- COVID hospital admissions correlated with suspected COVID patients attended by SAS
- COVID cases in the community correlated with COVID abstractions of SAS staff

55. This information, along with our own intelligence and assumptions enabled the SAS to model the impact of different scenarios of Covid-19 waves and easing of lockdown measures. These models were reviewed on a weekly basis to ensure that current assumptions and scenarios were up to date. In terms of the information the SAS provided, we provided a daily data extract of suspected Covid-19 patients and other SAS Accident and Emergency demand to Public Health Scotland to assist with their intelligence gathering. Furthermore, in relation to Accident and Emergency Services, the modelling, coupled with the patient escalation and triage measures that were introduced, allowed the Service to flex continually in relation to demand. Details in how we flexed services in relation to demand is explained in the section relating to the Resource Escalatory Action Plan (REAP Plan) in paragraph 64 below.

56. There were regular meetings with Scottish Government across all service functions including Chief Executives, Medical Directors, Workforce Directors and Finance Directors which ultimately fed back into the Scottish Government Resilience Room and the Scottish Government. Matters discussed at these meetings included clinical practice, clinical guidelines, PPE, funding and system wide challenges. Daily reports were provided relating to the provision of PPE, number of staff fitted with Filtering Face Piece Level 3 (FFP3) masks, availability of resources, system wide challenges and vaccination numbers.

57. During the initial phases of the pandemic, it felt as if there was a significant amount of duplication both in terms of meeting attendance and information supplied. Perhaps unsurprisingly given the nature of the pandemic, the primary form of information coming back to the Service was from public health colleagues.

Financial Governance

58. Under Section 15 of the Public Finance and Accountability (Scotland) Act, 2000, The Principal Accountable Officer (PAO) of the Scottish Government appoints the Chief Executive as the Accountable Officer of the SAS Board. This designation carries with it a responsibility for:

protocols for the transfer of patients from islands who were higher acuity confirmed cases of Covid-19. Early discussions were also progressed with partner agencies, including the development of a Memorandum of Understanding between Scottish Fire & Rescue Service (SFRS) and the SAS for assistance with the transportation of patients during the pandemic and this was signed off by the respective Chief Officers in May 2020. Concurrent discussions commenced with the Military regarding potential requests for Military Assistance to Civil Authorities (MACA), in respect of both air transportation and provision of driving support.

67. With respect to air transport, at the beginning of the pandemic, infection control concerns regarding the movement of Covid-19 patients in the SAS King Air (fixed wing aircraft) were identified. As a result, in collaboration with Scottish Government and Gama Aviation (the incumbent air ambulance provider), a contract was implemented with Logan Air to utilise one of their aircraft for 16 hours per day to support the transfer of Covid-19 patients using their Saab340 aircraft. This agreement started in May 2020 and concluded in June 2021.

Initial Impact on Resources

68. At the outset and throughout the pandemic, weekly demand and capacity forecasting models were produced for both our 999 and Patient Transport Services. The 999 models were used to forecast expected scenarios for demand for Covid-19 and non-Covid-19 related incidents and staffing capacity taking account of forecast absence levels. The models were used to identify any projected gaps in staffing levels and areas of priority which in turn, were used to inform where to deploy the use of additional overtime, bank and supplementary staffing such as the Military.

69. Due to the national lockdowns and the requirement for staff and the public to isolate, the number of front-line staff hours in the SAS emergency and urgent care services remained steady throughout the initial period of the pandemic. This was due to a reduction in sickness absence which largely mitigated the impact of Covid-19 related absence. In early summer 2021 coverage of shifts became more challenging due to the compounding effect of a return to pre-pandemic sickness absence levels while Covid-19 absence remained. This coincided with an increase in demand and wider system pressures across Scotland, for example increased hospital turnaround times. Throughout Covid the Service used various levels of escalation to ensure that despite

high levels of staff absence, high levels of demand, and increasing wider system pressures, it prioritised the resources it could generate to the sickest patients. And so, although it would be correct to say that there were no occasions where there were insufficient staff to meet demands on the Service that was only due to the levels of escalation that were put in place to prioritise demand and the additional support received from the Military, Scottish Fire and Rescue, and British Red Cross. It was also not without risk to lower acuity patients.

70. The Patient Transport Service models for forecasting demand and capacity were used in a similar manner. In some cases, the reduction in demand on Patient Transport Services enabled the release of staff to support delivery of 999 services.

71. Throughout these periods of increased pressure, staff would be allocated to the areas of most need or priority. Each region of the SAS (West, East and North) developed a mobilisation plan based on their anticipated staff abstractions. Within the mobilisation plan, they identified any requirements for mutual aid including the potential for Military support. Following the identification of expected gaps in provision, local management teams, through established management cells and the resource planning teams, would communicate available shifts with existing staff and bank staff. Where available, the Military, SFRS and occasionally British Red Cross were also allocated shifts. For Military and SFRS, training was put in place as part of an induction package. This training included a driving assessment along with basic life support and manual handling, so that they could support the clinician in the vehicle. The training also included face fit testing, doffing and donning PPE, and Infection, Protection and Control (IPC). There was no additional training delivered by the Service for British Red Cross, but we did support them with PPE.

72. The Strategic Cell was the ultimate repository for the gathering of this information which was collated and fed into the Executive Leadership Team. Whist there was engagement on a UK basis with other ambulance services through the National Ambulance Resilience Unit it was evident there was limited capacity for the provision of mutual aid should this be required, due to the universal impact on service capacity created by the pandemic.

73. One area which offered a potential pool of additional resource was private ambulance providers. Recognising the potential impact on service demand, the SAS undertook a

voluntary review of private providers that indicated they would be willing to support the NHS if required. This review was conducted by a senior manager and primarily based upon the Care Quality Commission (CQC) Standards as laid down in England.

74. However, Scotland does not have a legislative framework in place for the regulation of private ambulance providers. Consequently, there is no formal agreed governance mechanism by which NHS Scotland Health Boards, the SAS included, can be assured of the standards that private ambulance providers meet. This includes not only clinical standards, but also matters relating to financial probity, vetting and clearance of their employees.

75. The SAS therefore does not ordinarily contract the services of private providers. There were limited circumstances in which third sector organisations including the British Red Cross, His Majesty's Coast Guard (HMCG) and Mountain Rescue were asked to provide support during the pandemic, with Memoranda of Understanding compiled between the relevant organisations. These were the only additional clinical providers engaged and they were only engaged in limited circumstances.

76. Arrangements for the mobilisation of partner and third sector resources were the responsibility of regional cells based on the predicted staff abstraction rates and the epidemiological modelling of the potential impact of the virus on service demand.

77. One tool which supported the Services ability to safeguard its staff and its patients was testing. On 1 March 2020, there were no policies or plans in place which outlined how the Service would maintain adequate levels of Covid-19 tests for staff. No routine testing was in place. SAS managers were able to access Occupational Health Services to refer their staff should they require any health-related testing to take place, but this did not have capacity to deal with large numbers of staff.

78. At the time where the Covid-19 PCR tests were available for eligible front line key workers, all staff who were symptomatic or were in contact with a symptomatic person were able to quickly access a PCR test through the Scottish Government's National PCR testing arrangements.

79. SAS were in receipt of adequate level of lateral flow tests for staff once they became available. SAS acquired Lateral Flow tests in bulk in December 2020 via the National

example). This did not support the extended hours that our staff were working to maintain service delivery to our patients – but it helped. Our front-line clinical staff were clearly exposed to a very high risk of infection with the number of Covid-19 positive patients they were seeing. We therefore provided staff with every item of PPE that was available including full protection face masks, respirator hoods, additional protective uniform and very detailed infection control protocols on how to interact and treat patients with Covid-19 symptoms.

140. Supporting our staff's welfare was a huge driver for us and we had a wide range of wellbeing initiatives in place which included provision of welfare vehicles at many hospital sites, providing refreshments and food for clinical staff who were delayed at hospitals, and signposting staff with emotional and mental health issues caused by the pandemic to specialist services. Regular communications were in place to highlight changes in Government legislation as well as infection control protection guidance and general advice as to how to protect staff when interacting within their own community as well as at work. Regular management guidance was produced to assist all Service managers to interact safely with staff and take all necessary precautions to reduce infection.

141. In addition to the measures above, the SAS took the decision to fully extract Union Convenors from front-line working which allowed them dedicated time to attend meetings to represent and support their members and wider staff teams. We have three Trade Union Convenors representing the three recognised trade unions, GMB, UNISON and UNITE. They are normally allocated 80% facility time to participate in discussions with the SAS on all workforce issues. During Covid-19, it was agreed to increase this facility time to 100% to enable them to be fully focused on the pandemic and to support the Service and staff with often challenging workforce matters. As an example, Convenors were invited to attend a weekly 'Key Topic' meeting with senior service managers to discuss and address issues and concerns as they arose.

142. Guidance was provided by Scottish Government to the Service on 4 September 2020 in regard to vulnerable healthcare workers and to staff from some ethnic backgrounds. This guidance was adopted in its totality by the SAS. For staff in specific ethnic groups, we undertook a focused risk assessment as it was generally acknowledged that staff from some ethnic backgrounds were more susceptible to Covid-19. These additional risk assessments were based on Government medical advice and ensured that any

- Eye protection compatible with the FFP3 respirator (prescription glasses do not provide adequate protection against droplets, sprays and splashes).

161. Whilst face fit testing was carried out prior to the pandemic, in June 2020, the SAS Health and Safety Team circulated an internal SAS Face Fit Testing Procedure to all staff to ensure that they were adhering to the correct procedure as outlined in the Health and Safety Industry Guideline (INDG479). A PPE group in the SAS was set up by the Director of Care, Quality and Professional Development who had Executive responsibility for PPE and face fitting testing.

162. A chronology of changes to infection prevention and control measures in ambulance healthcare settings during the relevant period and the reason for such change is shown in exhibit PB/13 [INQ000303187] and also included:
    - Covid-19 decontamination of ambulance vehicles, management of linen and waste guidance 18 March 2020 and remained in place past 28 June 2020.
    - SAS policy on Station, Vehicle (including Aircraft) and Equipment Cleaning Schedule (Based on NHS Scotland National Cleaning Service Specification NCSS June 2016). First published in January 2009
    - Scottish Ambulance service PPE guidance during Covid-19 pandemic version 1.1-1.4 2 April 2020 and version 1.4 remained in place after 28 June 2020.
    - SAS Covid-19 guidance (February 2021 until May 2022) was developed. A Scotland version of guidance 6: Working Safely in UK Ambulance Services during Winter 2021-22: AACE / QIGARD, December 2021 linking with NIPCM (Scottish Version Winter Respiratory Guidance)
    - Patient Transport Guidance, 2020 (24 March 2020 version 3, 2021 (5 February 2021 version 4) and 2022 (7 April 2022).

Protecting our Staff and Patients: Personal Protective Equipment

163. The logistics and supply chain within the SAS at the time of the pandemic was significantly tested as we rolled out PPE and other supplies at pace across the Service.

164. At the start of 2021, the SAS carried out an extensive review of the then current model which included learning from Covid-19 to provide alternate sustainable solutions. The review found that prior to the start of March 2020, our logistics and inventory management for PPE/RPE was managed locally within our regions across Scotland, with procurement undertaken through the internal stores ordering system, PECOS.

Sufficient supplies for the relevant station requirements were ordered locally by operational staff with these goods being delivered to individual stations by third party suppliers, with stocks arriving in box quantities. The model the Service used at this time did not allow for stockpiling large quantities of stock, especially the volume required throughout the pandemic. PPE was used for specific patients and specific circumstances whereas following the categorisation of a pandemic, PPE was used for every interaction with any individual.

165. Addressing the legacy model issues and the lessons learned at the start of the pandemic, in February 2021 the SAS Board were presented with three options; to continue with the status quo, to return to the previous system of using third party suppliers or to develop the centralised model. The SAS Board approved a new centralised logistics service (spoke and hub model of logistics) which created three regional logistics hubs in our three regional areas (East, West, North) which enabled the SAS to continue their partnership with the National Services Scotland National Distribution Centre, receiving large quantities of key PPE stock items delivered to the three regional hubs, and from there our own staff distributed the required supplies to our local stations. The West Region hub was implemented in April 2021, the East Hub in September 2021 and North was March 2022. It was recognised by the Board and the Executive Team that this new model would benefit patients and staff by reducing the risk of areas running low or out of stock of critical clinical items and PPE.

166. The fragility of our operating model was highlighted during the initial months into 2020 when global demand was at its highest and securing supply from regular private providers was impossible for the Service. The private providers informed us they could not maintain this level of supply to us.

167. To address the issue urgently, in February 2021 the SAS procurement team took over responsibility for purchasing the Services supplies of PPE and RPE. They arranged to secure bulk stock of PPE, delivered to the SAS by the National Services Scotland National Distribution Centre to both the identified logistics hubs in the East and West of Scotland. This arrangement remains in place today. The majority of the PPE supplied was suitable for use across the Service, however, there was an increased requirement for face fit testing for FFP3 masks. In order to be compliant with Health and Safety regulations, staff must undergo Face Fit Testing for every type/make of FFP3 mask they are required to wear. In order to reduce the number of face fit tests required it was important to try to maintain stocks of the same make of mask for