NHS
South West
Clinical Senate

# Recommendations from the South West Clinical Senate Council on quantifying harm to patients and staff relating to ambulance delays and system-level interventions to mitigate the impact.

**21 July 2022**

## 1.0 Background

'Harm' emerged as a deliberative topic for the Senate Council, from conversations the with the NHS England Regional Clinical Quality team, in early 2022. The team had embarked on a project to quantify harm across the South West region, with a particular focus on harm at a System level.

The Clinical Senate determined that a more specific area where it could add value was to consider the harm across the system arising from the poor flow of patients through and out of hospital care, the most visible manifestation of which is ambulance handover delays.

In preparing this report, the Clinical Senate acknowledged the following key points:

- There is no universally agreed definition or measure for harm.
- Harm can be considered in terms of the following:
    i. **Experience:** delays could be distressing in the short term and could lead to long term psychological harm
    i. **Patient Outcomes:** poorer outcomes due to delays, lost windows of opportunity to deliver interventions i.e. thrombolysis for MI or stroke, death as a result of missed opportunities to deliver time critical treatments
    ii. **Safety:** The treatment risk benefit may change if there are delays, care delivered in suboptimal venues, care delivered by untrained staff

- Whilst it is almost certain the harm is occurring across the system the report addresses the potential for harm.

## 2.0 The National Context

Delays to handovers from ambulances to hospital Emergency Departments are lengthening. The 2022/ 23 *NHS Standard Contract* [1] sets out the national quality requirements for the handover of patients between ambulances and the hospital's Emergency Department as 65% within 15 minutes, 95% within 30 minutes, and 100% within 60 minutes. This time is calculated from when the ambulance arrives outside of the hospital's Emergency Department to when the clinical handover to the Emergency Department staff is completed.

An extract from the NHS England Urgent and Emergency SitRep[2] published data shows in the period of 28 March 2022 – 03 April 2022, there were 11,460 ambulance arrivals with delays of over 30 minutes, and 9,972 with delays over 60 minutes (See Figure 1).

| Date | Arriving by ambulance | Delay 30-60 mins | | | Delay >60 mins | |
|---|---|---|---|---|---|---|
| | | Numbers | As a % of total numbers | | Numbers | As a % of total numbers |
| **28-Mar-22** | 11,394 | 1,695 | 14.88% | | 1,655 | 14.53% |
| **29-Mar-22** | 11,235 | 1,641 | 14.61% | | 1,660 | 14.78% |
| **30-Mar-22** | 11,585 | 1,788 | 15.43% | | 1,596 | 13.78% |
| **31-Mar-22** | 11,593 | 1,623 | 14.00% | | 1,313 | 11.33% |
| **01-Apr-22** | 11,299 | 1,606 | 14.21% | | 1,407 | 12.45% |
| **02-Apr-22** | 11,225 | 1,554 | 13.84% | | 1,153 | 10.27% |
| **03-Apr-22** | 11,217 | 1,553 | 13.78% | | 1,188 | 10.59% |
| *Totals* | *79,548* | *11,460* | *14.41%* | | *9,972* | *12.54%* |

Figure 1: Extract covering period 28 March – 03 April 2022. [based on raw data from NHS England Daily Hospital Situation Report - Number of Patients Arriving by Ambulance and Ambulance Handover Delays (29 November 2021 – 03 April 2022). Published 07/04/2022]

The impact of handover delays alone in a congested system are

- Operational hours lost (to the ambulance service)
- Harm to patients experiencing extended delays whilst waiting in an ambulance
- Harm to patients and their families waiting for an ambulance in the community due to extended response times

[1] NHS England » NHS Standard Contract

[2] Statistics » Urgent and Emergency Care Daily Situation Reports 2021-22 (england.nhs.uk)

- Harm and moral injury experienced by all staff
- Environmental impact of ambulances idling outside hospitals

In a recent report "*Delayed Hospital Handovers: Impact Assessment of patient harm[3]"*, the Association of Ambulance Chief Executives (AACE) published findings from a clinical review, of the potential harm experienced by patients as a result of extended delays in handover between ambulance and hospital. The review found that more than eight in ten patients who were delayed beyond 60 minutes were assessed as potentially having experienced some level of harm and that nearly one in ten experienced severe harm. "*Harm caused by delays in transferring patients to the right place of care[4]",* the Healthcare Safety Investigation Branch (HSIB) Interim Bulletin outlined early findings and recommendations from a national investigation undertaken to examine the systems that are in place to manage patient flow through and out of hospitals, the impacts of delays across the health and care system, and the harm and emerging risk across the system.

The NHS Confederation article "*What the latest data tells us about ambulance handover delays [5]"* paints a stark picture of record high ambulance handover delays, the volume of hours lost, and potential harm to patients over Winter 2021. It describes the negative impact of the delayed handovers on ambulance response times in the community. This created pressure on clinical staff but also on ambulance call handlers, having to deal with repeat calls from distressed patients and their families waiting for an ambulance.

In February 2022, the Care Quality Commission and NHS England wrote to Trust and System Chief Executives outlining the need for a whole-system approach to tackling challenges across the urgent and emergency pathways, including handover delays[6]. It is recognised that the management of patient flow has further impacts across the healthcare system including delayed response to 999 emergency calls and to NHS 111 calls that require an ambulance response, cancellation of elective planned care, and people staying in hospital longer than they need to.

[3] Layout 1 (aace.org.uk)
[4] Delays transferring patients to right care | HSIB
[5] What the latest data tell us about ambulance handover delays | NHS Confederation
[6] What the latest data tell us about ambulance handover delays | NHS Confederation

Ambulance handover delays present a risk to patients in the community waiting for an ambulance and to those waiting outside an A&E. The NHS Long Term Plan[7] sets out a vision to eliminate handover delays.

## 3.0 The Regional Context

National data shows that 8 of the 20 hospitals with the highest percentage of ambulance arrivals delayed over 60 minutes are based within the South West region. (See Figure 2). This provides justification for the South West Clinical Senate accepting this as a deliberative topic.

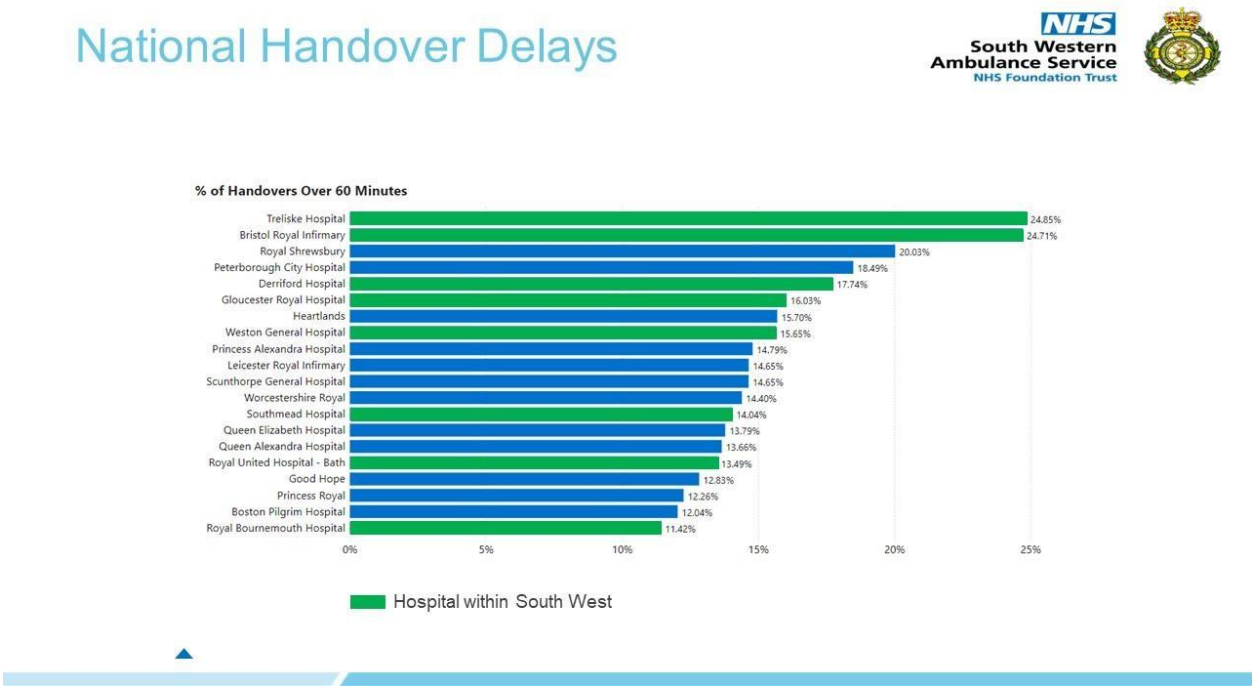


Figure 2: 'Top' 20 worst-performing hospitals in England with the highest percentage of handover delays over 60 minutes

## 3.0 Reflections from the South West region

The council heard reflections from two organisations (South West Ambulance Service NHS Foundation Trust and Gloucestershire Integrated Care Board) and the South West Clinical Senate Citizens' Assembly on the impact of handover delays.

### 3.1 South West Ambulance Service NHS Foundation Trust (SWASFT)

[7] NHS Long Term Plan » The NHS Long Term Plan

## Background and context

The South West Ambulance Service NHS Foundation Trust (SWASFT) has responsibility for providing ambulance services across Cornwall, Devon, Dorset, Gloucestershire, Somerset, Wiltshire, Isles of Scilly, and the former Avon area (Bristol, Bath, North and North East Somerset, and South Gloucestershire).

The trend in handover delays in the South West (See Figure 3) is consistent with the national picture.

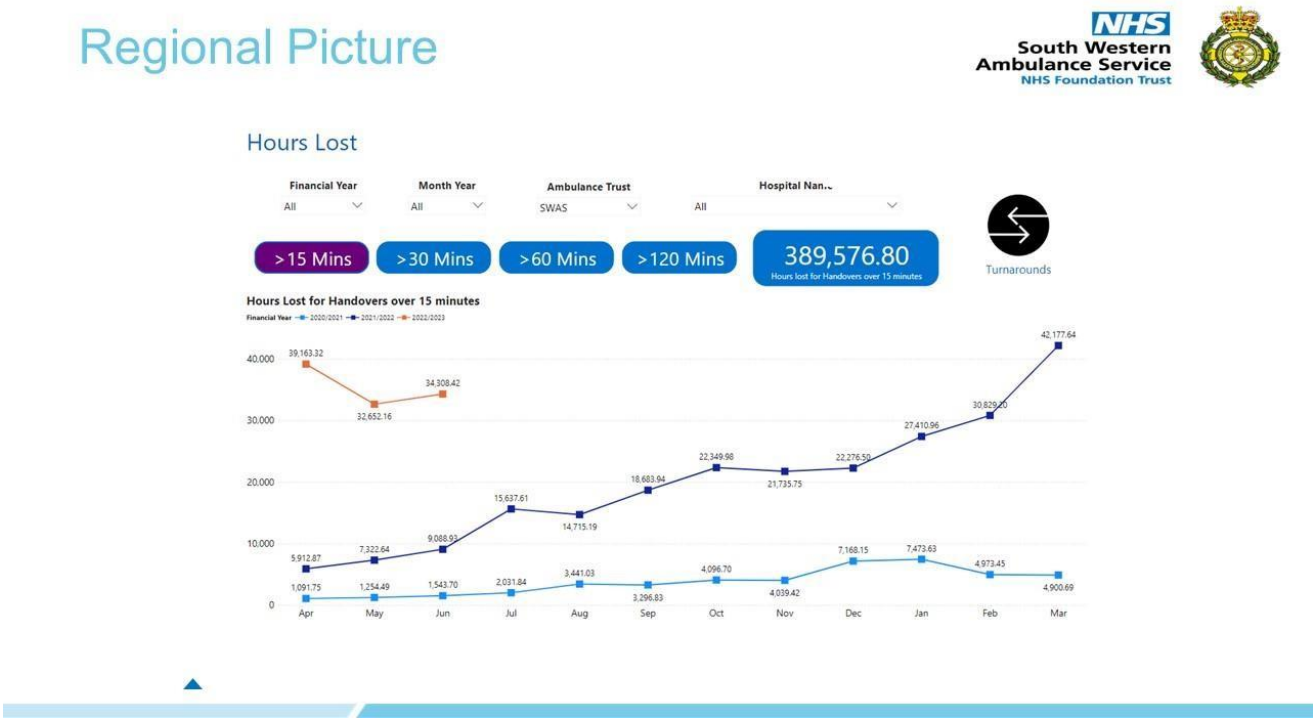


Figure 3: Hours lost for ambulance handovers that are over 15 minutes

SWASFT report that between April 2020 – June 2022, 389,576.80 hours have been lost due to ambulance handovers over 15 minutes[8]. This is against a backdrop of SWASFT having one of the highest non-conveyance rates in the country where call handlers and paramedics able to identify alternatives to attendance at hospital.

The table (Figure 4) shows the operational time lost by SWASFT by hospital in the South West due to handover delays over a 7-day period in July 2022 (11/07/2022 – 17/07/2022).

[8] See relevant target in the National Quality Requirement for the handover of patients between ambulances and hospital's Emergency Department in 2022/23 NHS Standard Contract NHS England » NHS Standard Contract

## Time Lost by Hospital

NHS South Western Ambulance Service NHS Foundation Trust

*Operational Time Lost to Handover Delays in Excess of 15 Minutes by Day*

| | 0 to 5 hrs | 5 to 10 hrs | 10 to 20 hrs | 20 to 50 hrs | 50 + hrs |
|---|---|---|---|---|---|

| Hospital | 11/07/2022 | 12/07/2022 | 13/07/2022 | 14/07/2022 | 15/07/2022 | 16/07/2022 | 17/07/2022 | Total |
|---|---|---|---|---|---|---|---|---|
| All | 1869:49 | 1697:37 | 1492:24 | 1285:43 | 932:34 | 806:05 | 907:15 | 8991:30 |
| BRISTOL ROYAL HOSP FOR CHILDREN | 0:38 | 3:09 | 1:17 | 0:56 | 1:43 | 1:02 | 0:50 | 9:38 |
| BRISTOL ROYAL INFIRMARY | 170:19 | 103:20 | 87:02 | 121:18 | 32:36 | 41:11 | 101:52 | 657:41 |
| CHELTENHAM GENERAL HOSPITAL | 9:21 | 5:24 | 13:11 | 3:56 | 6:02 | 2:48 | 2:23 | 43:07 |
| DERRIFORD HOSPITAL | 414:25 | 306:07 | 365:17 | 424:12 | 384:01 | 199:03 | 270:16 | 2363:25 |
| DORSET COUNTY HOSPITAL | 1:12 | 7:09 | 1:54 | 0:37 | 4:36 | 0:35 | 3:37 | 19:43 |
| GLOUCESTER ROYAL HOSPITAL | 165:57 | 114:39 | 133:44 | 109:45 | 107:41 | 162:49 | 137:40 | 932:17 |
| GREAT WESTERN HOSPITAL | 45:27 | 35:51 | 9:03 | 6:46 | 24:30 | 7:32 | 7:38 | 136:50 |
| MUSGROVE PARK HOSPITAL | 33:15 | 18:39 | 10:30 | 8:48 | 4:30 | 2:40 | 2:48 | 81:13 |
| NORTH DEVON DISTRICT HOSPITAL | 11:40 | 35:52 | 35:49 | 26:34 | 10:54 | 30:22 | 26:04 | 177:17 |
| POOLE HOSPITAL | 91:43 | 47:29 | 28:54 | 35:02 | 13:45 | 39:51 | 54:33 | 311:20 |
| ROYAL BOURNEMOUTH HOSPITAL | 66:16 | 17:16 | 40:18 | 71:37 | 63:55 | 92:41 | 10:51 | 362:56 |
| ROYAL DEVON AND EXETER WONFORD | 69:09 | 63:35 | 10:27 | 7:38 | 4:35 | 11:03 | 12:39 | 179:09 |
| ROYAL UNITED HOSPITAL - BATH | 85:40 | 144:24 | 122:24 | 83:46 | 55:23 | 76:49 | 13:50 | 582:20 |
| SALISBURY DISTRICT HOSPITAL | 59:45 | 26:06 | 64:24 | 1:57 | 4:01 | 1:32 | 2:55 | 160:43 |
| SOUTHMEAD HOSPITAL | 232:00 | 286:52 | 98:54 | 32:48 | 23:53 | 17:20 | 41:39 | 733:30 |
| TORBAY HOSPITAL | 120:42 | 102:49 | 176:24 | 157:38 | 56:48 | 4:01 | 15:58 | 634:24 |
| TRELISKE HOSPITAL | 261:14 | 323:05 | 246:45 | 173:14 | 99:18 | 108:49 | 160:43 | 1373:10 |
| WESTON GENERAL HOSPITAL | 23:43 | 50:04 | 34:47 | 15:19 | 29:31 | 4:57 | 39:33 | 197:57 |
| YEOVIL DISTRICT HOSPITAL | 7:15 | 5:38 | 11:12 | 3:41 | 4:43 | 0:51 | 1:19 | 34:41 |

Figure 4: Operational time lost to handover delays exceeding 15 minutes by day

The total of over 8900 operational hours lost that week equates to 781, 12-hour ambulance shifts that were unavailable to respond to emergencies across the region.
Before the pandemic, this weekly figure would have been around 500 operational hours.

The impact of this is that patients are experiencing longer waits until the ambulance arrives whilst some seek to make their own way to hospital presenting as undifferentiated emergencies.

The delay in ambulances attending has resulted in up to 30% of the calls received by the ambulance call centre, being repeat calls from patients already in the system. This adds to the workload and is stressful for call handlers when they are unable to provide a reasonable expected time of arrival, particularly if the caller is concerned that the condition of the patient is deteriorating.

## Harm

Handover delays cause harm both to the patient whose handover is delayed (direct harm) and to patients (and their families/ carers) who are denied the opportunity of timely ambulance response in the community (indirect harm).

Figure 5 shows a snapshot of the direct patient harm from 2021 based on the AACE Estimation Metrics for patients where their delay to be handed over was over 60 minutes.

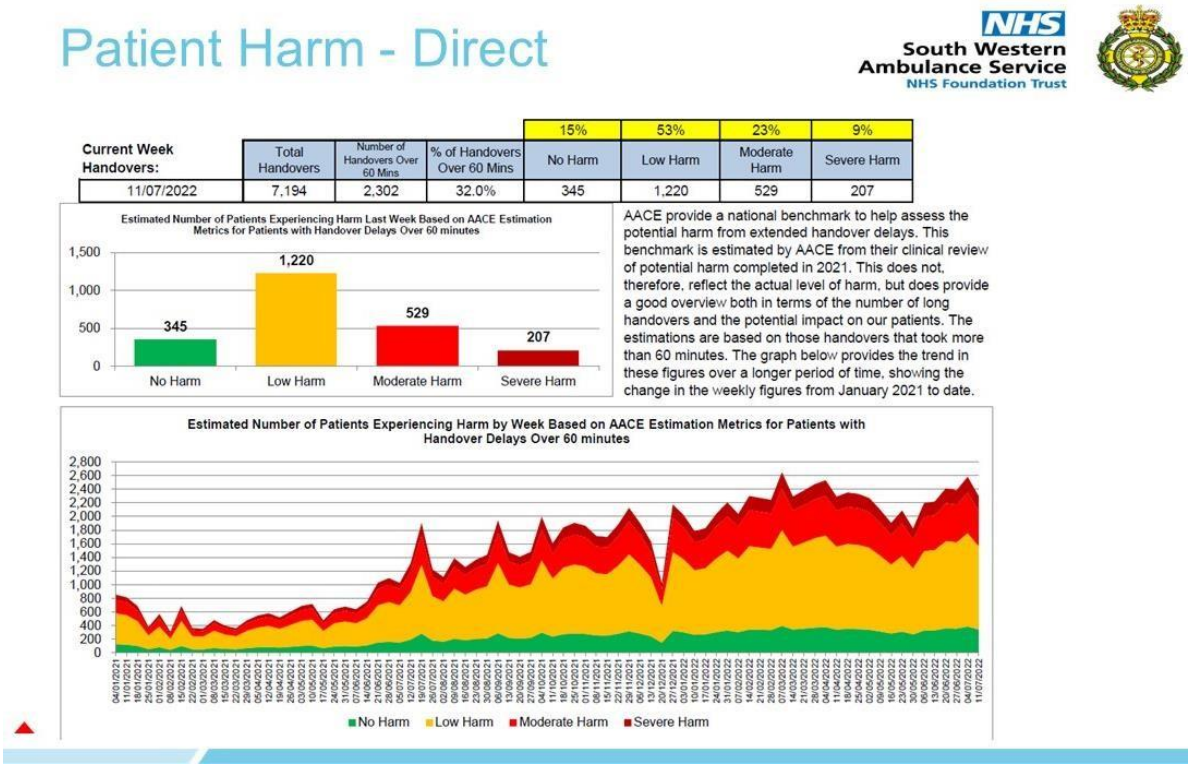


Figure 5: Patient harm based on AACE Estimation Metrics for patients

Figure 6 shows a snapshot of other metrics which are impacted by the extended ambulance response times which will have consequences for patients.

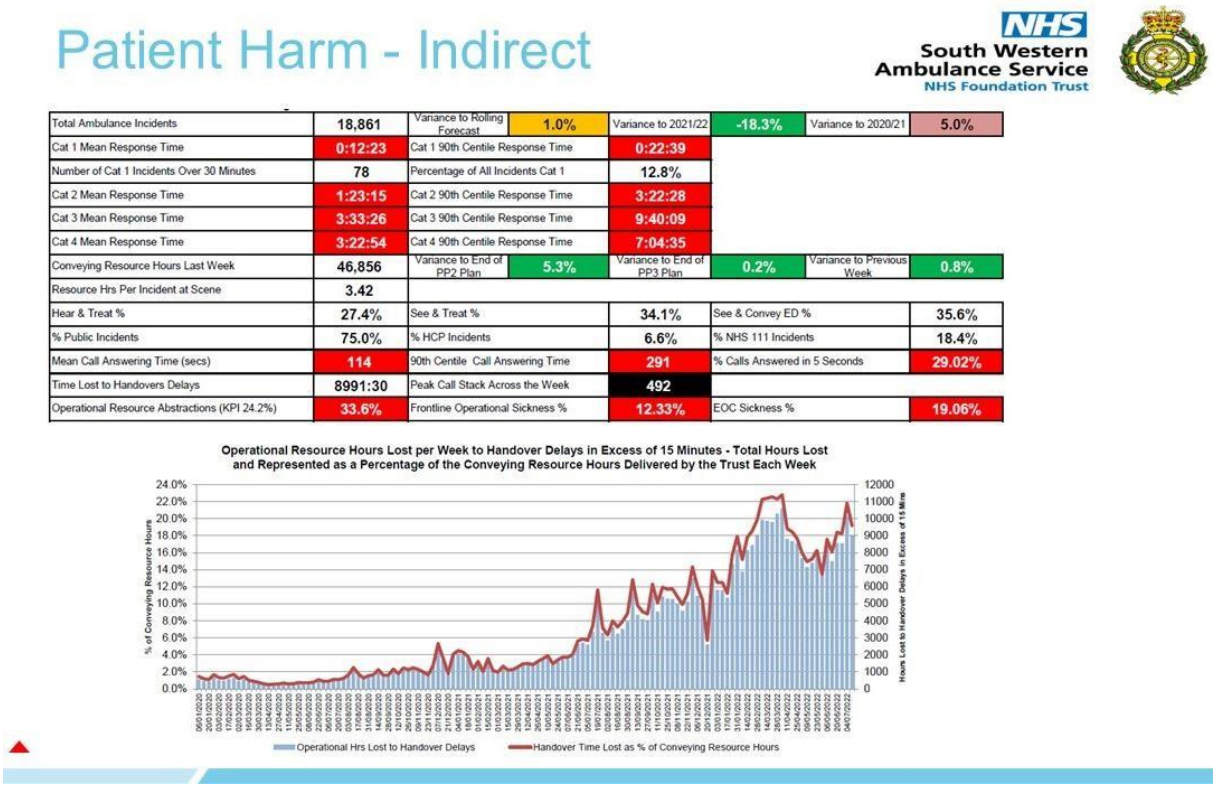


Figure 6: Indirect Harm due to ambulance handover delays

**Impact on staff**

The pressures within the system are stressful for all frontline staff. The issues described by ambulance staff are:

- The challenge of delivering care that does not meet standards
- The impact on morale of interacting with patients whose condition has been made worse by the delays
- The inability to make best use of their unique skills and experience to respond to emergencies within the community whilst waiting to handover a patient
- The pressure of needing to provide care and support to patients whilst in the ambulance that is not routinely part of their skill set (e.g. administering longer term/ routine medication, pressure sore prevention)
- The frustration of the perception that systems are seeking to put in place services in the community to compensate for the lack of availability of ambulances rather than solutions that allow them to be released to play their full part in the system.
- Difficulty in designing training programmes that provide paramedics in training with experience to develop their competence.

**Impact on the environment**

It may seem a trivial point but in order to care for a patient in an ambulance the engine must be running to provide ventilation, temperature control and power to essential equipment. These running engines contribute an additional and avoidable burden to the carbon emissions, noise, and air pollution.

**Looking ahead**

- SWASFT is keen to learn from other regions that are maximizing access to alternative community provision for ambulance crews, and providing direct access to SDEC pathways in hospital, bypassing ED – particularly as at the time of the meeting SWASFT had the lowest SDEC availability for paramedics across England.
- SWASFT support patient cohorting as an approach as it has been shown to save ambulance time. A letter[9] from NHS England to Trust Chief Executives, Clinical Commissioning Groups, and Local Accident and Emergency Delivery Boards, describes cohorting as patients being managed in clinical settings that reflect their acuity, after assessment by triage to ensure departments are fully aware of the acuity and needs of the patient, and any attendant risks. This has been trialed in Cornwall and saved 517 hours in ambulance time over 9 days. Currently, only 2 hospital trusts in the region carry out patient cohorting.

## 3.2 Gloucestershire Integrated Care Board (ICB)

Recently Gloucestershire ICB undertook a review of patient flow through Gloucestershire Royal Hospital, one of their acute hospitals, to understand the harm along the care pathway – from handover delays at the 'front door' to delayed transfers of care, and the impacts and clinical outcome for patients. The review included attending ward rounds, carrying out anonymized case reviews, monitoring Emergency Department attendance, and speaking with (and shadowing) staff.

Colleagues from Gloucestershire ICB shared some of their observations:

- The infection prevention and control measures introduced in relation to the COVID pandemic have impacted patient flow through the hospital.

[9] ambulance-handover-letter.pdf (england.nhs.uk)

- At the time, there was a lack of ring-fenced beds for frailty patients

- Patients with longer lengths of stay in hospital, experience decompensation, and consequentially increase in complexity
- Patients are frequently moved to different wards due to outbreaks which disrupts discharge planning
- Delays to discharge to assess[10], are particularly problematic as the frequent moves can result in a lack of continuity of care which in turn increases the length of stay and can compromise patient outcomes.
- Patients on discharge pathways should have regular weekly reviews to check that the pathway is still appropriate. They observed that some patients on a discharge pathway that had a changed circumstance, however the pathway hadn't been reviewed and wasn't actioned with an alternative pathway of care.
- The skills of the Advanced Nurse Practitioner were not being fully utilised
- Social workers placed to work within the Emergency Department were having a positive impact.
- Patients over 70 years of age experienced proportionally longer delays than patients in other age cohorts. This aspect needs to be explored further.

**Looking ahead**

Gloucestershire is exploring several opportunities:

- Working with primary care and social prescribers to develop a multi-disciplinary team approach for patients that have had multiple hospital admissions, seeking a way to help keep patients at home
- Social prescribers will be based within Frailty Units to support and turnaround discharge so that patients do not have lengthy stays
- Developing an outreach model for frailty patients that will follow the patient and provide continuity of care, and settle the patient at home

[10] discharge to assess (D2A) is about funding and supporting people to leave hospital, when safe and appropriate to do so, and continuing their care and assessment out of hospital. They can then be assessed for their longer-term needs in the right place. (NHS England » When it comes to discharge, timing is everything)

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    - Developing a frailty virtual ward to support patients remain in their bed (in their own home)

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Developing a proactive approach for the Falls Service to manage patients, to ensure that they are identified much earlier with the view to prevent or reduce further falls

- Established an enhanced helping Care Home Working Group to provide support to the Care Home Sector so that patients are not inappropriately admitted
- Developing pathways that ensure that people that are 'end of life' are not inappropriately admitted
- Developing a model with the Fire Service to enable them to provide a timely response to appropriate patients.

Gloucestershire state that its ambitions will require a whole system approach, to make the desired changes: improve patient outcomes and reduce harm along the care pathway. They have taken a population health management approach to manage the frail, elderly populations by segmenting these populations into (mild, moderate, and severe) cohorts, to be able to deliver care more systematically and work more closing with primary care (primary care networks, community teams, end of life, dementia). To this end, Gloucestershire has found it beneficial to engage the multi-disciplinary team early on in the admissions of patients in this cohort, so that a discharge plan can be made much earlier in the patient's care.

### 3.3 Reflections from the South West Clinical Senate Citizens Assembly

Representatives from the South West Clinical Senate Citizens' Assembly shared their reflections on handover delays and harm, gathered at two recent Citizens' Assembly meetings:

- The Citizens Assembly recognises that this is a whole system issue and not the sole responsibility of the ambulance service. However, it acknowledges that the impact on the ambulance service has greater visibility and this has fed the narrative.

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  - There needs to be a clear definition and a shared understanding of harm.
  - Patient feedback provides an important channel for capturing and quantifying patient harm. Systems in the South West should explore opportunities to work with Patient Participation Groups, and local Healthwatch organisations to gather patient feedback.

    The Citizens Assembly suggests that the newly created Integrated Care Systems have a role to encourage greater cooperation and collaboration across their geographical footprint, between health and care organisations (including third sector organisations). This will optimise care pathways across the whole System.
  - Integrated Care Systems must explore whether more can be done to reduce and/or avoid hospital admissions, by treating and supporting patients in their own homes, where appropriate. There are initiatives where this has been done and lessons that can be learned that could be of benefit.
  - The Citizens Assembly observes that in some Systems, services have been developed, to provide care for the frail elderly who as a patient cohort are at greater risk of accessing the Emergency Department. Examples of these services include: An Older People's Assessment Unit at Royal United Hospitals Bath[11] and a range of Home from Hospital services available in Bath and North East Somerset geographical footprint to help patients to return home from hospital[12]. The Citizens Assembly recommends that work is done to assess whether these services should be adopted across the South West.
  - The Citizens Assembly suggests that social care should be involved in discharge planning meetings to help address issues around delayed discharge, which impacts patient flow.
  - The Citizens Assembly questions whether the NHS 111 algorithm is fit-for-purpose and has the flexibility to respond to the caller's needs or needs to be reviewed. This is in response to discussions that highlighted that a proportion of calls to NHS 111 are transferred across to 999 emergency calls.
  - The Citizens Assembly recommends that a metric is developed to quantify patient deterioration and the number of deaths, resulting from handover delays would be beneficial.

[11] Royal United Hospitals Bath | Older People's Unit (ruh.nhs.uk)
[12] Home from Hospital | Live Well in Bath & North East Somerset (bathnes.gov.uk)

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  - The Citizens Assembly proposes that several measures could be used to quantify the harm and moral injury experienced by staff i.e. staff feedback surveys, and HR metrics around staff sickness and turnover.
  - Patient Participant Groups could be enlisted to provide advice and information to educate patients, their families, and the local community.

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  - The role of the community Pharmacist as a source of clinical advice and support needs to be clarified for the benefit of patients, their families, and members of the public.
  - Communications and engagement materials should be developed to inform patients and raise awareness, as to how to access the right care, in the right setting and at the right time. This will help reduce patients inappropriately accessing care via the Emergency Department, instead of more appropriate care settings.

## 4.0 The Questions

The South West Clinical Senate sought to explore the following question regarding ambulance handover delays and harm:

- How can we better quantify the harm to patients and staff relating to ambulance delays in the South West?
- What can be done at a system level to mitigate the impact?

## 5.0 Observations

The Council made several observations:

i. Many agencies /organisations are seeking to address this problem. The Senate is not seeking to replicate this work but to shine a light on the clinical impacts and explore positive interventions from a clinical perspective

ii. Ambulance handover delays are a highly visible symptom of a wider system challenge of timely and efficient flow of patients in and out of hospital.

iii. Poor flow through the urgent and emergency care pathway is resulting in harm for patients, people with urgent needs in the community and staff

iv. Potential solutions will need to address flow across the urgent and emergency care pathway.

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v. Difficulties in discharging patients that no longer meet the criteria to reside to social care is a significant contributor. The compelling business case for social care as a means of supporting the NHS was made in the Clinical Senate Report in 2018 on Workforce in the South West. The current delays in the system strengthen this case.

vi. The scale of the problem is variable across the region and across regions.

vii. It is unclear where in the system the responsibility lies for the harm and risk to patients whose care is delayed.

viii. NICE guidance and quality standards can help in supporting and shaping the system pathways of care – e.g. urgent and emergency care pathways[13] and improve outcomes across health and social care, e.g. care in the community, improving the movement of people/discharging (transfers of care[14] between hospitals/community/care home settings.

## 7.0 The Recommendations

The South West Clinical Senate makes the following recommendations:

1. The AACE Report *Delayed Hospital Handovers: Impact Assessment of patient harm*[15] describes the quantified harm for patients experiencing handover delays of over 60 minutes but there is no commensurate quantified harm metric for delays in the community. The Clinical Senate recommends that a harm metric is developed to demonstrate the scale of this harm.
2. Solutions should be targeted on improving flow to restore the ambulance service to capacity. It is a false economy to use ambulance staff and vehicles as an alternative to ED care
3. The business case for investment in social care should be revisited as it may be the most cost-effective approach to helping the NHS improve its efficiency
4. Ambulance providers should have access to the full range of options established as an alternative to admission, learning from what works in systems across the region and in other regions.
5. The model of care for complex patients in the community needs to be recalibrated. This will require a cultural shift in the way in which hospital and community services, including primary care work together to enhance the urgent care out of hospital offer such as rapid response and virtual wards.

[13] https://stpsupport.nice.org.uk/urgent-emergency-care/index.html
[14] https://stpsupport.nice.org.uk/transfer-of-care/index.html [15]
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6. Patient stories are a powerful tool to promote change and identify initiatives that will make the most difference to the patient experience. Systems should review their mechanisms for capturing real time feedback from patients.

7. Communications and engagement materials should continue to be developed to inform patients and raise awareness, as to how to access the right care, in the right setting and at the right time.
8. The current delays across the system have led healthcare workers to make decisions about provision of care and treatment in ways that are either unusual or that would be inconceivable in less stressed circumstances. Individuals and employers may find the UK Clinical Ethics Network resource on Moral Distress and Moral Injury[15] helpful.

*(Given the imperative for change in this area it is acknowledged and hoped that by the time this report is published action systems may already have taken actions aligned with a number of these recommendations)*

These recommendations will be shared with the South West Regional Clinical Quality Team, NHS England who commissioned the work and published on the website of the South West Clinical Senate.

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