



EVIDENCE SEARCH RESULTS

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|-------------------------------------|--|
| Question/subject of request: | We are looking for ways to save our keyworkers time on D2A using AI. Our project will be looking at ways we can save time with our assessment process and review process ie paperwork. We would like to develop and roll out a tool which will enable us to input basic info about our patients challenges which would then create goals which we can share with our enablers (carers) they would then work with the patient to achieve the goals. The current process we have in place can take up to half an hour to establish a good goal which everyone can follow and a further hour to review which will increase the length of stay the patient has on our service too. I have two other people who are very keen to develop this and are prepared to attend meetings, preferably on Teams as we all work remotely. |
| Date requested: | 22/5/25 |
| Date completed: | 16/6/25 |
| Compiled by: | Jess Pawley |

CITING THIS SEARCH

If you reference this search in any paper, publication or presentation, please let us know.

The citation format is:

- Pawley, J., (2025). *Evidence summary: Saving time in discharge to assess processes by using AI*. Taunton, UK: Somerset Foundation Trust Knowledge and Library Services.

CONTACT DETAILS

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|--|---|
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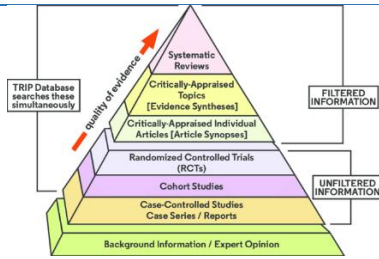
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The results are presented according to the hierarchy of evidence which is used to rank the relative strength of results obtained from scientific research.

The design of the study and the endpoints measured affect the strength of the evidence.

Evidence hierarchies are often applied in evidence-based practices and are integral to evidence-based medicine.

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Contents (click to jump to each section):

Summary of search results:

This summary has been generated in part using AI

Ambient voice technology came through across the literature citing the importance of learning from those who are already using the technology, and of making patients aware of exactly how their data will be used. Building on this, [Forbes suggest that AI could be used to help remind patients to take their medication](#), and by extension we could use this to remind them to engage with their goals. Consider also the local demographics and equity of healthcare access on the impact of implementing any AI-technology, [as described by Piscitello](#).

There are many international examples throughout the results.

Click to jump to sections:

- [Key papers](#)

From [Piscitello et al](#) (2024) - The use of AI in prediction of mortality to target goals of care (GOC) documentation. May unintentionally disadvantage severely ill patients who lack AI-generated scores, from receiving targeted GOC documentation.

[Ellershaw et al](#) (2024) look at the use of AI to automatically generate hospital discharge summaries. A small number of discharge summaries were created using GPT large language modelling, and then evaluated for errors. The median number of errors per summary was 7, with 36% of these defined as “severe” and 22% adding in non-relevant information. Clinician review is therefore required, and this can increase the risk of automation bias over time (as the model will only learn from the information it is given).

[Owens et al](#) (2024) consider how the implementation of ambient voice technology in primary care reduced documentation time per patient encounter by 28.8%, and higher use of the technology is linked to lower disengagement scores. It must also be highlighted that overall burnout scores did not show significant improvement.

In another paper by [Owens et al](#) (2024), patients agreed that their healthcare provider was more focused on them, although “no difference was detected in the patient-physician relationship on the PDRQ-9 scale.”

While not specific to discharge, I want to highlight here the paper by [Schorr et al](#) (2021) which focuses on goal setting and the prevention of cardiovascular disease.





- [Examples from other organisations](#)

[Central and North West London NHS Foundation Trust](#) piloted Anathem, an AI ambient voice technology. This QI project showed that as a preliminary outcome, “the time taken to write documents more than halved from 27 minutes to 10 minutes.”

[A new AI project will predict a patient’s admission risk](#) – from the University of Bristol.

Linked to the above, the Royal Devon University Healthcare NHS Foundation Trust are involved in a research project to improve patient outcomes with discharge decision support ([IPODDS](#)). This is one of two projects at the Trust looking at how data can be used to simulate discharge pathways.

- [Reports](#)

[NHS England have recently published guidance](#) for Trusts looking to embed ambient voice technology within their settings. The guidance is very high level and mostly describes what the technology is and the considerations needed

Research carried out by [Catapult](#) looks at the use of an AI-based virtual assistant called Monica, used to “support patients at home and provide relevant information to clinical teams.” Both staff and service users were involved in the creation and implementation of the technology, to discuss benefits and barriers. Monica can help automate and schedule patient care assessments, which may help increase engagement with and commitment to goals. It can also assist with pre-, during and post-discharge to maintain consistency of care.

Be extremely mindful of bias from the following [report from Signal 1](#), which I am including as it expressly describes the use of machine learning in the discharge process but has been published by a company who devises such tools.

- [Further published papers](#) – ranked in order of relevance

Key points include:

- X2 systematic reviews on [AI in healthcare](#) and [its use in clinical documentation](#).
- [Setting goals of care in rehabilitation](#) and in [dementia settings](#)
- [AI in the creation of discharge summaries in the ED](#)
- [A QI project into the use of ambient voice technology to address physician burnout](#)

- [Opinion pieces](#)

be mindful of potential bias

[The Health Foundation](#) weighs up both sides of the use of ambient voice technology, noting that this is still an emerging field as medicine moves into non-clinical uses for AI. Does not give an overall assessment or outcome, but rather suggests that further evidence is needed to show impact. Recommends that NHS Trusts must make fair assessments of the technology and compare tools.





[This piece from Forbes](#) details the high margin of human error within the discharge process, citing many relevant papers and how such errors can lead to unnecessary readmissions. While this does not focus specifically on goal-setting, it does describe how AI can be used to predict such readmissions, and how AI can be used to check-in with patients post-discharge in the form of automated reminders to take medication.

I hope this is helpful. Please do let us know if you need any further information.



The Knowledge & Library Service have a growing archive of completed evidence summaries on [inSPIRE](#) – the organisation’s knowledge, research and evidence repository. You can browse the evidence summaries [here](#).

These results of this search will only be shared in the repository if you have given your permission to do so (we ask this in the evidence search request form).

Thank you.



Are you curious about research? Do you want to get involved with research but don’t know where to start? Are you already engaged with research, but would like to share knowledge and learning with other researchers in the organisation?

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You will be added to the Research Community MS Teams channel where you will have access to discussion forums about be the first to know about events and knowledge sharing opportunities.

Key Papers

[Equity in Using Artificial Intelligence Mortality Predictions to Target Goals of Care Documentation](#)

Piscitello et al, Journal of General Internal Medicine, 2024

abstract only, full paper can be provided if needed

[Automated generation of hospital discharge summaries using clinical guidelines and large language models](#)

Ellershaw et al, Association for the Advancement of Artificial Intelligence, 2024

[The association between use of ambient voice technology documentation during primary care patient encounters, documentation burden, and provider burnout](#)

Owens et al, Family Practice, 2024

[Effect of Ambient Voice Technology, Natural Language Processing, and Artificial Intelligence on the Patient-Physician Relationship](#)



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Owens et al, Applied Clinical Informatics, 2024

abstract only, full paper can be provided if needed

[Harnessing Mobile Health Technology for Secondary Cardiovascular Disease Prevention in Older Adults: A Scientific Statement From the American Heart Association](#)

Schorr et al, Circulation: Cardiovascular Quality and Outcomes, 2021

Examples from other organisations

[CAMHS Quality Improvement Project using AI technology wins first prize :: Central and North West London NHS Foundation Trust](#)

[January: IPODDS-project | News and features | University of Bristol](#)

[NHS Royal Devon | Using data to tackle NHS and social care pressures in the South West](#)

Reports

[NHS England » Guidance on the use of AI-enabled ambient scribing products in health and care settings](#)

[Using AI-Based Technology to Enhance Outcomes on the NHS Discharge to Assess \(D2A\) Process - Connected Places Catapult](#)



Using-AI-Based-Technology-to-Enhance-Discharge

[Using machine learning to streamline the hospital discharge process](#)

Signal 1

(high likelihood of bias as I think this is created by a specific company).

Further published papers

ranked in order of relevance

[Artificial Intelligence \(AI\) – Powered Documentation Systems in Healthcare: A Systematic Review](#)

Bracken et al, Journal of Medical Systems, 2025



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[Improving Clinical Documentation with Artificial Intelligence: A Systematic Review](#)

Perkins et al, Perspectives in Health Information Management, 2024

[Characteristics of goal-setting tools in adult rehabilitation: A scoping review](#)

Okita et al, Clinical Rehabilitation, 2023

[Video Intervention and Goals-of-Care Documentation in Hospitalized Older Adults: The VIDEO-PCE Randomized Clinical Trial](#)

Volandes et al, JAMA Open, 2023

[Transforming healthcare documentation: harnessing the potential of AI to generate discharge summaries](#)

Clough et al, British Journal of General Practice Open, 2024

[Assessing artificial intelligence-generated patient discharge information for the emergency department: a pilot study.](#)

Authors: De Rouck, Ruben;Wille, Evy;Gilbert, Allison and Vermeersch, Nick

Publication Date: Apr 25 ,2025

Journal: International Journal of Emergency Medicine 18(1), pp. 85

[Applying human-centered design to adapt the Jumpstart Guide for goals-of-care discussions in persons living with dementia](#)

Im et al, Journal of the American Geriatrics Society, 2024

[New care pathways for supporting transitional care from hospitals to home using AI and personalized digital assistance](#)

Anghel et al, Scientific Reports, 2025

[Reduced Hospital Readmissions Through Personalized Care: Implementation of a Patient, Risk-Focused Hospital-Wide Discharge Care Center](#)

Barrett et al, NEJM Catalyst, 2025

abstract only, full paper can be provided if needed





[Enhancing clinical documentation with ambient artificial intelligence: a quality improvement survey assessing clinician perspectives on work burden, burnout, and job satisfaction – QI Project](#)
Albrecht et al, Journal of the American Medical Informatics Association, 2025

[Understanding the integration of artificial intelligence in healthcare organisations and systems through the NASSS framework: a qualitative study in a leading Canadian academic centre.](#)

Authors: Alami, Hassane;Lehoux, Pascale;Papoutsis, Chrysanthi;Shaw, Sara E.;Fleet, Richard and Fortin, Jean-Paul

Publication Date: Jun 03 ,2024

Journal: BMC Health Services Research 24(1), pp. 701

[Imagine there is no paperwork... it's easy if you try.](#)

Authors: Martin-Noguerol, Teodoro;Lopez-Ubeda, Pilar and Luna, Antonio

Publication Date: Mar 28 ,2024

Journal: British Journal of Radiology 97(1156), pp. 744–746

[Changes in psychiatric documentation and treatment in primary care with artificial intelligence scribe use](#)

Castro et al, medRxiv, 2025

This article is a preprint and has not been peer-reviewed. It reports new medical research that has yet to be evaluated and so should *not* be used to guide clinical practice.

Opinion pieces

[Ambient voice technologies in the NHS: all talk? - The Health Foundation](#)

[Revolutionising patient transitions: how AI is reshaping hospital discharge](#)

Khashu, Forbes, 2025

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| DATABASES AND INFORMATION SOURCES USED | | |
|--|--------|-------------------|
| x | Pubmed | BMJ Best Practice |
| | HMIC | |



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| | | | | | |
|---|---------|--|----------------------------|---|--|
| x | Medline | | Social Policy and Practice | | Cochrane Library |
| | Emcare | | CINAHL | x | TRIP |
| | Embase | | PsycINFO | x | Grey Literature KnowledgeShare Google Programmable Search Engine Google Advanced Search Futures NHS NHS England |
| | AMED | | UpToDate | x | Other Consensus AI Litmaps |

| PURPOSE OF SEARCH | | |
|-------------------|----------------------------------|---|
| | Patient info/health & well being | Clinical decision making (inc. patient care) |
| | Executive Team support | Research/Education/Professional development |
| x | Quality Improvement | Primary Care & Neighbourhoods Directorate support |
| | KM/Management decision making | Other |

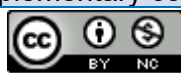
| USER CATEGORY OF REQUESTOR | | |
|----------------------------|-----------------------------|-----------------------------|
| | Medical students | Patients/public |
| | Nursing/midwifery students | Physician Associates |
| | Doctor/Psychiatrist | Public Health (Somerset CC) |
| | Nurses/Midwives | Other |
| x | Allied Health professionals | |

| HAS PERMISSION TO SHARE THE RESULTS BEEN OBTAINED FROM THE REQUESTOR? | | |
|---|-------------|-------------------|
| x | YES - share | NO – do not share |





| KEY WORDS/SEARCH STRATEGY INCLUDING MESH HEADINGS | LIMITS USED |
|---|-------------|
| <p>OVID MEDLINE search strategy:</p> <p>1 artificial intelligence.mp. or Artificial Intelligence/ 2 quality of health care.mp. or "Quality of Health Care"/ 3 quality improvement.mp. or Quality Improvement/ 4 quality control.mp. or Quality Control/ 5 Quality Indicators, Health Care/ or quality indicators.mp. 6 2 or 3 or 4 or 5 7 (artificial intelligen* adj3 discharge assessment*).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word] 8 (artificial intelligen* adj3 discharge).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word] 9 (artificial intelligen* adj3 assessment).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word] 10 limit 9 to (yr="2015 - 2025" and english) 11 (discharge or hospital discharge).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word] 12 10 and 11 13 discharge paperwork.mp. 14 10 and 13 15 artificial intelligence.mp. or Artificial Intelligence/ 16 11 and 15 17 limit 16 to (yr="2015 - 2025" and "all adult (19 plus years)" and english) 18 (admin or admin process* or administrative process* or discharge process or paperwork or discharge paperwork).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol</p> | |





supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]
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