners) on behalf of the UK Government to extend the contract for the overall Airwave network and are looking at an extension to the end of 2022 with an additional 12 months contingency built in. Heads of Terms have also been agreed with the key ESN suppliers (EE and Motorola) to define a new way forward based on revised timescales and the incremental approach to delivery. These Heads of Terms will be converted to a formal Change Advisory Notice on approval of the FBC. It is expected that the 12-month notice period for extending the Airwave service will be reduced to 9 months (so notice will be required by 31st March 2019 and not 31st December 2018) due to the requirement to have the ESMCP FBC approved before a commitment can be made to extend Airwave.

Local discussions have started with Airwave regarding extensions relating to the Integrated Communications Control System (ICCS) as well as hand-held and mobile Airwave terminals etc. Initial discussions suggest there may be scope to use the current ICCS for a further 6 or 12 months beyond December 2019 with little or no capital investment. However, using the current ICCS beyond this time is likely to require costly hardware and software upgrades. The situation is similar with Airwave terminals with feedback from Airwave to date suggesting that extending the use of the current terminals for a full three years may not be viable. Discussions with Motorola continue, however until there is more certainty regarding ICCS & terminal extensions significant financial, technical & operational risks remain. From an ICCS perspective, work is ongoing to manage and mitigate the risks, the Service Board approved the ICCS Replacement Business Case in October 2018 and the Scottish Government has agreed to fund the capital costs. The revenue costs are being discussed with SG in order to mitigate any risk of significant cost pressures. The Service is now taking forward discussions with the Ambulance Radio Programme (ARP), who manage the solution and have contracted Frequentis to deliver the ICCS software, in order to finalise a Memorandum of Understanding which will trigger SAS' status as a user organisation in the Frequentis contract.

ESMCP are investigating the viability of utilising the EE 4G network to provide air to ground (A2G) coverage in GB. The Service is liaising with ESMCP to enable Gama to run test flights in Scotland to gather data to assess if this approach is viable. This will be enacted through a change in the Service contract with Gama but will come at no cost to the Service.

The strategic risks relating to ESMCP are increasing as senior government level scrutiny increases and timescales slip. This includes financial, commercial, operational and technical risks. The situation is exacerbated by the turnover of senior SG staff leading in this area, it has just been announced that the current strategic lead (who is the fourth SG Senior Responsible Owner so far) and 'operational' lead are moving to new roles. The lack of continuity is not ideal at this critical time when the FBC is undergoing approvals. From a Service perspective, these risks are being managed through the Scottish Government (SG) Strategic Group, the 2020 Steering Group and the Enabling Technology Board.

**Improvement** - Reduced like for like costs (although this is now at risk), ubiquitous access to mobile broadband data to support the effective and efficient delivery of clinical services out with the hospital environment. Improvements will be measured through *'before and after'* data analysis and through the use of user surveys.

**Planned Activities** – Continued review of ESMCP FBC and input into the FBC and Finance assurance groups. Collaboration and liaison with Police Scotland, Scottish Fire & Rescue, the Scottish Government and the ESMCP Programme Team regarding ESN transition planning. Communication and collaboration with the Ambulance Radio Programme Team regarding ICCS replacement. Engagement with Motorola regarding ICCS & terminal extensions.

**Other Considerations** - It is worthy of note that the delivery of the internal ESN Programme relies on the corresponding delivery of the risky and highly complex GB-wide Emergency Service Mobile Communications Programme.

### 3. Fleet Projects

**Background** - The Enabling Technology Programme is providing governance for a number of Fleet related projects. This is principally the Vehicle Replacement Project but also includes the upgrading of the server infrastructure under the Fleet Management System Replacement Project. The Vehicle Telematics Project is 'on-hold' due to a lack of sponsor and uncertainty around the likelihood of benefits being realised.

**Aim –** The Vehicle Replacement Project aims to manage the annual fleet replacement activities in line with the approved Fleet Replacement Business Case. It also aims to take advantage of technology to improve the operation and management of the Service fleet.

**Status** - The 2018/19 fleet replacement programme is managed by the Fleet Department, it is well underway and is progressing to

plan. There have been a number of challenging external factors e.g. the supplier T.O.M. has gone into administration and Brexit related risks, however the Fleet team have managed them appropriately. In terms of the Fleet Management System Replacement Project, the Enabling Technology Board agreed to scale back the project scope with the current system being retained albeit with an upgraded server platform. This upgrade work has now been completed. From an Enabling Technology Programme perspective, the Telematics Project has been placed 'on-hold' until a viable 'business case' is established and funding has been identified.

**Improvement** - Reduced running costs, improved reliability and vehicle availability, improved vehicle specifications, improved management information. Improvements will be measured through 'before and after' data analysis and through the use of user surveys.

**Planned Activities** – From an Enabling Technology perspective the main activities in relation to the fleet projects are project management support and benefits realisation. Initial discussions around production of the next Fleet Business Case will also be undertaken.

**Other Considerations –** There are a number of inter-dependencies between the Fleet Projects and other Service Programmes e.g. Clinical Service Transformation, Defibrillator Replacement Project and the ESN Programme.

**4. Defibrillator Replacement**

**Background –** The current Philips MRX defibrillators are at the end of their serviceable life. A Project is now underway to replace them with new Advanced Life Support (ALS) monitor/defibrillator units. The aim being to improve patient care and staff experience.

**Aim –** The objective of the Defibrillator Replacement Project is to manage and deliver the replacement of defibrillators used by Scottish Ambulance Service clinicians. The aims being to improve patient care through innovation and clinical transformation, enable the delivery of the Out-Of-Hospital Cardiac Arrest Strategy for Scotland (2015) and to deliver better care to patients wherever they may be.

**Status** – The Full Business Case (FBC) was approved by the Service Board in September and by the Scottish Government Capital Investment Group (CIG) in October. The procurement process is nearing completion. A preferred bidder has been identified and notified. We are now in the standstill period, the period has been extended due to concerns raised by the unsuccessful bidder. A face-face debrief session was held with the unsuccessful bidder on 7th November. If there are no legal proceedings the stand-still period will end on 19th November and the contract award finalised on 20th November. The delay in contract award has had negligible direct impact on the project implementation plan so far, the exact roll-out dates have still to be agreed but it will take place over summer / autumn 2019.

**Improvement** – Implementation of new defibrillators will deliver various benefits including enhanced clinical care for patients and improved staff experience through full integration with the new ePR.

**Planned Activities** – Finalise contract award. Implementation kick-off activities. Roll out plan development.

**Other Considerations –** There are a number of inter dependencies between the Fleet Projects and other Service Programmes e.g. Clinical Service Transformation, Defibrillator Replacement Project and the ESN Programme.

## 5. Enabling Technology – Other Projects

The scope of the Enabling Technology Programme currently extends beyond the programmes and projects already covered in this section. It also includes a number of projects related to the delivery of the Service eHealth Strategy, Cyber Resilience and renewing or re-procuring a number of key ICT related contracts. For example, work to develop an Initial Agreement for a new in-vehicle Patient Transport System is now commencing. Further details regarding these additional projects and initiatives are available via the Enabling Technology Programme Team as required.

## Section 4 Workforce Development

### 1. Employee Resourcing

**Aim** – To recruit and retain staff to ensure the Service has the necessary skills to deliver its 2020 workforce profile and improve staff experience.

**Status** – Implementation/Planning - progressing with 2018/19 intake plans and developing 2019/20 plans based on continuing strategic direction of travel.

**Improvement** – We have sustainable Ambulance Care Assistant and Technician recruitment pipelines given high levels of interest in joining the Service. Our continuing challenge is ensuring the translation rate of staff progressing on to Paramedic training (and to Specialist/Advanced Paramedic roles). We have reviewed recent success in increasing Paramedic training numbers and have developed plans to maximise our next intakes. We continue to monitor turnover at individual skill set level to ensure workforce forecast numbers do not require additional adjustment.

**Planned Activities Include** –Work continues on delivering the targets within our resourcing plan which include an additional 75 Ambulance Care Assistants, 160 Technicians, 200 Paramedics (including 51 Specialist and 12 Advanced Paramedics).Paramedic intakes commenced in July with a further September and October group. The Workforce Development Group has been monitoring the position to consider the best options for maximising recruitment, following the earlier decision to shift the balance to recruiting a Trainee Paramedic intake in September. Our combined Paramedic training and direct recruitment numbers is now 150 with a second undergraduate programme intake of 55 students in September. We have a pipeline of Technician-Paramedic applicants which we will allocate to our 2019/20 and increase this number through a new early 2019 internal recruitment campaign. In the meantime we will continue to increase our direct qualified paramedic recruitment numbers. Workforce re-modelling (incorporating Clinical Response Model developments and Demand & Capacity Review) will inform any further adjustments for this and future year targets.

**Other Considerations** –The development of the employee resourcing model continues to mitigate the risk associated with maintaining high volume Paramedic recruitment and training required as part of our strategy. This work aims to support continuing target delivery over the next three years as we prepare for changes to the Educational Model to align with the introduction of degree level HCPC registration requirements in 2021. This will build on the external pipeline which was expanded last year with commencement of the first full time degree programme in Scotland (first graduates in 2020).

**Benefit Realisation/Return on Investment** – Ensuring the Service has the right mix of skill and resources will enable it to effectively contribute in an integrated health and social care system.

## 2. Employee Development

The Scope of Practice framework has been developed which defines how all of the Service's frontline roles will operate to support our 2020 Strategy. This framework continues to evolve to align with transformational organisational change. From an initial focus on the development and deployment of the Specialist Paramedic role in Urgent & Emergency Care, planning for 2018/19 will review needs across all areas, incorporating the development of advanced paramedic practice, reflecting re-banding implications and incorporating major trauma, national operations (Ambulance Control Centres, National Risk & Resilience Department, ScotSTAR and Air Ambulance) and support/corporate functions.

**Aim** - To identify the employee development requirements arising from workforce modelling which will underpin the delivery of our Workforce Plan and ensure we have developed a workforce capable of delivering our strategic aims.

**Status** – Planning (review of work to date and response to workforce re-modelling activity).

**Improvement** – Career Framework underpins and directs staff advancement with the Learning & Development policy and underpinning processes approved and adopted to ensure there is a framework for the identification and prioritisation of resources to support our 2020 strategy. Educational Governance improvements are being led by the Capable Workforce Group (reporting to the Workforce Development Steering Group), which aims to bring key stakeholders together to take and organisational view of our dispersed training delivery model and advise on improvements to the identification, delivery and reporting on key development priorities.

**Planned Activities Include** – Modelling activity to inform employee development requirements is a current priority. Learning & Development infrastructure development is focusing on both the development of processes connecting personal development planning and access to learning delivery, and on the development of supporting IT systems for development activity recording and supporting online learning access. The career framework model will evolve to align and incorporate pathways for all clinical, operational and management requirements.

The roll out of Turas Appraisal continues after its launch on 2nd April 2018 as replacement for the eKSF system. We are still awaiting the next national functionality update to allow the reporting of present organisational activity levels. However, we are now receiving data downloads which will support some reporting capability and will be reported back through our educational governance channels. The Turas Appraisal system supports the recording of Executive Performance Management and the system has recently been updated to support mid-year review functionality as part of the 2018/19 objective setting cycle. This is one element of Project Lift, the new national level Executive level talent management and succession planning framework, which launched at the end of May 2018. Engagement in the roll out of Project Lift has been undertaken at Executive and Senior Leadership Team level. Initial Board level information has just been released to inform our leadership talent management activity. At the service level we are completing a leadership development needs assessment and progression of national board collaborative activity aligned to national NHS Scotland Leadership Framework will. Agreement of key metrics to measure progression will support these changes.

**Other Considerations** – The Clinical Service Transformation (CST) programme leads on developing advanced practice within the Service, and close working arrangements between Clinical Services Transformation and Workforce Development are required and in place to manage interdependencies.

**Benefit Realisation/Return on Investment** – To support the delivery of the Service's See and Treat and Hear and Treat targets, with greater integration of health and social care, managing patient care at home, supporting anticipatory care planning for patients with long-term conditions, prescribing and referring directly to clinical services. This work will also ensure that support function needs are incorporated into our development planning, ensuring that priority development needs are identified and supported.