

Assessing the burden of clinical documentation

Insights into the challenges associated with clinical documentation as perceived by Doctors, Nurses and Allied Health Professionals in NHS trusts.



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Executive summary

Study reveals NHS doctors, nurses and allied health professionals are spending 25% longer on clinical documentation than they were 7 years ago. On average, one third of working hours is spent generating clinical documentation and one hour per day is spent searching for information.

In 2022, Nuance commissioned an independent study into the challenges associated with clinical documentation as perceived by clinicians from NHS hospitals. This study provides insights from nearly 1,000 doctors, nurses, and allied health professionals (AHPs) from across England. Building on a very similar study published in 2015, the new findings provide both an assessment of the situation today, and how this has changed over the intervening years.

Over the last seven years there have been many changes in healthcare – from the introduction of new digital tools to a global pandemic, and during this time many of the documentation challenges faced by clinicians appear to have remained the same or worsened.

Key takeaways:

- In 2022, the average time spent generating clinical documentation, across all roles (doctors, nurses and AHPs) was **13.5 hours per week**. An increase of 25% over the last 7 years.
- **3.2 hours per week** was spent on clinical documentation outside of normal working hours, and for consultant doctors this average was **4.7 hours per week**.
- Both studies showed that in **1 in 4 instances**, when clinicians access clinical records, the information they require is either not available, or not sufficiently clear.
- In 2015, an average of 55 minutes per day was spent searching for information and in 2022 this had increased to **62 minutes per day**.
- The value of time for a consultant doctor searching for missing information and creating/adding to clinical documentation is nearly **£57,000 per doctor, per annum**.

Another striking finding is that use of pen and paper for clinical noting has halved since 2015. This study was not intended to test the impact of electronic patient records (EPR) but has highlighted factors relating to digitisation that are adding to the burden of clinical documentation.

This report highlights how much time is spent on clinical documentation and sets out some of the economic as well as patient flow implications. It does not explore how the burden of clinical documentation impacts clinician wellbeing, but it is worth noting a separate survey conducted by Nuance in 2020 where **85% of UK healthcare professionals said clinical documentation burden contributes to burnout**.

Study overview & demographics

Nuance Communications commissioned independent research consultancy, Ignetica to undertake this study to assess the perceptions of doctors, nurses and AHPs regarding the challenges associated with clinical documentation in **five NHS England trusts : four Acute trusts and one Mental health and community trust**. The new research follows the similar Nuance and Ignetica study published in 2015. As such, this enabled the new work to also **explore and understand how perceptions have changed in the 7 years, particularly as the use of EPR systems has expanded**.

The programme involved trusts from different regions across England. All had **well-established electronic noting systems with these being either best-of-breed systems or a trust wide EPR system**. In each case, the

research hypothesis was reviewed with the trust’s Chief Clinical Information Officers (CCIOs) or similar role to challenge and refine the logic. Based on this, Trusts asked their clinicians to respond to the online survey focussing on the time spent creating or adding to clinical documentation, as well as exploring situations when the necessary information is not available. The surveys were undertaken between April and July 2022.

Through the participation and support of the Trusts, a total of 966 clinicians took part in the 2022 survey, providing a sizeable population for analysis and segmentation.

Figure 1: Respondents role profile

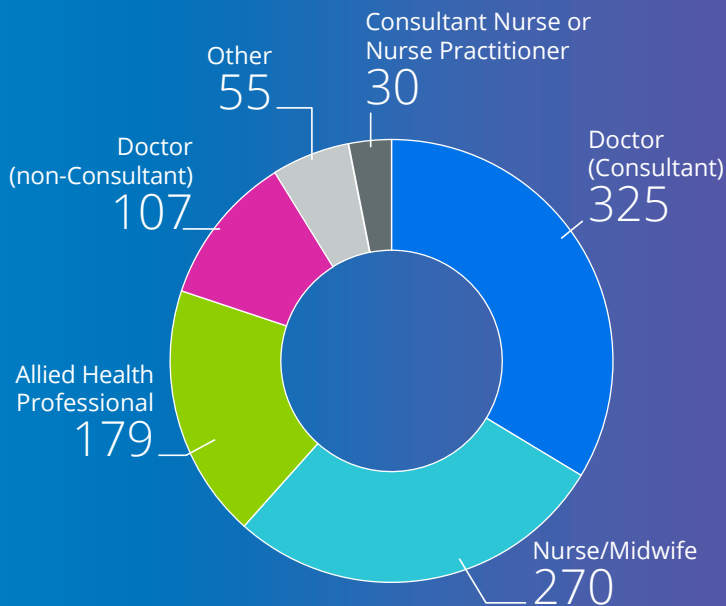
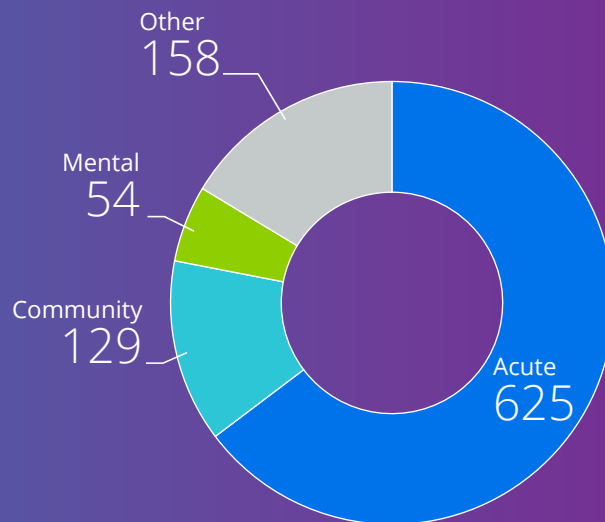


Figure 2: Respondents primary field of work



Documentation modalities

The survey asked respondents to indicate which documentation modalities they used, selecting all that apply from a list of defined options, as applicable to their different clinical settings.

The change in documentation modalities from paper to digital provides a key index to electronic system utilisation.

Documentation modalities have changed dramatically since 2015 with Pen & Paper (formerly cited respectively for Inpatients and Outpatients by 80-90%) now cited by c40% reflecting the increasing levels of digitisation in NHS trusts. Perhaps most surprisingly, there has been little increase recorded in the use of tablet and touchscreen.

Table 1: Documentation modalities for Inpatients and Outpatients

DOCUMENTATION MODALITY	Inpatients		Outpatients	
	2022	2015	2022	2015
Pen & Paper	41.0%	89.4%	37.9%	81.0%
Keyboard and Mouse	95.0%	55.3%	90.5%	63.3%
Tablet and Touchscreen	13.7%	12.8%	6.6%	5.1%
Dictation and Transcription	8.9%	17.0%	35.6%	38.0%
Speech Recognition	13.0%	0.0%	37.5%	3.8%
<i>n=</i>	439	94	317	79

Working hours and the time spent on clinical documentation

Respondents were asked to indicate the number of hours they work per week. This revealed a wide distribution of working hours across the respondent population but with a very distinct modal response at 37.5 hours per week. This provides a baseline measure for later analysis of timings specific to documentation tasks.

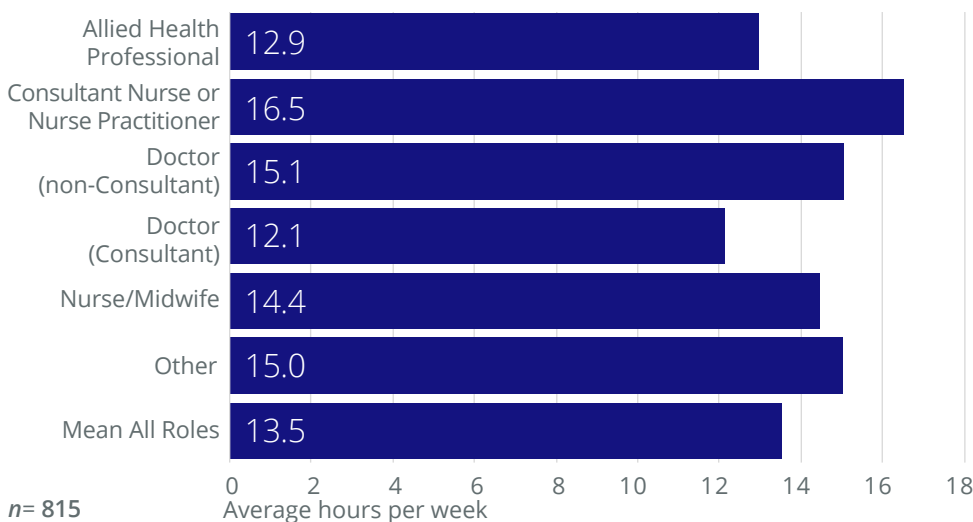
In this study, whole time equivalence (WTE) has been taken as 37.5 hours per week reflecting both contract norms and the modal peak seen at that level. This follows the same methodology as used in 2015 and also ensures comparisons between 2015 and 2022 can be made on an equivalent basis.

Time spent creating or adding to clinical documentation

Respondents were asked to estimate the number of hours per week they spend adding to, or creating, clinical documentation in inpatient, outpatient and community care settings. The combined, WTE adjusted, hours reveals that on average, across all respondents, this consumes 13.5 hours each per week. As shown in figure 3, there is some variation by role, with consultant nurses¹ and non-consultant doctors highest, however there is otherwise broad similarity across all key clinical roles.



Figure 3: Average time spent adding to or creating clinical documentation per week

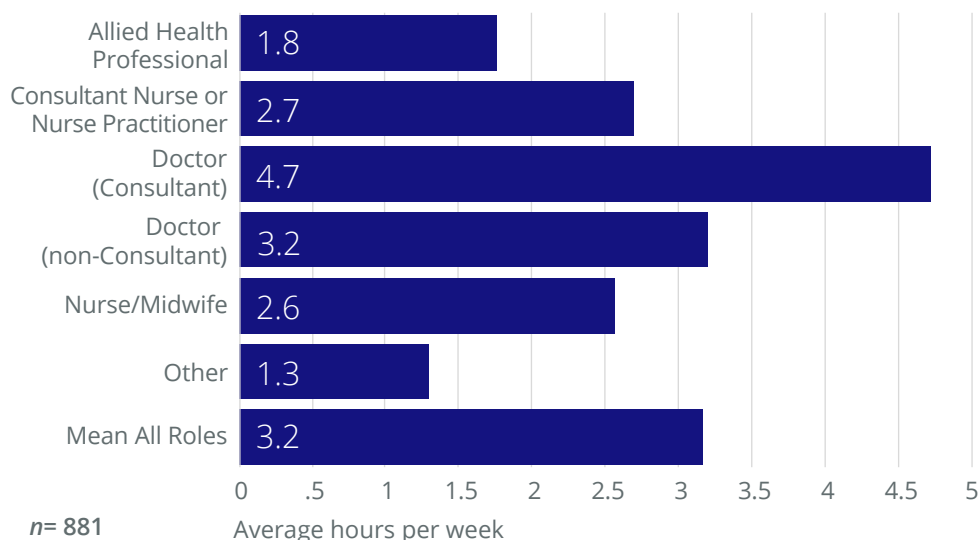


¹ Note the sample size for consultant nurses/nurse practitioners was small at 26, and findings for this cohort are therefore generally excluded from the analysis due to the lower level of implied confidence.

Time spent creating or adding to clinical documentation out of hours

Respondents were also asked how much time they spend adding to or creating clinical documentation out of normal working hours. As shown in figure 4, respondents indicated an average of 3.2 hours per week is consumed on this basis (WTE adjusted). This was highest for consultant doctors at 4.7 hours.

Figure 4: Average time spent adding to or creating clinical documentation per week out of hours

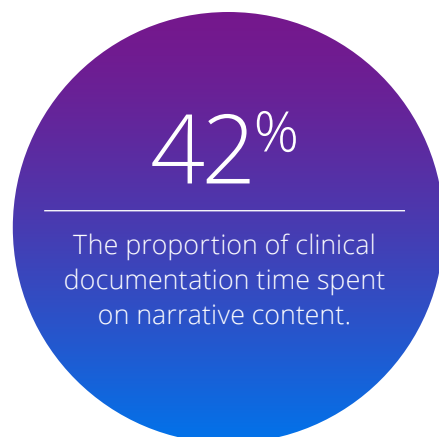


Proportion of clinical documentation time that is narrative

Within the time spent generating clinical documentation, the study investigated what proportion of this time is involved with narrative content as opposed to structured form completion. Estimated shares were requested for inpatient (IP), outpatient (OP) and community care (CC) settings, from which combined mean weighted rates were also derived per role, as set out in table 2 below.

Table 2: Proportion of time generating narrative content

NARRATIVE CONTENT	Average % of time generating narrative content			
	IP	OP	CC	Combined
Roles				
Allied Health Professional	56.1	40.0	34.2	45.0
Doctor (Consultant)	46.2	62.3	18.9	46.7
Doctor (non-Consultant)	52.7	46.5	16.9	42.7
Nurse/Midwife	39.4	25.3	30.6	33.3
Mean per setting	46.7	47.8	25.3	41.7

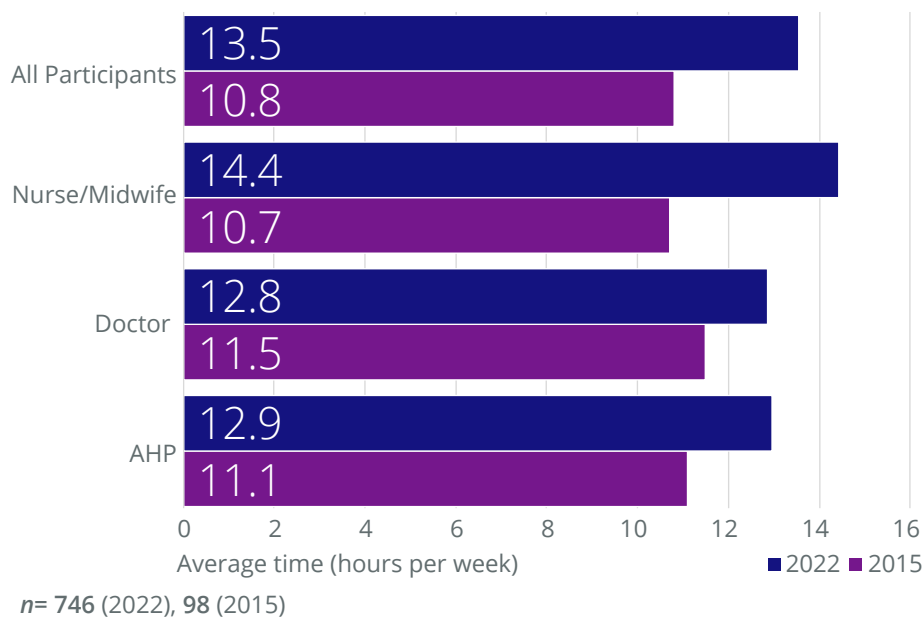


As can be seen, overall, close to 42% of clinical documentation time is spent generating narrative content. There is some variation by role, and per setting.

Comparison with the 2015 study

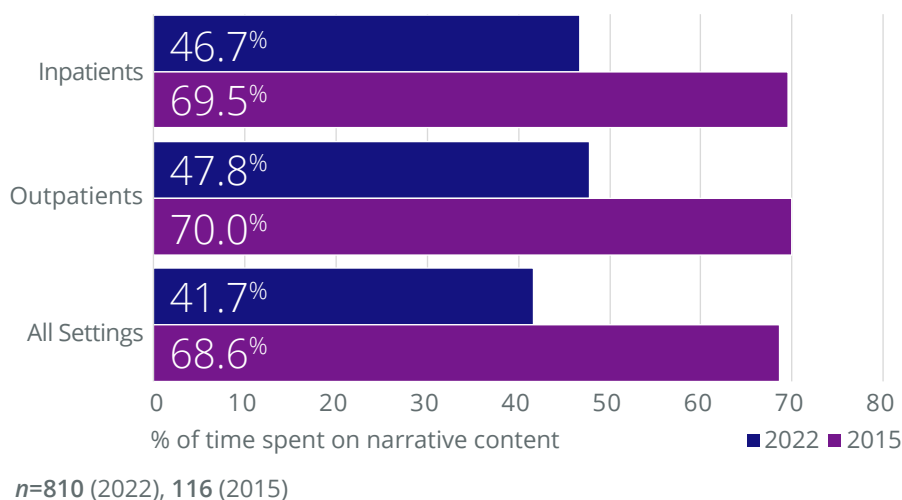
There has been a significant increase in the time spent adding to, or creating clinical documentation per week. As shown in figure 5, the overall average was 10.8 hours in 2015 and has increased to 13.5 hours in 2022.

Figure 5: Comparison of the mean hours spent generating clinical documentation 2022 cf 2015 (WTE adjusted)



Over the same period, the proportion of time spent on narrative notes has decreased, as shown in figure 6. Where in 2015 this was 69% overall, it is now significantly lower at 42%, with a very similar pattern of change reflected in the findings for both inpatients and outpatients².

Figure 6: Comparison of proportion of time spent generating narrative notes, 2022 cf 2015



² In this case the sample size for community care in 2015 was too small to reliably draw definitive conclusions, however the indication was also one of reduction.

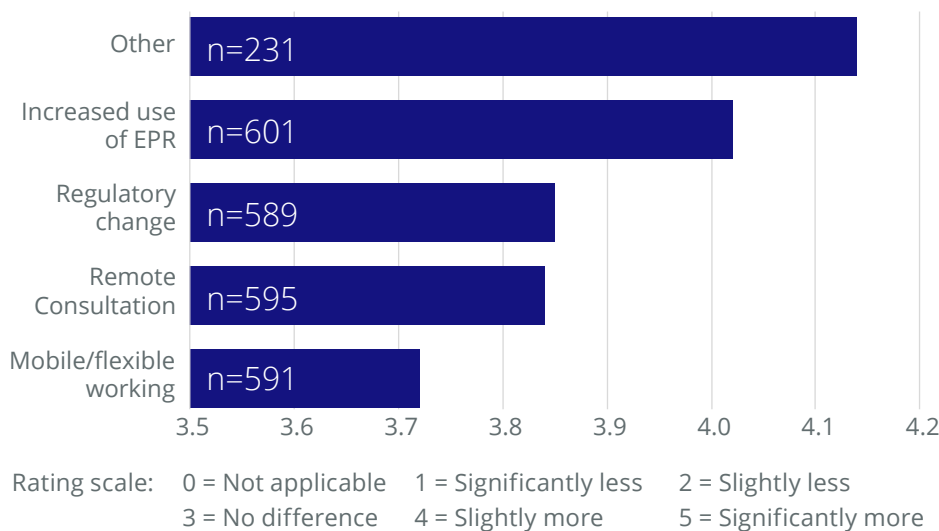
The decrease in narrative content likely correlates with the increased digitisation of notes, and specifically structured forms within such systems.

There also appears to be a correlation between increasing digitisation, and the increasing time consumed generating documentation. The study therefore also asked respondents to consider the extent to which different factors had contributed to the increasing challenge.

As set out in figure 7, respondents were asked to rate the impact of a series of named factors as well as applicable 'other' factors. The rating options ranged from significantly less (1) to significantly more (5), with no difference being 3.

Of the named options, increased use of EPR was the most frequently cited, and the highest mean rated factor, at just over 4, implying 'slightly more'. Regulatory change and remote consultation were very similarly rated, followed by mobile and flexible working. At mean levels this suggests a general view that these all added 'slightly more' to the challenge, rather than any one being the fundamental driving factor.

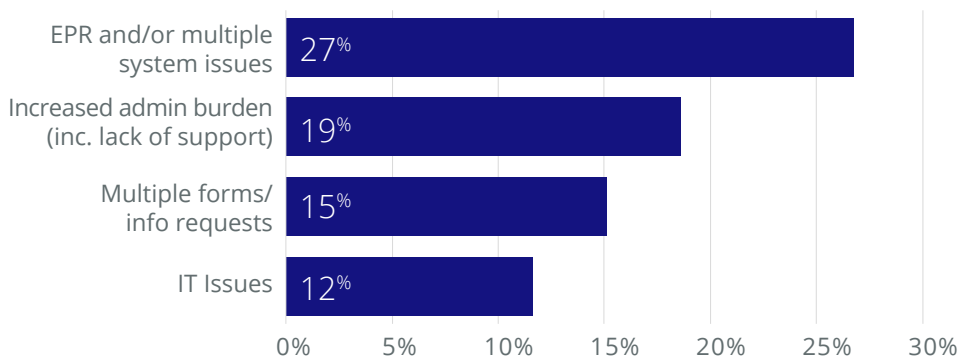
Figure 7: Mean rating and response counts for the factors influencing documentation time



Despite the wider benefits of EPRs and digitisation, there also appears to be a correlation between increasing digitisation, and the increasing time spent on clinical documentation.

The most frequent themes, emerging from the 'other' response comments, are set out in Figure 8.

Figure 8: Review of the "other" factors based on analysis and clustering of the comments provided



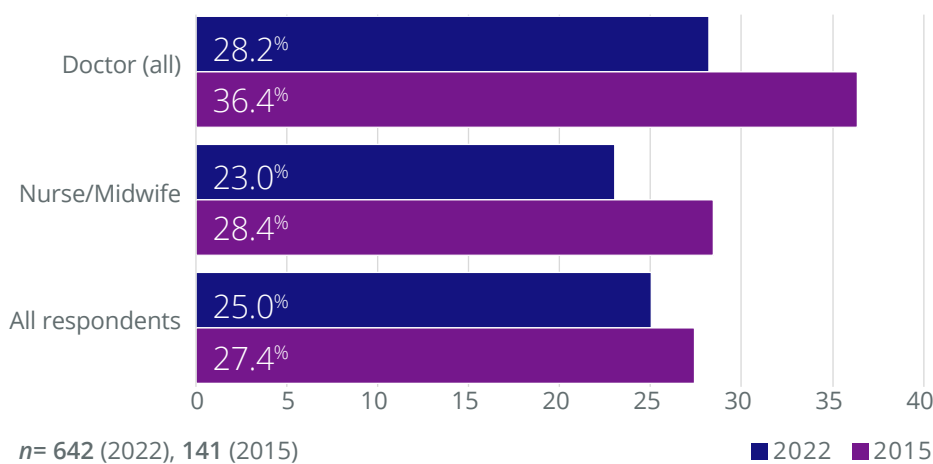
n= 231 Indicated 'Other', 81 of whom left comments which have been analysed in the above groupings

As can be seen in figure 8, the four key themes that emerged from these descriptive comments predominantly relate to digitisation issues.

Accuracy and completion of clinical notes

Beyond generating clinical documentation, a further series of challenges can arise when working with the existing records in the delivery of care. The study investigated the frequency of instances when reviewing notes that clinicians find either the information is not available, or it is insufficiently clear in meaning or legibility.

Figure 9: Share of instances when the information required is not available or sufficiently clear



As shown in Figure 9, overall, in 25% of instances the information isn't available or sufficiently clear.

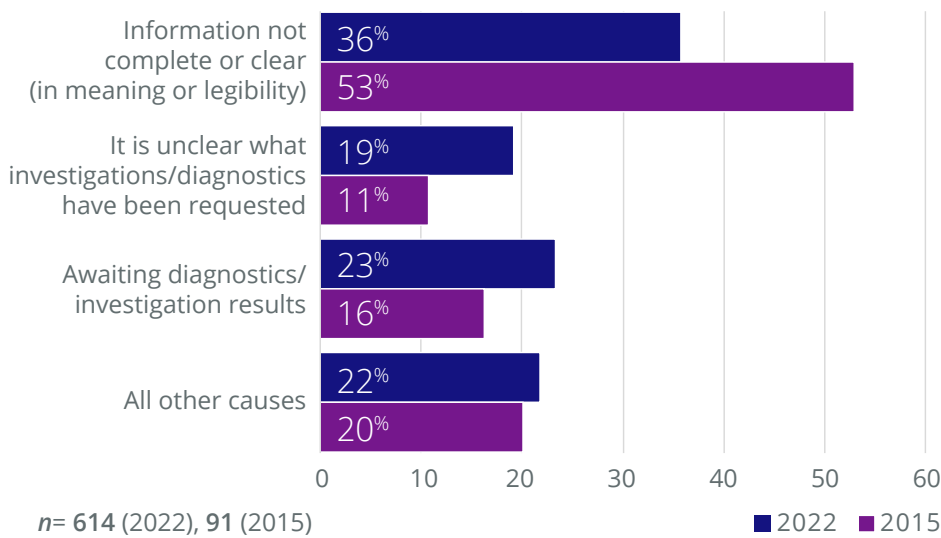
Causation of information issues

Having established the proportion of instances that information was either not available or not sufficiently clear, the study further sought to understand the principal causes of these issues.

As set out in figure 10, the primary cause of information issues in 2015 and 2022 continues to be information not complete or clear (in meaning or legibility). However, there has been a significant improvement with this issue reducing by 17% over the last 7 years.

In contrast, issues relating to diagnostics appear to have significantly worsened over the last 7 years. Whilst it was beyond the scope of this study to investigate the underlying issues these results have flagged an interesting area for further research.

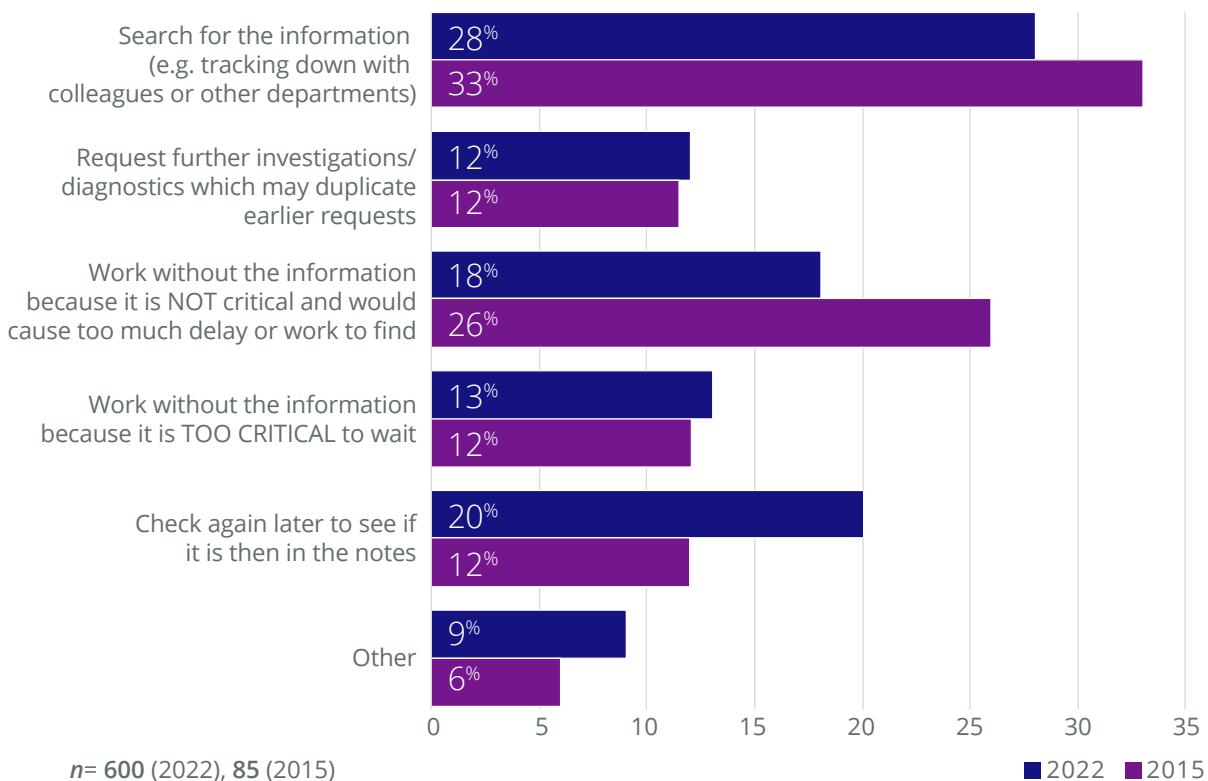
Figure 10: Causation of information issues, 2022 vs 2015



Responses to information issues

Having explored the causation of information issues, the study also sought perspectives on how these situations are addressed. As shown in figure 11, the overall approaches, when the required information is not available/ sufficiently clear, remains similar to 2015. There are two areas where significant changes can be seen: Firstly, checking again later to see if the information is then in the notes has increased significantly. Secondly the instances of working without the information because it is not critical and would take too long to find has decreased.

Figure 11: Responses to information issues, 2022 vs 2015



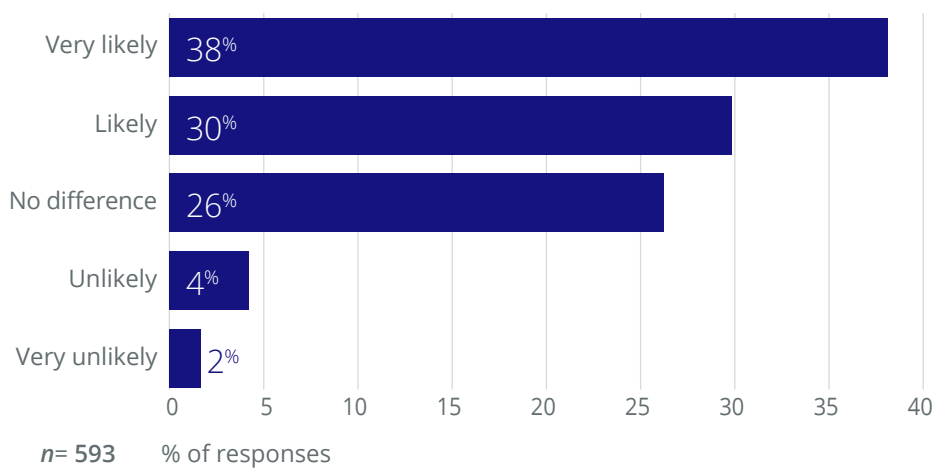
More complete notes with more time

Given the implications of insufficiently clear or complete notes, respondents were asked

“would your notes be more complete if you had more time?”

As can be seen in figure 12, 68% felt it was either ‘very likely’ or ‘likely’, compared to only 6% who felt it was ‘unlikely’ or ‘very unlikely’ their notes would be more complete if they had more time.

Figure 12: Likelihood of notes being more complete with more time

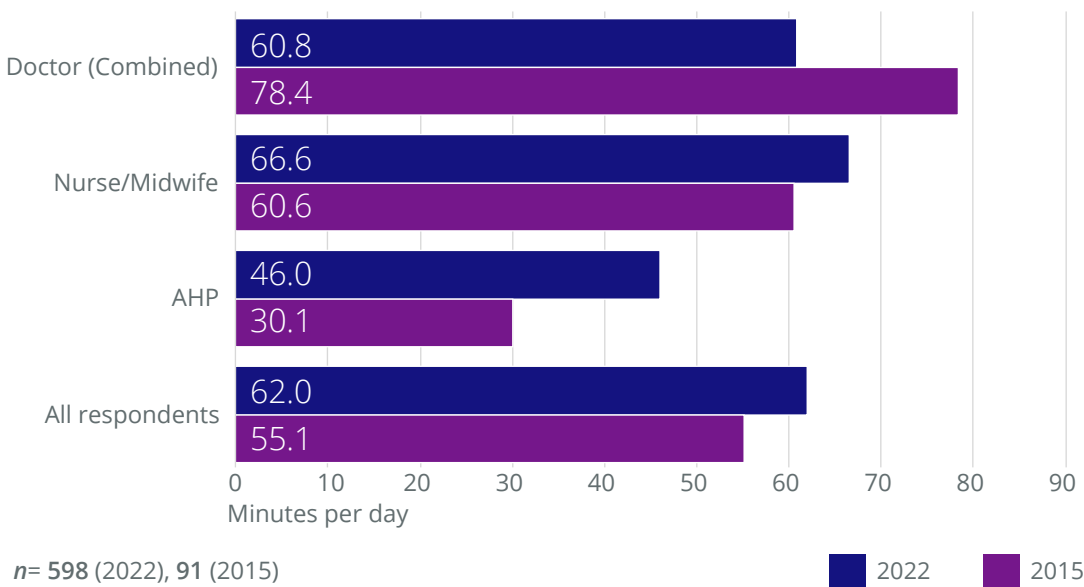


Time spent searching for information and impact of the delay

With searching for information being the most frequently used response to information issues, the study asked respondents to assess how much time this consumed, on average per day.

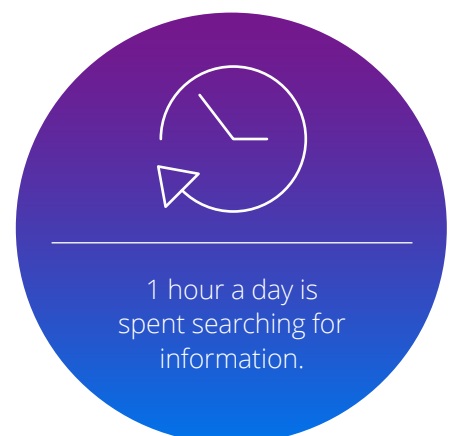
As shown in figure 13, the average time across all respondents was 62 minutes per day, an increase from the 55 minutes seen in 2015.

Figure 13: Average time spent searching for information per day (minutes, WTE adjusted)



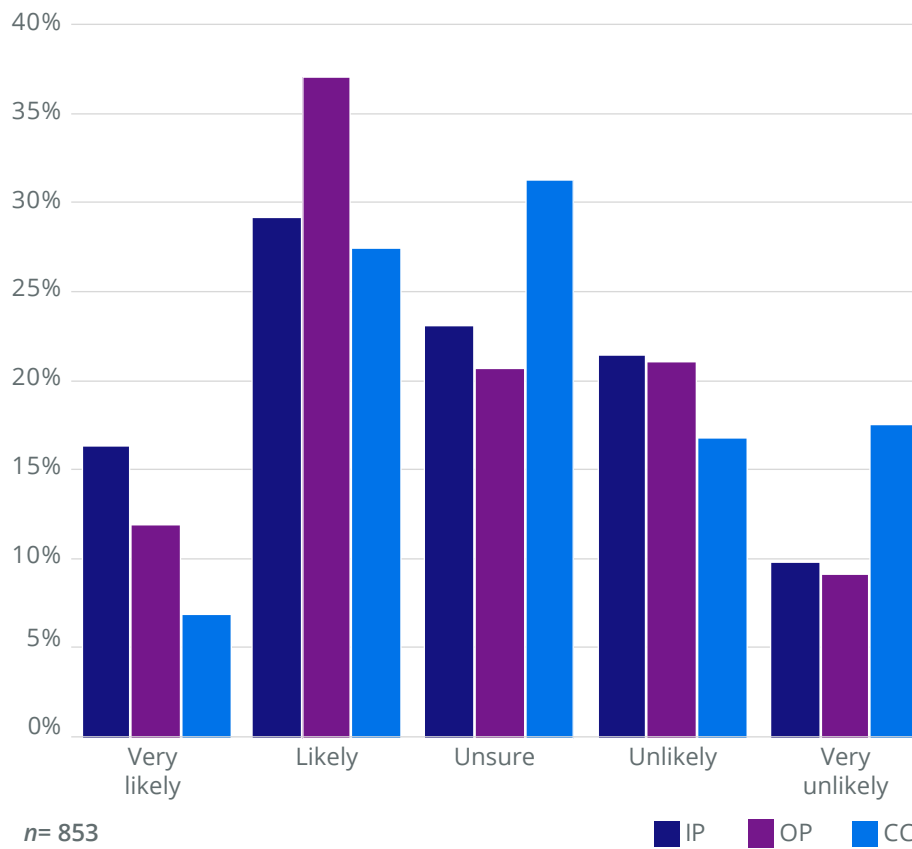
Clearly, having to spend an hour a day on searching for information is a significant burden for clinicians.

However, it is also possible that the delay waiting for the information could have a potential impact on patient's length of stay or care journey. The study therefore asked clinicians for their views on the potential impact.



As reflected in figure 14, the modal (most common) response was that it was 'likely', this would have an impact. However, for community care the modal responses was 'unlikely'. Further segmentation (not shown) also reveals a much more distinct 'likely' response for those working in Medicine, with this clearer still in outpatient settings overall, as well as for consultant doctors in inpatient settings.

Figure 14: Likelihood of information delays extending patient stay/journey



Economic implications

The survey respondents have provided a clear indication of the challenge of working with clinical documentation, as well as key timings assessments. Time spent on clinical documentation not only adds to the workload burden faced by clinicians but also has considerable economic implications.

Using the applicable NHS 2021-22 pay bands, including overhead loading at 30% to represent the wider costs of employment, hourly rates can be derived for each of the roles involved in the study. Since there are a range of levels within the role groupings, for analysis purpose we have taken the mid-range/mid band for the applicable roles, and in the case of Nursing and AHPs, on the basis of prudence, low Band 6 was used for modelling purposes.

Using these rates, the time spent adding to clinical documentation, as well as searching for information can be translated into economic terms.

As set out in the tables 3 and 4 the values are very significant. Overall, across all of the roles represented in the study (and weighted to their volume), this equates to an average per person of over £25,000 per annum adding to clinical documentation and over £10,000 per annum searching for information. Whilst the need to add to clinical documentation and search for information is intrinsic to each role, the value highlights the scale of opportunity if approaches could be developed to reduce either of these average times.

Table 3: The value of time spent creating or adding to clinical documentation

AVERAGE TIME ADDING TO CLINICAL DOCUMENTATION (HOURS PER WEEK) AND ITS ECONOMIC VALUE				
Time and economic value	Hours	£ Week	£ Month	£ Year
Doctor (Consultant)	12.1	869	3,331	39,974
Doctor (non-Consultant)	15.1	629	2,411	28,934
Consultant Nurse or Nurse Practitioner	16.5	962	3,688	44,261
Nurse/Midwife	14.4	322	1,234	14,811
Allied Health Professional	12.9	289	1,107	13,283
Overall weighted average	13.5	557	2,137	25,639

Table 4: The value of the time spent searching for information

AVERAGE SEARCH TIME PER DAY (MINUTES) AND ITS ECONOMIC VALUE				
Time and economic value	Mins	£ Day	£ Month	£ Year
Doctor (Consultant)	61.8	74	1,414	16,974
Doctor (non-Consultant)	57.5	40	766	9,198
Consultant Nurse or Nurse Practitioner	63.6	62	1,182	14,178
Nurse/Midwife	66.6	25	475	5,697
Allied Health Professional	46.0	17	328	3,935
Total and weighted average	62.0	44	845	10,143

£39,974

The value of time for a consultant doctor creating or adding to clinical documentation per annum.

£16,974

The value of time for a consultant doctor searching for missing information per annum.

£57,000

The value of time for a consultant doctor creating/adding to clinical documentation and searching for missing information per annum.

Conclusions

The study quantifies the challenges associated with clinical documentation as perceived by Doctors, Nurses and AHPs working in NHS England trusts.

There may be few who would challenge the view that accuracy and completeness of clinical documentation is essential for integrated, effective, efficient and safe delivery of care. However, the study shows documentation may not always be as complete or accurate as clinicians may wish. On average, an hour a day is currently spent searching for missing information.

The study shows the burden of clinical documentation has increased over the last 7 years. Doctors, Nurses and AHPs are spending 13.5 hours per week generating clinical documentation, and this is an increase of 25% compared to 2015. Although there are many influencing factors, issues relating to the digitisation of clinical records were the primary driver.

It is important for NHS leaders and EPR vendors to understand the challenges of clinical documentation. These challenges impact patient care, the patient journey, the wellbeing of NHS healthcare professionals, staff utilisation, and Trust economics.

The study has set out to establish the current situation and the differentials compared with 2015, as perceived by clinicians based on their day to day experience, with as broad a representation as possible. It has not however sought to establish the impact of use of different digital documentation modalities on any of these variables. The variation in the design and deployment of such systems would require a rather different approach to control for these factors, and we hope may be an area for future research.



The study shows the burden of clinical documentation, for NHS Doctors, Nurses and AHPs, has increased over the last 7 years.

Acknowledgment

We would like to acknowledge, with grateful thanks, the involvement of the five Trusts who participated in the study and the individual clinicians who completed the survey. Each of the Trusts took part on the basis of anonymity and hence are not named. In recognition, and in thanks for the participation of each, Nuance Communications has made a charitable donation to Marie Curie.



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HC_5179_01_B, October 5, 2022_EN_UK