ASSOCIATION OF AMBULANCE CHIEF EXECUTIVES

Bringing together skills, expertise and shared knowledge in UK ambulance services

Taking stock: assessing patient handover delays a decade after 'Zero Tolerance'

SEPTEMBER 2023

info@aace.org.uk

www.aace.org.uk

Acknowledgements

With many thanks to the hospitals who have taken part in our 'Effective Interventions' series so far, and to NHS England and its Emergency Care Improvement Support Team (ECIST) for supporting AACE in developing those case studies.

- Chesterfield Royal Hospital
- George Eliot Hospital
- Homerton University Hospital
- John Radcliffe Hospital
- Milton Keynes General Hospital
- North Tees Hospital
- Royal Berkshire
- Salford Royal Hospital
- Walsall Healthcare NHS Trust
- West Middlesex University Hospital (Chelsea and Westminster)

Contents

Introduction

It is now over a decade since handover delays were the focus of a major collaborative report by the NHS Confederation and the Association of Ambulance Chief Executives (AACE).

'Zero Tolerance: Making ambulance handover delays a thing of the past' highlighted the detrimental impact of delays on patients and staff across the Urgent and Emergency Care (UEC) system, as well as the resulting drain on finite physical and financial resources.

At the time of its publication, the expectation – stipulated by the Department of Health – was that handovers must occur "within 15 minutes of ambulances' arrival at the A&E (Accident and Emergency) Department", and that a "zero tolerance" approach to delays should be embraced.

This was in the context of research undertaken in 2011 which revealed one-in-five handovers were exceeding the expected 15-minutes.

Over the next ten years, delays increased steadily. The upward trend was already established before the 2020 pandemic, but has since accelerated with numbers reaching unprecedented levels: 2022 saw volumes peak in December when around three quarters of handovers in England took 15-minutes or longer, and around one quarter took more than an hour.

Alongside this decade of growth, numerous studies, reports and guidelines have been published, aimed at raising awareness of the issue among regulators as well as providing cross-sector recommendations aiming to bring delays under control.

In 2021, AACE released the results of its clinician-led *review* of 500 A&E patients across the UK each of whom had experienced handover delays of one-hour or longer. These results quantified the widely understood, if largely unmeasured, reality that the longer patients have to wait in an ambulance as part of the handover process, the greater the risk of them experiencing additional, sometimes serious harm.

Since then, AACE has issued monthly reports detailing handover delay volumes and their broadly felt impact. It has used this insight to engage with regulators, practitioners, sector representatives, staff and patients, as well as the specialist press and main-stream media.

While bringing attention to the growing scale of the harm and loss resulting from delays, AACE has also focused on best practice. It has identified individual hospitals where longer delays are a fraction of the national average, and approached them, with NHS England's support, to understand how this is achieved. Case studies outlining successful initiatives from ten such hospitals have been published to-date, with more to follow.

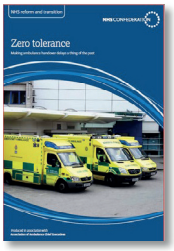
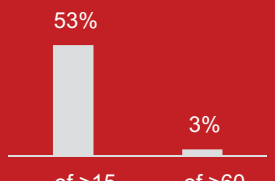
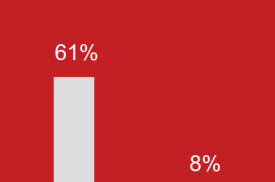
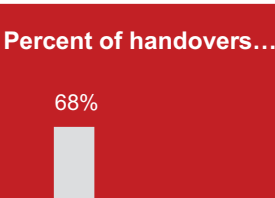
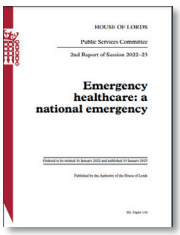
At the start of the 2023-2024 period, longer delays have shown signs of receding –yet continue to remain significantly higher than just two years ago. Unlike then, however, there is now a greater awareness of the consequences of delays and the need for their control. It is clear today that 'Zero Tolerance' did not result in the immediate "reduction and elimination" of delays, but it has nonetheless helped drive awareness of the problem and its solutions. That report's call for consistent and transparent data resulted in the National Ambulance Information Group (NAIG) developing new metrics, collected across England from 2018 and forming the backbone of the current, ongoing conversation.

Data collection continues to evolve. Delays are a fundamental component of NHS England's new Ambulance Data Set *(ADS)*, which will standardise the way UEC data is gathered. In turn this will allow for better planning, communication and patient care, and is vital to the success of NHS England's *long term plan* to address and eliminate handover delays.

Collectively we move further away from the unprecedented numbers seen in 2022 with a better appreciation of what can be done to finally achieve those goals of reduction and elimination. This report therefore represents a hopeful 'line in the sand' - a reminder of the impact of handover delays over the past decade and the work still to be done to reduce them, but also an opportunity to draw together the positive initiatives from hospitals who have 'bucked-the-trend'. Sharing this learning will shape the journey ahead for ambulance and acute trusts alike, and ultimately reduce the risk of further harm to already vulnerable patients in need of urgent emergency care.

From 2012 to 2023, a snapshot of activity

An overview of handover statistics, commentary and media coverage over the last decade.

Year	Delayed Handovers	Relevant Publication	Coverage
2011 to 2012	Percent of handovers… 	**Zero Tolerance. Making ambulance handover delays a thing of the past.** NHS Confederation/ AACE, 2012  • Spotlighted concerns over patient handover delays following demand of "zero tolerance" from then NHS Chief Executive David Flory • Highlighted findings from National Audit Office that one in five handovers were taking longer than the expected 15 minutes	**7** Online news articles mentioning UK handover delays
2017 to 2018	Percent of handovers… 	**Addressing ambulance handover delays: actions for local accident and emergency delivery boards** NHS, 2017  • Cited "record handover delays" and emphasised the impact on patients and ambulance resource • Outlined immediate remedial actions to be taken by acute trusts and ambulance trusts, commissioners, GPs and community services to control and minimise delays	**126** Online news articles mentioning UK handover delays
2021 to 2022	Percent of handovers… 	**Delayed hospital handovers: Impact Assessment of Patient Harm.** AACE, 2021  • Shared results of a structured clinical review of 500 handover patients • Concluded that eight-in-ten patients delayed an hour or longer were likely to experience potential harm as a result, with one-in ten of these experiencing severe harm	**1,040** Online news articles mentioning UK handover delays
2022 to 2023	Percent of handovers… 	**Emergency healthcare: a national emergency. House of Lords,** 2023  • Handover delays a key focus of House of Lords' whole-system review of pressures faced in emergency healthcare • Calls for a clear national steer, overhaul of operating models for primary care and collaborative sharing of best practice	**3,610** Online news articles mentioning UK handover delays

"Staggering" - charting the increase in longer delays

At the time 'Zero Tolerance' was published, handover data was neither routinely nor consistently collected. The "one in five" figure it cited was taken from a National Audit Office report which focused only on the 15-minute expectation, and made no reference to the distribution of handovers beyond that standard.

The lack of mention of longer handover delays maybe suggests such events were uncommon, or even flatly unexpected. This notion is supported by an online search of news stories using the words "hospital handover delays one hour" and focused between January 2011 and January 2014. This elicited just *one result* from the UK, a regional story where local trusts faced heavy fines for delays exceeding 30 minutes. Over a six month period, the same area reported 499 handover delays of an hour or longer – statistics the Royal College of Nursing described as "staggering" in the report.

To further contextualise the change in volume of longer handovers, AACE produced a back-calculated time-series using historical turnaround data (which closely tracks handover data), and seasonal trends as a base (Figure 1). In December 2012, there were an estimated 5,226 handovers exceeding one hour across England, or 174 each day. By December 2022 the actual data show a figure of 66-thousand, thirteen times greater than the 2012 estimate, and over two-thousand delays every day.

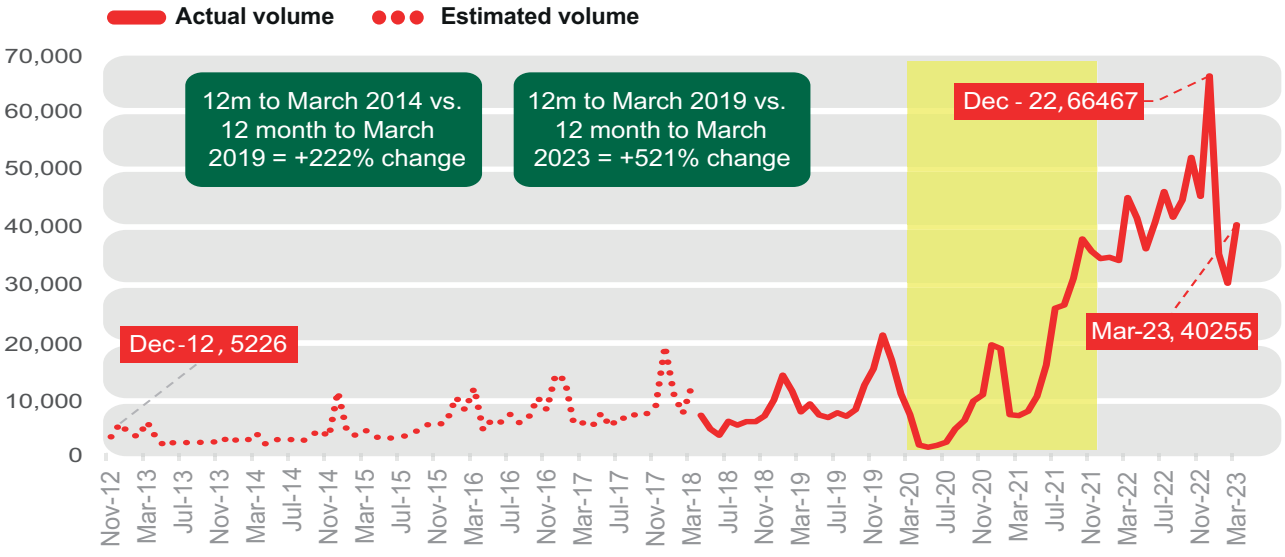
The increase this represents came in two phases. Pre-pandemic, growth in delays was strong but steady: comparing the 12-months to March 2014 with the same period to March 2019 there was an increase of 58-thousand hour-plus delays, a difference of +222%.

The arrival of COVID-19 saw the necessary introduction of measures designed to protect all those in and around the UEC system. These slowed the handover process, and while ambulance demand reduced at the start of the pandemic, it had increased to a then record high by early 2021, placing further pressure on the system. Longer handovers grew in volume, and continued to do so until the end of 2022.

As a result comparing the 12-months to March 2019 with the same period to March 2023 sees an increase of 436-thousand hour-plus delays, a difference of +521%.

Despite a marked, if unsteady, decrease in 2023, hour-plus delays remain very high. To return to volumes described as "staggering" a decade ago, these delays must recede significantly. There can therefore be no room for complacency with the current trajectory, and every reason for a continued focus on improvement.

Figure 1. Volume of patient handovers exceeding one-hour: 2012 to 2023 (source: NIAG)



Estimates back-calculated using historical turnaround data and seasonal fluctuation as base. Yellow area shows period covered by COVID waves in the UK (source ONS).

The impact of delays on the Urgent and Emergency Care system

While delays persist, their impact will continue to be felt across the UEC system. AACE has *documented* the trends in handover delays and their consequences for several years, but the key points bear repetition here.

In the 12-months to March 2023, just under two-million hours were lost as a result of delays exceeding 15-minutes. This is roughly the same as the time taken to complete 155-thousand ambulance job cycles every month, and is the equivalent of a fifth of all incidents requiring an ambulance response during the same period.

Unsurprisingly, fewer available vehicles affects the time it takes ambulances not waiting outside hospitals to reach new patients.

Analysis shows that changes in the volume of longer handover delays has a perfect positive correlation with changes in the mean response time for the most serious incidents (Figure 2).

While it is important to reiterate that correlation is not the same as causation, it is notable that Category-1 and Category-2 mean response times have both exceeded their national standards (seven and eighteen minutes respectively) since mid-2021: this was the same period that handover delays of an hour or longer started to increase.

As discussed previously, patients' risk of *harm* grows the longer they have to wait during the handover process.

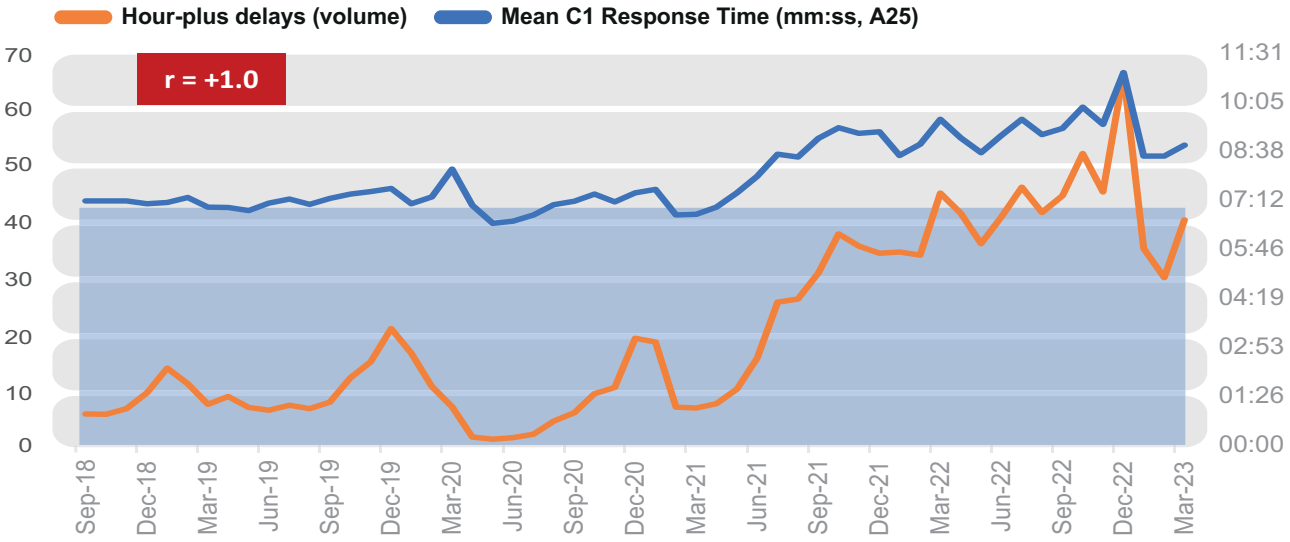
In the 12-months to March 2023, 868-thousand hours were lost to handover delays of an hour or longer. The number of patients risking potential (additional) harm as a result of these delays was an estimated 440-thousand, or over one-in-ten of the patients who required ambulance transport to an emergency department (ED) during that time.

The impact of these delays on staff was reflected in AACE's 2021 report which cited crews feeling drained, abandoned, worried and demoralised following long waits with sick and injured patients.

This outline of findings demonstrates the far-reaching consequences of handover delays, from the immediate health and well-being of patients and staff, to the queues of ambulances unable to respond to new incidents while available resources struggle to reach those patients within the expected national standards.

Concerning as the current position remains, however, the issues summarised here are not experienced equally across all trusts. Within the data there are considerable variation and notable outliers. It is from within these groups that the examples of good practice are found.

Figure 2. Hour-plus delays and Category-1 mean response time (source: NAIG, AQI)



Shaded area shows the seven-minute national standard for Category-1 mean response. There is a similarly strong, positive correlation between hour-plus handovers and Category-2 mean response time: here r = +0.9.

Handover delays vary considerably across England

AACE's monthly analysis has focused on national trends, rather than individual trusts. However there is considerable variation within these data which reflect the different challenges faced by ambulance trusts and hospitals across England.

The chart below looks at the experience for ambulance trusts, illustrating the range of hour-plus delays. It groups together the three trusts with the highest ranked, and the three with lowest ranked proportions of handover delays each month, and compares these two groups with the average for all trusts in England.

If the overall increase in the volume of these delays is itself striking (discussed on page 5), so is the difference between the highest and lowest groups: while the highest peaked at 36% in December, the lowest group has only once exceeded 7%.

The gap between the two has also grown significantly. For the first three years of the time-series the gap averaged three-percentage points. In the final 12-month period to March 2023, this has increased to 18-percentage points.

While individual trusts can move in and out of these two groups, for the most part they are fairly consistent. Given the numbers below are based on the average proportion, then it is also self-evident that included trusts will exceed, or fall below the group average by some margin.

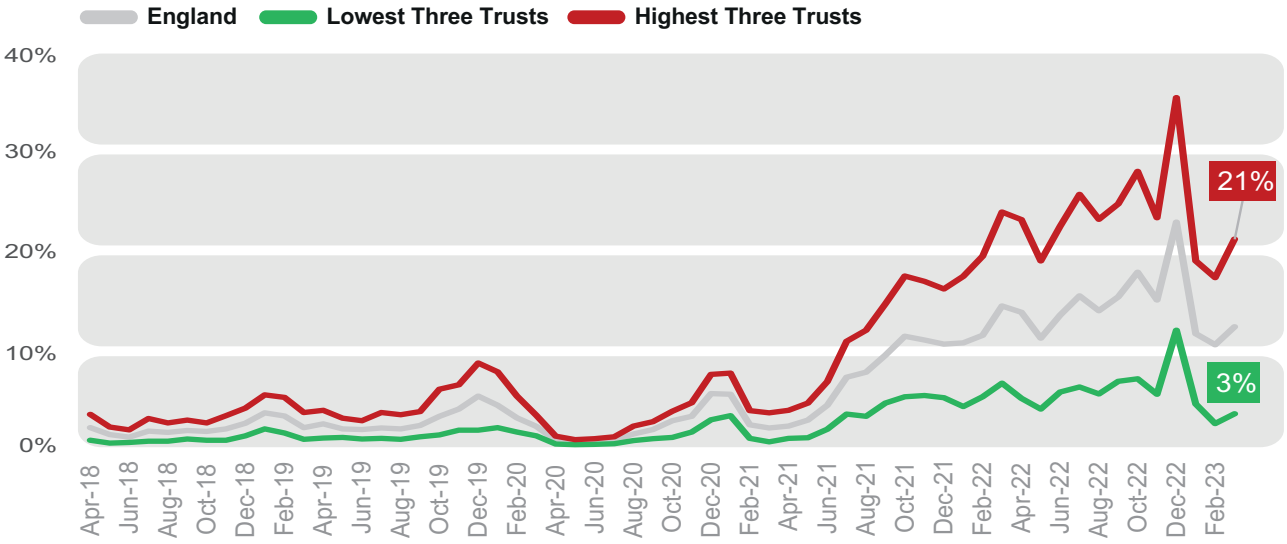
Likewise, the results for hospitals within these trusts vary significantly. In the 12-months to March 2023, the three ambulance trusts experiencing the highest proportion of hour-plus delays averaged 24%. However, each individual trust included several hospitals with a proportion of 30% or higher and several at 7% or lower.

This broad variance is also reflected in the three ambulance trusts experiencing the lowest percentage of hour-plus handovers.

It is to this group of acute hospital trusts - where the proportion has consistently trended below the national average - that AACE turned to learn more.

With NHS England's support, it has produced a series of case studies which currently cover ten such hospitals, spotlighting the measures in place that have helped keep longer handovers to a minimum. This has been done in the hope that sharing these stories with ICSs articulates effective practices and measures that will benefit the hospitals, and ambulance trusts that trend above the national average, and help bring longer handover delays back to manageable levels across England.

Figure 3. Distribution of hour-plus delays as proportion of handovers (source: NAIG)



Combined data for three trusts with the highest, and three with the lowest proportion of handover delays. Calculation is based on monthly ranking so the trusts in each groups can change. IOW not included.

Successful interventions – a summary of handover case studies

The full case studies for each of the hospitals listed in the front of this report can be found on AACE's *website*, but the main findings are summarised here. What is striking when drawing together the feedback from these ten, very different, locations is the degree of commonality between them - especially in relation to the importance of leadership and culture.

Leadership was one of the prevalent themes. The visibility of hospital leaders is key, with senior staff and medical specialists working regular shifts in ED (and other departments across the hospital). As well as practical support, it gives them first-hand experience of the challenges staff face. Handovers are often prioritised, with senior clinicians having oversight of the initial handover, allowing patients to be allocated promptly first time, and according to capacity. Elsewhere, some hospitals operate a process where handover oversight is escalated to the Chief Operating Officer if delays start to approach a 45-minute threshold.

Culture manifests itself in several ways. Overall, staff in these hospitals are highly patient centric. Patient stories are routinely shared, helping to keep the impact of delays focused on those directly affected. There is commonly a strong team ethos, with top-down ownership of handovers by all staff, a refusal to normalise delays, and regular communication and meetings to discuss and assess demand. This is made actionable by empowerment: the competency of nursing staff is valued, development, encouraged and trusted, enabling them to make decisions and lead on improvement ideas, freeing up staff elsewhere in the chain and ensuring best use of resources. Another cultural component is flexibility, where roving staff are moved between areas, dependent on need, avoiding silo working and again encouraging a sense of team.

Collaboration with parties outside the hospital is wide ranging. Strong, positive relationships with ambulance trusts are a starting point, often via a well embedded Hospital Ambulance Liaison Officer role. A proactive, integrated UEC system is a significant factor for many, where alternative care pathways are developed and consistent with a focus on hospital avoidance: Home First teams working out of ED, community strategies focusing on education of Primary Care Networks and giving patients access to information that helps keep them at home, clinical care plans for avoidable admissions, Urgent Community Response (UCR) teams built on local authority partnering, and initiatives to link partners across social care, council and health care have all helped reduce avoidable conveyance.

Validation and assessment at first point of contact, and first arrival have both been fundamental. Validation of Category-3 and Category-4 calls has been the focus of a recent push, and this has helped further reduce ambulance conveyancing. Effective Rapid Assessment and Treatment Teams (RATT) were cited by several as being instrumental, cutting down triage time for the most serious cases, and ensuring those patients rapidly arrive at the correct point of care – again keeping flow moving through the hospital.

Dedicated risk management is in place in many of these hospitals, with devoted teams working to harmonise data from across the hospital and ICS to enable leaders to make live, proactive judgements. These are integral to creating bed capacity and maintaining patient flow.

Use of hospital space and technology was also cited, but in a number of different ways. These range from strong single point of access provision, to which ambulance services have access, dedicated rapid access triage cubicles, zero tolerance on corridor care, the development of new urgent treatment centres and purpose-built same day emergency care villages. Digital tablets are employed in some cases to help new walk-in arrivals to ED find the right point of care, sometimes redirecting them from ED and once more freeing up resource for ambulance arrivals.

The shift in media and regulatory focus

In January 2023, the House of Lords published a report titled, *'Emergency healthcare: a national emergency'.* This report called for "cross-government attention, and accountability from the Prime Minister down" in tackling the growing crisis facing UEC. Hospital handover delays were cited in the report, which covered the time lost to delays, the harm caused to patients, and the impact on the broader UEC system.

The report, and the call to action it represents, is welcomed. It was published following a period of increased parliamentary debate and media focus on handover delays.

This change in focus is illustrated by the chart below, which shows the number of times ambulance handover delays were mentioned in online news articles over the last decade. Consistent search terms were used for each 12-month period ending March, from 2012 to 2023.

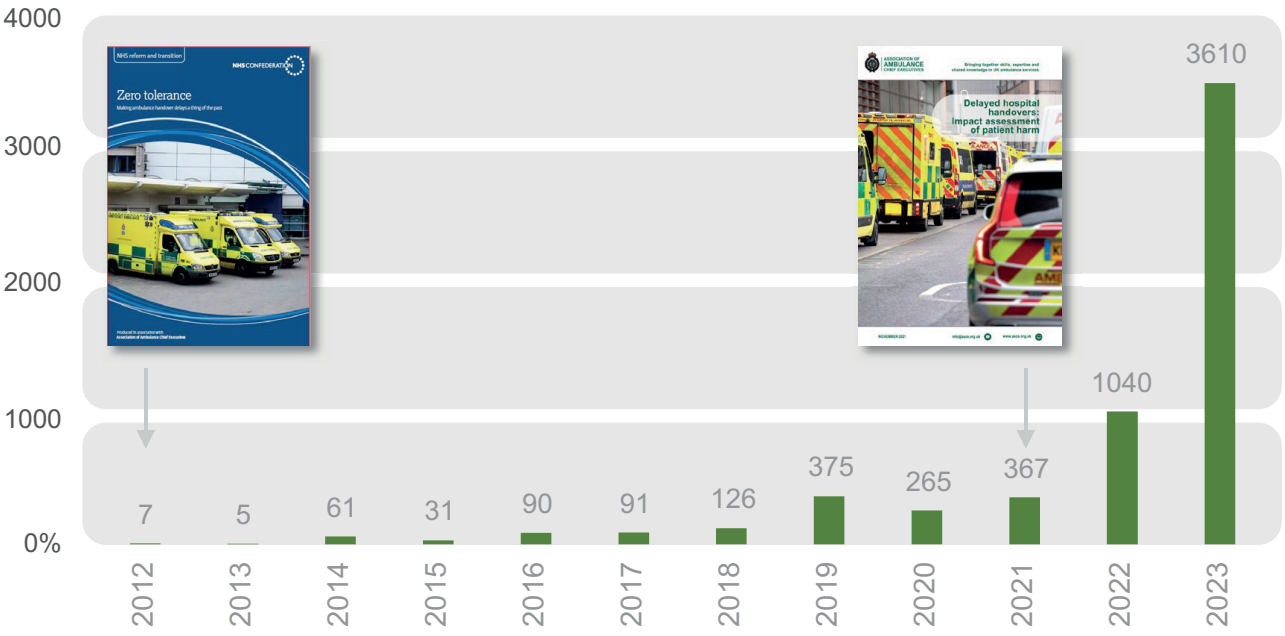
From single digit results over a decade ago, the most recent period returned well over three-thousand. Among these articles, many of which mentioned AACE's 2021 report, were powerful stories of individual loss and harm, including several high profile reports of patients who had died during a prolonged handover wait.

The revelation of the scale of handover delays alongside the individual human tragedies that have occurred as a result, have finally been bought to the fore. Further evidence of this can be seen by including the word "parliament" in the search terms outlined below. Over a three year period from April 2011, seven articles including these terms. In the three years from April 2021, this number was over seven-hundred.

While appreciating that such searches are not an exact science, when combined with the clear messages of concern now being expressed at the highest political level, they do illustrate how the debate has shifted in recent years.

'Zero Tolerance' was the seed for this change. Its message - along with evidence of the impact of ambulance handover delays - grew over the following years, consolidating into the increased awareness and urgent calls for action seen in 2023. Hopefully then, a combination of political will, renewed focus from leaders across the health sector, and shared good practice between those on the front line, will now help reduce handover delays, protecting patients, staff and vital resources across the UK.

Figure 4. Online news articles mentioning ambulance handover delays (source: Google)



Uses the search words: hospital, ambulance, "handover delays", UK. Each period covered is the 12 months ending March that year.

Conclusion

Over the decade since 'Zero Tolerance' patient hospital handover delays have continued to grow, with longer delays reaching unprecedented levels in late 2022.

In the meantime, the potential harm to patients and the drain on vital ambulance resources remains significant.

A positive change over the last ten years is that of increased awareness. Recognition of the impact of handover delays has grown, with greater regulatory focus and expanded coverage across all media.

There is also a significant ongoing drive by NHS England to reduce and eliminate handovers. As part of this process, it is working to ensure all ambulance data, including handover delays, is internally consistent. NHS Digital is incorporating handover data into the evolving Ambulance Data Set (ADS). This consolidates a number of existing data sources to ultimately help better understand the end-to-end patient experience within the UEC system.

The recent spotlight on handover delays has also helped reveal examples of ambulance and acute trusts working together to keep longer delays to a minimum. These valuable case studies provide examples for all to draw from going forward, and AACE will continue to work with individual hospitals and NHS England to bring more examples to life.

There have been recent national changes to mandatory Infection Prevention and Control (IPC) measures, which have moved to flexible implementation based on local risk assessment. This relaxation could remove some pressure for ambulance and acute trusts, and perhaps contribute to a reduction in handover delays.

The number of handover delays has dropped in early 2023. This is a positive short-term trend, but one that needs to be sustained for some time to bring levels back in line with those seen even two years previously.

In the meantime, AACE will continue to monitor hospital handovers, and report regularly on the key trends affecting the sector.

Finally, AACE would strongly advocate all partners and stakeholders continuing and, in fact, enhancing efforts to ensure handover delays do not become an accepted and normalised part of ambulance service and emergency department life. As AACE and its partners have repeatedly articulated - and continue to articulate - the impact upon patients waiting outside hospitals, as well as those waiting in the community, and on ambulance service employees, is considerable and of significant detriment. We must all continue to strive to eliminate hospital handovers and take action wherever there is an opportunity to do so at both local and national levels.