

Ambient AI Webinar

Friday 25th April 2025

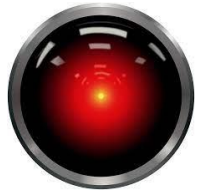


Welcome!

Dawn Plummer – Digital Health Innovation Lead



Housekeeping



- This first part of the session is being recorded and will be shared publicly after the event.



- Please keep your microphone on mute if you are not speaking.



- There is time for Q&A, feel free to type questions in the chat in the meantime.



Purpose

The aims of the event are to:

- Discuss ambient AI and how it can help our NHS workforce
- See an ambient AI technology and how it works (Heidi Health)
- Discover how ambient AI is being used in both a primary and secondary care setting
- Q&A



Agenda

Time	Item	Lead	Organisation
11:00 – 11:10	Welcome and introduction What is Ambient AI?	Dawn Plummer, Digital Health Innovation Lead	Health Innovation East Midlands
11:10 – 11:20	Heidi Health presentation	Oscar Bown, Go to Market Lead	Heidi Health
11:20 – 11:30	How ambient AI will be used in primary care	Neil Fraser, Medical Director	PICS
11:30 – 11:45	How ambient AI is being used and evaluated in secondary care	Dmitriy Chernov, Chief Medical Information Officer	West Hertfordshire Teaching Hospitals NHS Trust
11:45 – 11:55	Audience Q&A	Dawn Plummer, Digital Health Innovation Lead	Health Innovation East Midlands
11:55 - 12:00	Next steps and support from HIEM	Dawn Plummer, Digital Health Innovation Lead	Health Innovation East Midlands



Who we are and what we do

- One of **15 health innovation networks across England**, we are the East Midlands NHS innovation arm.
- Over **10 years expertise supporting** adoption of transformative technologies and pathways, via our pipeline we help **identify and import** solutions to meet local challenges
- We are funded by the NHS and the OLS – our core support and services are **free to local NHS partners**
- We support innovators to become '**NHS ready**' and to collect real world evidence that they can help to solve real problems faced by our organisations



Ambient AI - What is the problem to solve?

- Two thirds of clinician's report working additional unpaid hours to deal with the administrative burdens of their role
- GP practices in England are struggling to recruit and retain staff
- GP numbers are in decline
- Clinicians are expressing a desire to gain flexibility over their workload



What is ambient AI?

- Ambient AI is a type of 'hands-free' artificial intelligence
- Operates in the background, providing insights and managing systems without needing constant user engagement
- It aims to be an unobtrusive companion, enhancing experiences and automating tasks
- Used in a variety of sectors but it is becoming of interest in healthcare as our clinicians often experience burnout



Why is Ambient AI useful?

- Ambient AI takes a large proportion of the note taking workload away from a clinician
- Patients like that their clinician is more engaged and focused on them rather than facing the computer screen
- It saves time – clinicians are not needing to catch up on admin tasks between appointments or at the end of their clinic
- Can be used to complete customised templates and information needed for the patients record
- Some Ambient AI technologies incorporate clinical decision support algorithms



Innovator showcase

Heidi Health





Primary Integrated
Community Services Ltd

Implementing Ambient AI in Primary Care

Dr Neil Fraser

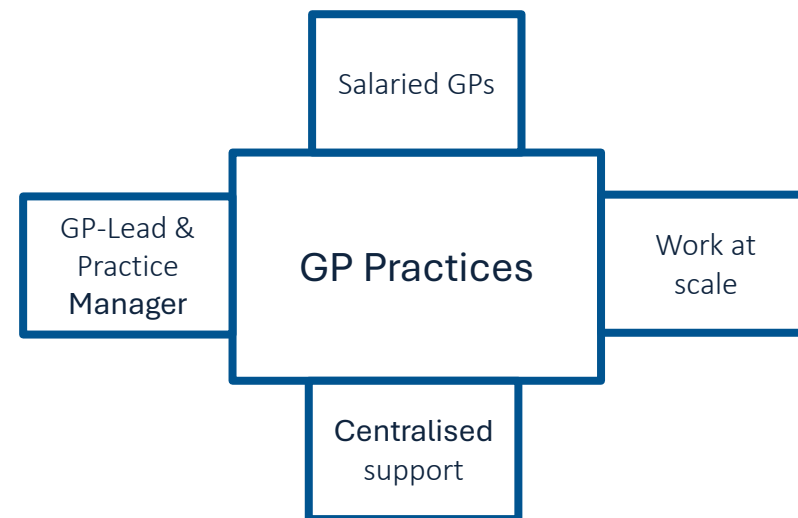
GP

Medical Director, Primary Integrated Care Services

GP owned
NHS provider

@pics_primary
picsnhs.org.uk

GP-owned
Primary Care
Provider



Primary Integrated
Community Services Ltd



Out of Hospital
Services
(Gynaecology, Pain,
CFS)

PCN Host and
Support Service

Community Services
(incl. acute home
visiting, end of life)

Primary Integrated
Community Services Ltd



Challenges facing our clinicians

- Demand > capacity
- Increasing complaints and expectations
- Increasing administrative workload
- Expectations of documentation

- Inefficiency
- Common processes

Why Ambient AI?



Challenges facing our organisation

- Staff wellbeing
- Capacity to change

Potential of AI

- Saves time (30s/consultation)
- Quality and detail of documentation
- Focus on patient during consultation

....patient satisfaction?
....staff burnout?

Patient
Experience

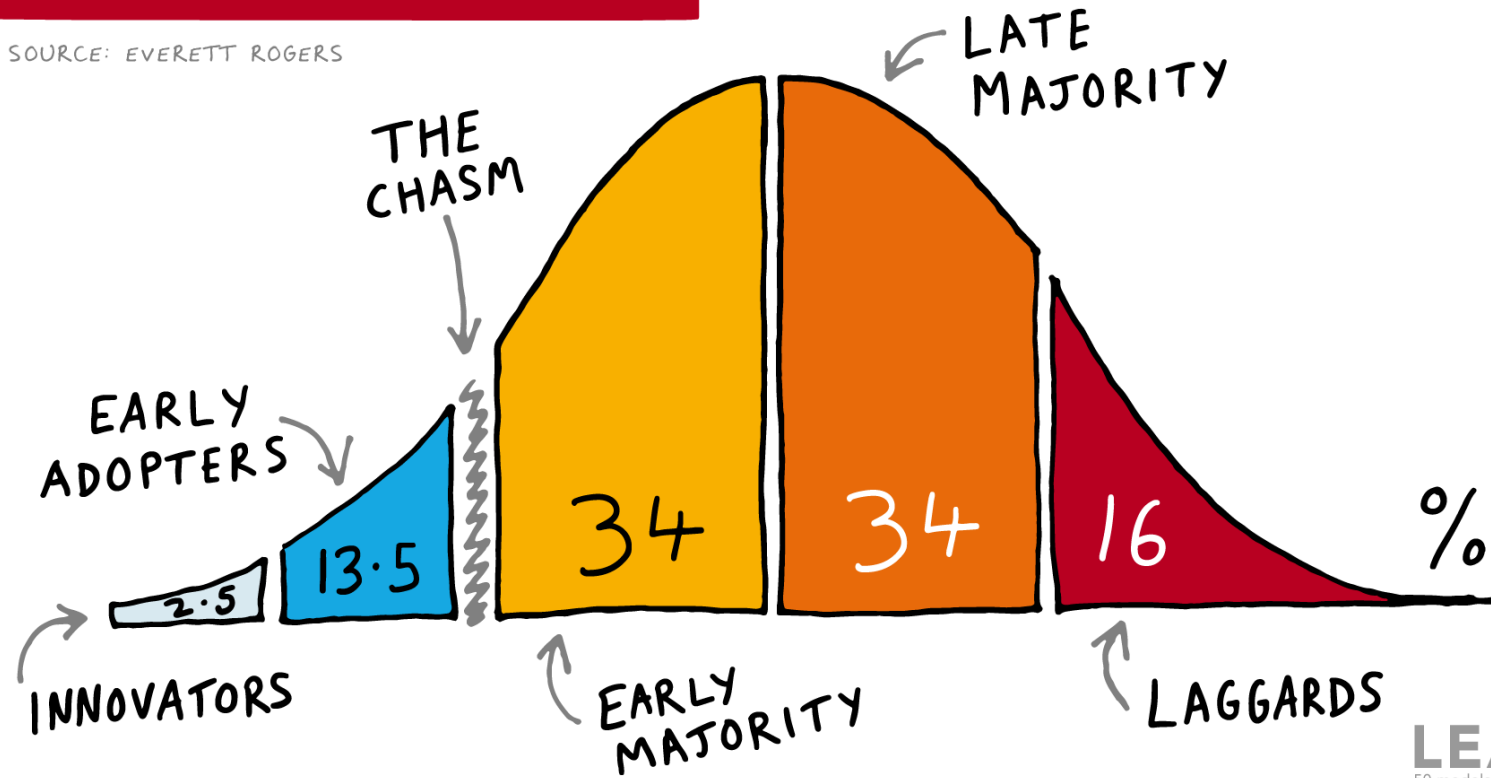
Staff experience



Time saved

DIFFUSION OF INNOVATION

SOURCE: EVERETT ROGERS



LEAD
50 models for success

Progress so far...

- Governance
 - Data processing agreements
 - Data privacy impact assessment
- Patient communication
 - Website, phone messages
 - Consent
- Hearts and minds
 - Permission & reassurance
- Practicalities
 - Webcams, softphones
- Roll out



Primary Integrated
Community Services Ltd

Primary Integrated
Community Services Ltd





Primary Integrated
Community Services Ltd

Thank you

Primary Integrated
Community Services Ltd





Ambient Voice Technology in SDEC

Dr Dmitriy Chernov - Chief Medical Information Officer, Acute Medicine Registrar, West Hertfordshire Teaching Hospitals NHS Trust

Enhancing documentation efficiency in Same Day Emergency Care through ambient voice technology.

Study Overview



Retrospective Observational Study

Comparing documentation efficiency between manual typing and Ambient Voice Technology.



Participants

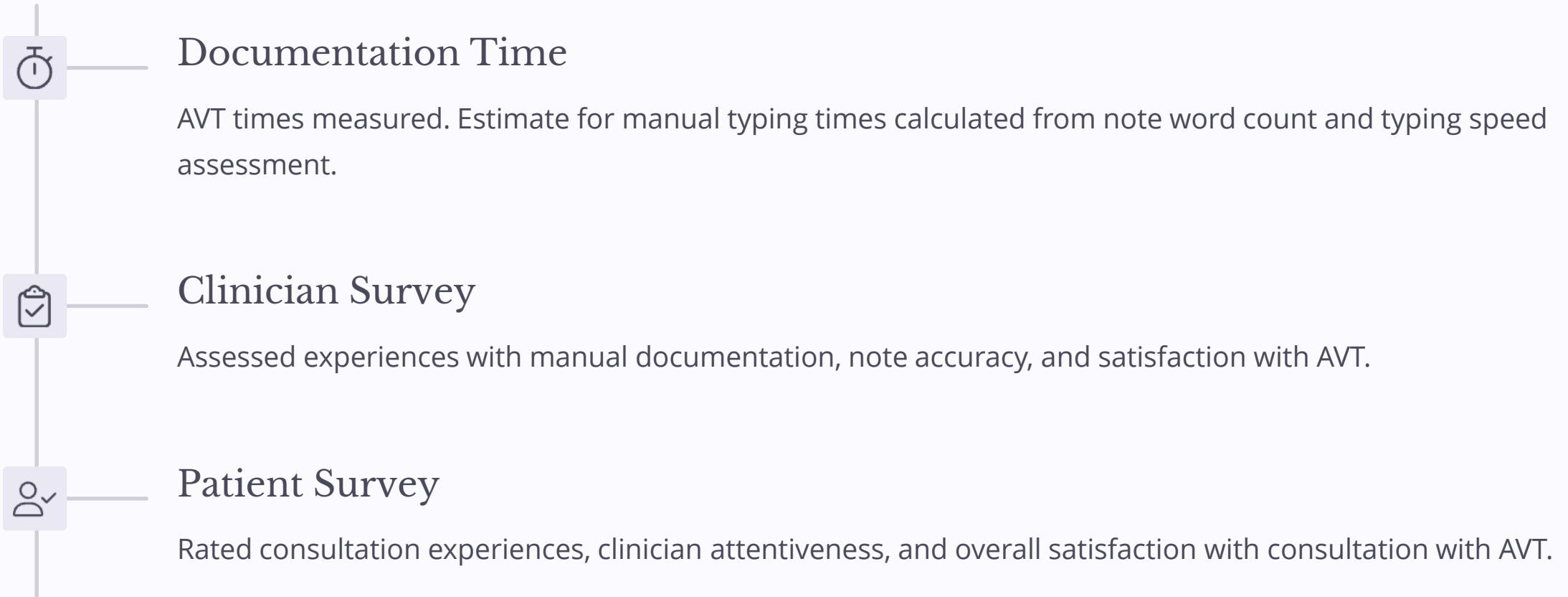
Questionnaire of 20 clinicians using AVT for documentation.
100 SDEC case notes analysed.



Patient Feedback

20 patients provided feedback on AVT-assisted consultations.

Data Collection Methods



Documentation Time Comparison

52.01s

AVT Documentation

Average time with software assistance

368.32s

Manual Documentation

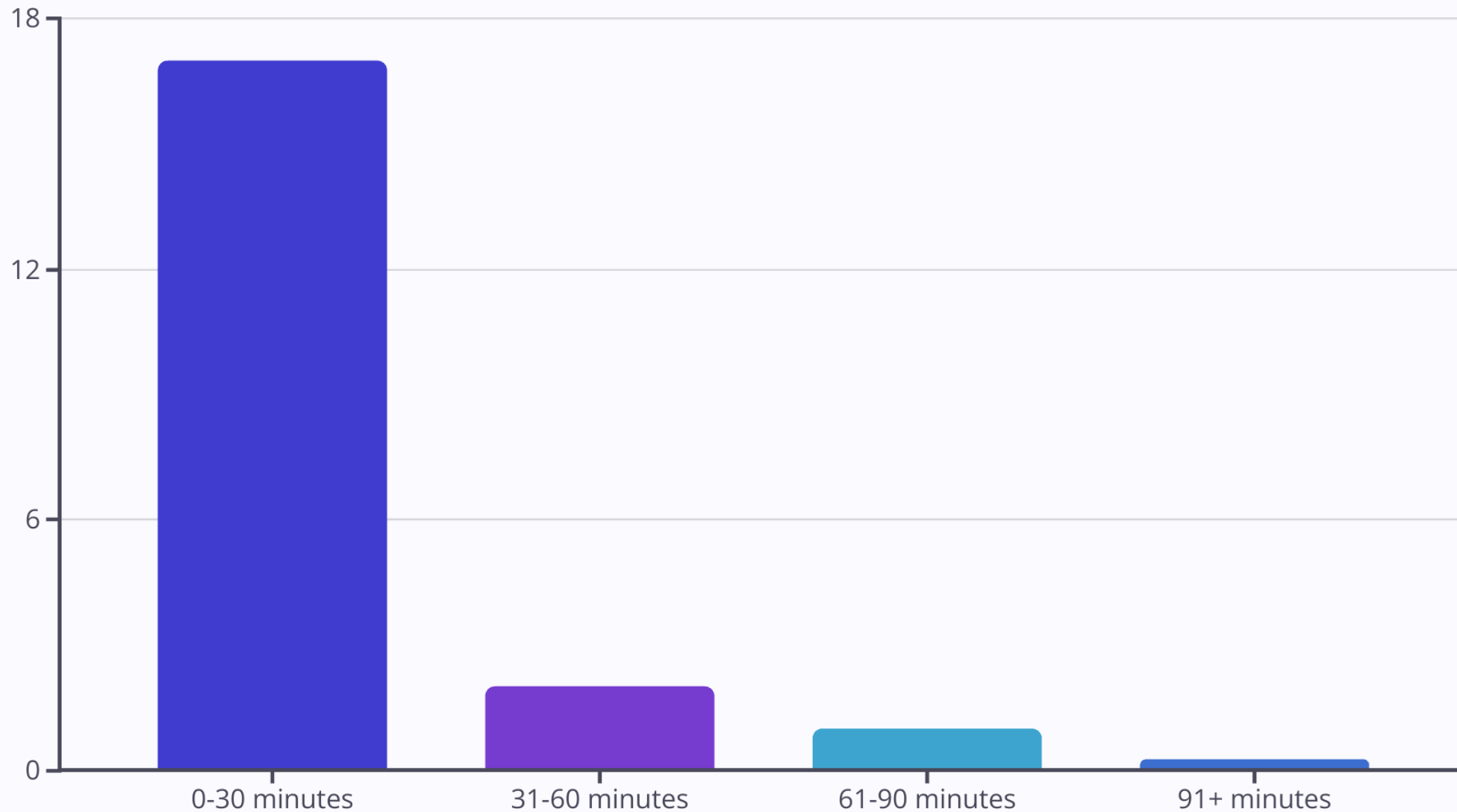
Average time with traditional typing

85.8%

Time Reduction

Significant efficiency improvement with
AVT

Time Burden of Manual Documentation



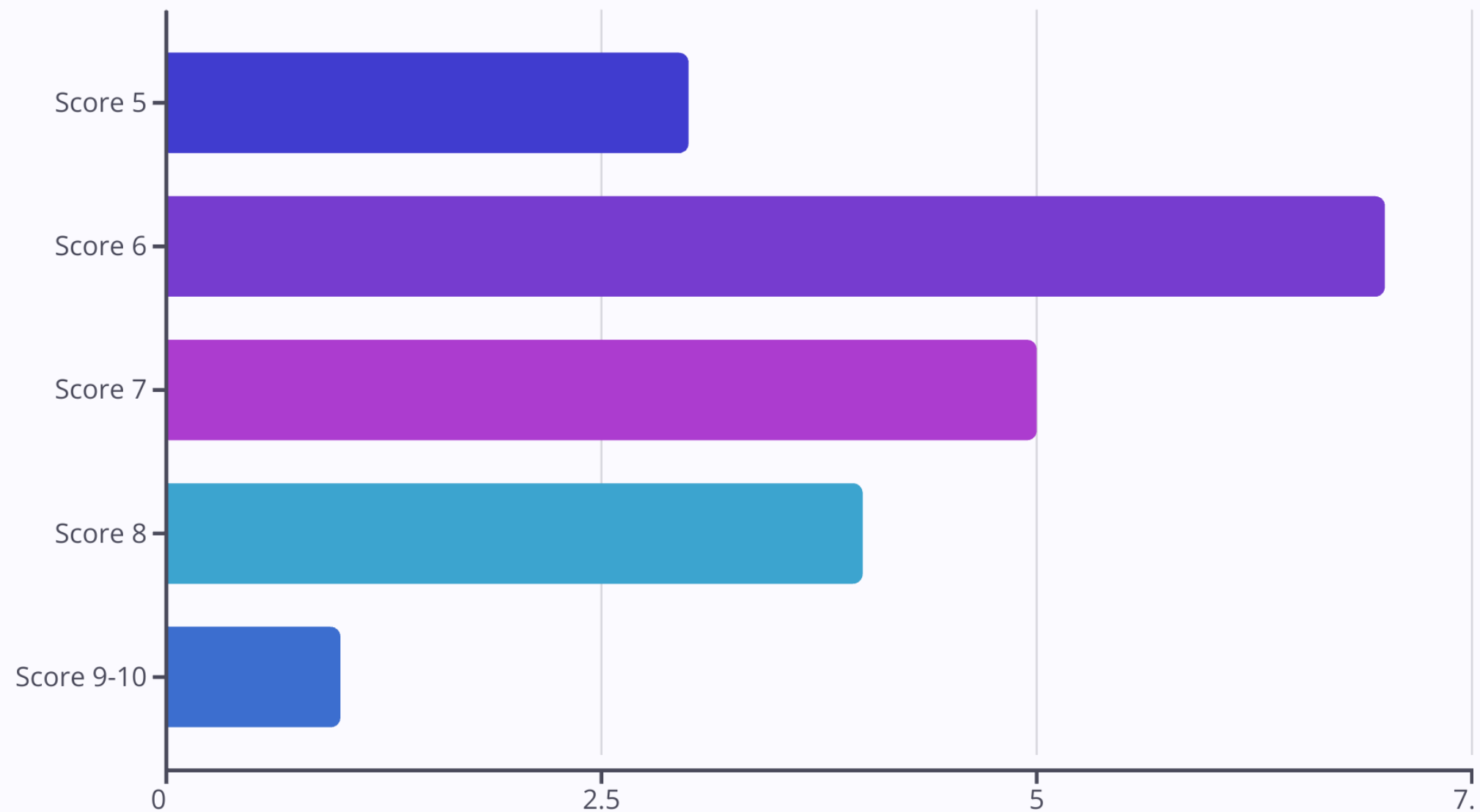
Most clinicians (17 out of 20) reported spending 0-30 minutes on manual documentation per consultation.

Extra Documentation Time



Time spent by clinicians outside normal working hours on clinical documentation per week. Most reported spending up to an hour extra per week.

Confidence in Manual Note Accuracy



Confidence in manually typed note accuracy was moderate, with most clinicians scoring 6 out of 10.

Missing Information In Manual Notes



Missing or unclear information in manually typed clinical records was reported as a daily issue by most clinicians.

Causes of Missing Information



Incomplete
Documentation

16 responses



Time Constraints

14 responses



Typing Errors

9 responses



Staff Unavailability

7 responses

Time Spent Searching for Missing Information



0-30 minutes daily

7 clinicians



31-60 minutes daily

10 clinicians



61+ minutes daily

3 clinicians

Most clinicians spent 31-60 minutes daily searching for missing information, highlighting significant administrative burden.

AVT Impact on Burnout

Reduced Burnout

19 out of 20 clinicians felt AVT reduced burnout from documentation tasks.

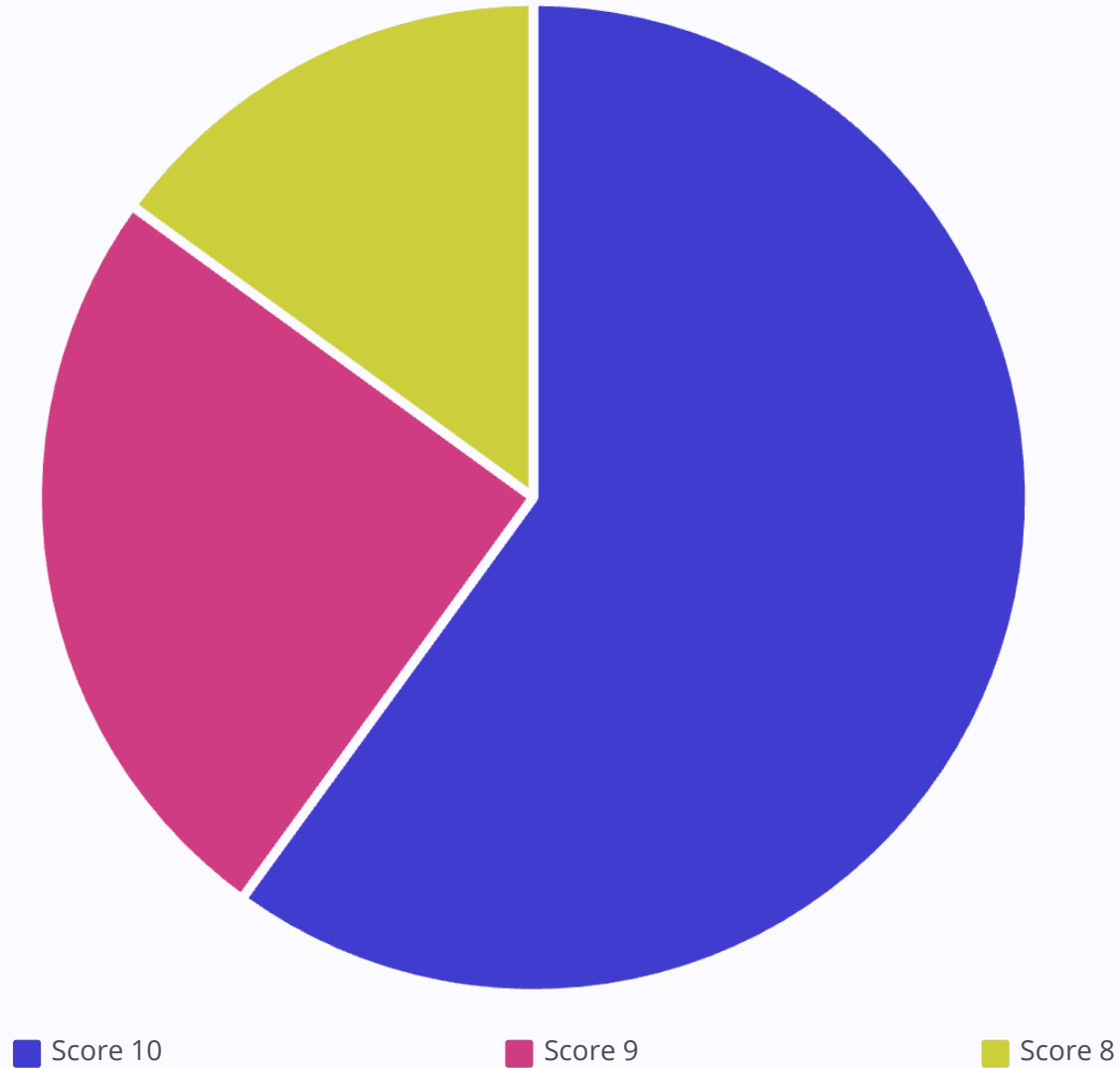
This aligns with studies linking clerical burden to clinician burnout.

Time Savings

18 clinicians reported significant time savings with AVT.

Average time saved: 5.27 minutes per case.

AVT Usability Ratings



Usability ratings were high; the majority scored the tool 10 (very easy to use), with others rating it 8 or 9.

Impact on Patient Communication



Improved Eye Contact

Clinicians maintained better visual engagement with patients.



Enhanced Conversation Flow

Reduced typing interruptions led to smoother consultations.



Increased Patient Satisfaction

Patients reported feeling more heard and understood.

Patient Feedback on AVT

Improved Experience

18 out of 20 patients felt AVT improved their overall consultation experience.

Enhanced Clinician Attentiveness

19 patients agreed AVT enhanced clinician attentiveness and consultation flow.

Future Preference

18 patients expressed a preference for using AVT in future consultations.

AVT Limitations



Transcription Errors

Noisy environments can lead to mishearing critical information.



Interruptions

Colleague interruptions during transcription may lead to record errors.



AI Hallucinations

LLMs may generate fabricated or irrelevant content.
Not formally assessed in our study.

Potential Improvements

Enhanced Algorithm Training

Improve transcription accuracy through better AI training on medical terminology.

Noise-Cancelling Technology

Implement advanced audio filtering to reduce environmental interference.

Validation Protocols

Develop streamlined review processes to verify transcription accuracy.

Broader Applications



Emergency Departments

High-volume settings where rapid documentation is critical.



Primary Care

Regular consultations requiring detailed documentation.



Specialty Clinics

Complex cases needing comprehensive notes.

Key Takeaways

Time Efficiency

85.8% reduction in documentation time (52s vs 368s).

Future Research

Needed across diverse clinical environments to assess long-term value.



Clinician Benefits

Reduced burnout and improved workflow satisfaction.

Patient Satisfaction

Enhanced consultation experience and clinician attentiveness.

Audience Q&A



HIEM support offers

For those within the East Midlands locality

- Support with horizon scanning, needs analysis and matching to known innovations
- Helping to design an evaluation to support a business case
- Bid writing support from our expert in-house team
- Opportunities to apply for pump priming support to trial new innovations



Close



Further information

Dawn Plummer, Digital Health Innovation Lead

- dawn.plummer@nottingham.ac.uk

- **Web:** healthinnovation-em.org.uk
- **LinkedIn:** Health Innovation East Midlands
- **X:** Healthinn_em
- **Bluesky:** @healthinn-em.bsky.social

