Artificial Intelligence (AI) in case recording

National Workload Action Group – Reducing unnecessary social worker workload supplementary report

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Contents

List of figures 3
Acknowledgements 4
Introduction 5
Context 6
Unnecessary workload 6
The impact of the COVID-19 pandemic 7
Time allocation of social workers 7
Administrative burden 8
Exploring the case for using AI in case recording in children's social care 10
Defining artificial intelligence (AI) 10
Responsible development and use of artificial intelligence (AI) 12
Overheads 13
Communication, process and retrieval overheads 13
The overheads of social work vs the function of social work 14
Methods 16
Assumptions and questions 17
Key Findings 18
There is a wide range of potential use cases for using AI in case recording in children's social care 18
There is an opportunity to make better use of information in case records using AI 19
Enhanced search and retrieval 21
Enhanced analysis and insights 21
AI and automation have the potential to reduce unnecessary workload, however, some assumptions about how social workers time is reallocated must be examined more closely 22
AI represents an opportunity to reimagine aspects of case recording, including how children and families contribute to and access their own records and other important information 23
There are risks and ethical challenges associated with using AI in case recording in children's social care 24

Digital poverty is a barrier to the adoption of AI and risks exacerbating existing inequalities 26
Joined up leadership and smart investment is essential to drive responsible development and adoption of AI in children's social care 27
Local investment 28
Other factors influencing AI adoption 28
Policy and practice implications and analysis 30
The opportunities and benefits of using AI in case recording 30
Responding to the risks and ethical challenges of using AI in case recording 31
Policy gaps 31
Conclusion 33
Appendices 34
Appendix A – Communication, process, and retrieval overheads 34
The impact of high communication, process and retrieval overheads 36
Measuring communication, process and retrieval overheads 36
Appendix B – Types of AI used in case recording in children's social care 38
Transcription 38
Virtual assistants 38
Generated documentation 39
Automated tasks and workflows 39
Bespoke AI applications 40
Appendix C – Cognitive search 41
What cognitive search is 41
What cognitive search does 41
How cognitive search can help social workers 41
Some of the important characteristics of cognitive search 41
Appendix D - Resources to support the responsible development and deployment of AI 43

List of tables

Table 1 - Categories and sub-categories for GenAI tool usage 11

Table 2 - The overheads and functions of social work 15

Table 3 - Structured and unstructured information 20

Table 4 - Communication, process and retrieval overheads 35

Table 5 - Examples of communication, process, and retrieval overheads 37

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The involvement and engagement of the 22 local authorities taking part in this project ensured that the work was focused on what would make a difference in social work practice, to children and families and to social workers. The feedback they provided on the practice resources developed during this project was essential in checking the resources would be practical and useful for social workers and the social care workforce.

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Introduction

This report is published as part of a suite of supplementary reports from the work of the National Workload Action Group (NWAG). NWAG was established by the Department for Education to identify potential solutions to reduce unnecessary social worker workload, so that social workers could focus on necessary activities. The suite of supplementary reports provide additional detail about the activity and findings of each of the workstreams: admin support, workload and caseload management, supervision, hybrid working and digital practice and the use of AI in case recording. The NWAG Final Report summarises the NWAG activity and recommendations.

This supplementary report reviews the use of artificial intelligence in social work case recording, identifying the challenges and opportunities, describing current and proposed usage in the children's social care sector. The approach NWAG took to identifying the key drivers and potential solutions is outlined. The key messages section describes the project insights from this strand of work.

While there are no specific resources on the use of AI in children's social care from this project, because technology is moving so quickly, we hope that there is learning for everyone in the content of this supplementary report. However, for those who are interested, there are resources on digital practice which, like the use of AI, is an emerging area of work. These practical learning resources are available on Support for social workers.

Context

Case recording was a priority DfE set for NWAG from the outset, recognising that over-recording leads to social workers spending more time than necessary on recording. The use of AI in case recording emerged from NWAG discussions which surfaced the growing use of AI in children's social care. Because this topic is new and emergent, this supplementary report explores it in more depth. For more context, this briefing should be read in conjunction with the National Workload Action Group (NWAG) Final Report.

Project activity aimed to:

- describe the opportunities for adopting AI for case recording in children's social care
- illustrate potential AI applications and use cases already tested by local authorities in England and elsewhere
- examine the potential risks and ethical issues of adopting AI for case recording in children's social care
- recommend ways that AI could reduce unnecessary social worker workload and improve efficiency, identifying ways to mitigate risks and ethical dilemmas while involving children and families in the decision-making process

Unnecessary workload

The British Association of Social Workers (BASW) Annual Survey of Social Workers and Social Work 2023 surveyed more than 1,200 social workers from across the United Kingdom. The survey provides important insight into the workload issues:[1]

- 64.61% of respondents report not being able to complete all their work during their contracted hours
- 50.21% reported not feeling able to manage their current workload
- 46.7% identified the adequacy of staffing levels as one of the biggest challenges in their workplace
- 67.49% identified cuts to local services as one of the biggest challenges facing the profession in the immediate future

[1] British Association of Social Workers (BASW) (2023) *Annual Survey of Social Workers and Social Work 2023*. Available at: https://basw.co.uk/policy-and-practice/resources/basw-annual-survey-social-workers-and-social-work-2023 (Accessed: 08/08/2024)

- 63.05% of respondents said they work between 1 and 15 hours extra every week to complete their work and 67.16% of respondents said they were not paid overtime for the additional hours they worked
- Almost two-thirds of respondents (65.27%) reported that they had noticed a turnover of more experienced staff in the last 12 months, which had a negative impact on the workplace and practice

The impact of the COVID-19 pandemic

The COVID-19 pandemic had a significant effect on social work workload and wellbeing. In a report published by Unison, nearly 3,000 social workers across the UK provided feedback on working conditions, wellbeing, and concerns about the level of support they are providing to families:[2]

- staff shortages (93%), unmanageable caseloads (90%) and long hours (80%) are identified by social workers as major concerns affecting their ability to do their jobs
- 72% said their workload increased during the pandemic
- 89% are worried about the limited level of service they provide to the public reporting that often their first point of contact with families was at a crisis point because they have no time for early help. This resulted in elevated stress levels from families that increase the risk of threats and violence
- 78% of social workers said they experienced increased stress levels and 77% of respondents were worried about their mental health due to work related pressures
- 70% said morale has decreased
- 49% said they ’re now less likely to stay in their jobs
- 44% believed harassment and abuse increased during the pandemic

Time allocation of social workers

BASW surveyed 350 social workers to better understand how they currently allocate their time during a working week:[3]

[2] Unison (2023) *Social work and the impact of the Covid pandemic*. Available at: https://www.unison.org.uk/news/press-release/2022/06/social-workers-at-breaking-point-with-half-at-risk-of-quitting-warns-unison/ (Accessed: 02/02/2025)
[3] British Association of Social Workers (BASW) (n.d.) *80:20 Campaign: How much ‘direct’ time do social workers spend with children and families?* Available at: https://basw.co.uk/about-basw/social-work-around-uk/basw-england/campaigns/80-20-campaign (Accessed: 08/08/2024)

- on average, social workers worked 45 hours a week, of which 11 hours were spent face-to-face with children, young people, parents and carers. This equates to just over 20%

- 29 hours a week were spent on a computer or doing paperwork which accounts for 65% of the average working week

- Another highlight from the report is that 32% of respondents said they spent no time on reflective practice per week and 42% said they spent less than an hour

The BASW 80:20 campaign aims to reverse the current trend in social work where practitioners are spending most of their time on administrative and process driven tasks, rather than on building relationships.

Administrative burden

The high administrative burden on social workers in England is a significant issue that impacts on their ability to invest meaningful time in direct work with children and families. Social workers spend a large portion of their time on time-consuming paperwork, regulatory requirements, information sharing and communication, data entry and management, and bureaucratic processes.

Administrative tasks are crucial for the proper functioning of social work and have become an issue attracting increasing attention and concern over recent years. The Independent review of children's social care,[4] highlighted several key points regarding administrative support for social workers. The review noted that social workers often face a significant administrative burden, which can detract from their ability to spend time directly supporting children and families. Technological barriers were also highlighted as an additional unnecessary burden to case management. For example, social workers do not have the time to overcome technological and other barriers. Practitioners stated that clunky information technology (IT) systems meant that communication and processes were extremely time consuming and often involved duplication or having to phone other professionals to find out information.

The review recommended a range of approaches to reduce the administrative burden of social workers, including:

- investing in more support staff to handle administrative duties

- reducing unnecessary paperwork and streamlining processes

[4] MacAlister, J. (2022) *The Independent Review of Children's Social Care: Final Report. Department for Education*. Available at: https://www.gov.uk/government/publications/independent-review-of-childrens-social-care-final-report (Accessed: 08/08/2024)

- providing better technological tools to streamline administrative tasks

Better technological tools could include improved case management systems, single digital view of the child,[5] automated systems, and artificial intelligence. Artificial intelligence (AI) is an emerging technology increasingly integrated into daily life. Local authorities are already experimenting with AI to reduce unnecessary workload and to streamline administrative processes.

[5] A single digital view of the child is a comprehensive, secure system that consolidates all relevant information about a child from various agencies into one accessible platform. This approach ensures that professionals, such as social workers, teachers, and healthcare providers, can collaborate more effectively and provide consistent, informed support to each child.

Exploring the case for using AI in case recording in children's social care

Defining artificial intelligence (AI)

There is no single, universally agreed definition of artificial intelligence (AI). The Government Digital Service use the definition of AI adopted by OECD countries:[6]

> An AI system is a machine-based system that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments. Different AI systems vary in their levels of autonomy and adaptiveness after deployment.

To put this simply, artificial intelligence can broadly be thought of as technologies that enable computers to simulate elements of human intelligence. This can include reasoning, problem-solving, learning from experience, understanding natural language, and adapting to new situations. AI encompasses a wide range of techniques, from rule-based systems to sophisticated machine learning and generative models.[7]

There are many different types of AI and Generative AI, sometimes referred to as GenAI, is the type most used. GenAI can create original content such as text, images, videos, audio, or software code in response to a user's prompt or request. Research[8] into how knowledge workers use GenAI tools indicates three major categories of task types: 1) for creation, 2) to find or work with information, 3) to get advice, and nine subgroups (See Table 1 – Categories and sub-categories for GenAI tool usage).

[6] Government Digital Service. (2025) *Artificial Intelligence Playbook for the UK Government*. Available at: https://www.gov.uk/government/publications/ai-playbook-for-the-uk-government/artificial-intelligence-playbook-for-the-uk-government-html#what-is-ai (Accessed 6 Mar. 2025).
[7] Leslie, D. (2019) *Understanding Artificial Intelligence Ethics and Safety: A Guide for the Responsible Design and Implementation of AI Systems in the Public Sector*. The Alan Turing Institute. Available at: https://www.turing.ac.uk/sites/default/files/2019-08/understanding_artificial_intelligence_ethics_and_safety.pdf (Accessed: 08/08/2024)
[8] Michelle Brachman, Amina El-Ashry, Casey Dugan, and Werner Geyer. 2024. *How Knowledge Workers Use and Want to Use LLMs in an Enterprise Context. In Extended Abstracts of the 2024 CHI Conference on Human Factors in Computing Systems* (CHI EA '24). Association for Computing Machinery, New York, NY, USA, 1–8. https://doi.org/10.1145/3613905.3650841

Table 1 - Categories and sub-categories for GenAI tool usage

Category	Sub-category	Description
Creation	Artefact	Generate new artefact to be used directly or with some modification
Creation	Idea	Generate an idea, to be used indirectly
Information	Search	Seek a fact or piece of information
Information	Learn	Learn more about a new topic more broadly
Information	Summarise	Generate a shorter version of a piece of content that describes the important elements
Information	Analyse	Discover a new insight about information or data
Advice	Improve	Generate a better version
Advice	Guidance	Get guidance about how to make a decision
Advice	Validation	Check whether an artefact satisfies a set of rules or constraints

The Government digital service (GDS) highlights the transformative potential of GenAI in public services, enabling new levels of efficiency and people-centric service delivery.[9] In the context of social work, generative AI is the most common type of AI used for case recording.

AI is set to evolve rapidly, enhancing both automation and analytical capabilities. The applications of AI technology are diverse and continually emerging with a consensus across various disciplines that AI will fundamentally transform the way we live and work.[10]

[9] Government Digital Service. (2025) *Artificial Intelligence Playbook for the UK Government*. Available at: https://www.gov.uk/government/publications/ai-playbook-for-the-uk-government/artificial-intelligence-playbook-for-the-uk-government-html#what-is-ai (Accessed 6 Mar. 2025).
[10] Department for Science, Innovation and Technology (2021) *National AI Strategy*. Available at: https://www.gov.uk/government/publications/national-ai-strategy (Accessed: 08/08/2024)

Responsible development and use of artificial intelligence (AI)

Artificial intelligence (AI) is rapidly transforming various sectors, including children's social care. The UK government is promoting AI adoption to enhance public services and drive economic growth.

In January 2025, the UK government launched the AI Opportunities Action Plan (DSIT 2025), which builds in the National AI Strategy and outlines an ambitious plan to lay the foundation to accelerate the adoption of AI. The plan signals, in no uncertain terms, that AI is here and there is an enthusiasm to reap the benefits across a range of sectors, including the public sector.[11,12]

While the benefits of AI are persuasive, AI comes with risks and ethical challenges that range from existential concerns to more practical immediate matters. The adoption and deployment of AI in children's social care, or any public or private organisation, must be grounded in a robust regulatory and ethical framework that sets the tone for responsible development. The UK government has set out six cross sectoral principles to guide and inform the responsible development and use of AI:[13]

- **Safety, Security and Robustness:** AI systems should function in a robust, secure and safe way, and risks should be continually identified, assessed and managed
- **Appropriate Transparency and Explainability:** AI systems should be appropriately transparent and explainable
- **Fairness:** AI systems should not undermine the legal rights of individuals or organisations, discriminate unfairly against individuals, or create unfair market outcomes
- **Accountability and Governance:** Governance measures should be in place to ensure effective oversight of the supply of AI systems, with clear lines of accountability across the AI life cycle

[11] Department for Science, Innovation and Technology. (2025). *AI Opportunities Action Plan*. Presented to Parliament by the Secretary of State for Science, Innovation and Technology by Command of His Majesty. CP1241. Available at: https://www.gov.uk/government/publications/ai-opportunities-action-plan/ai-opportunities-action-plan (Accessed 7 Feb. 2025).
[12] Department for Science, Innovation and Technology (DSIT) (2021) *The National AI Strategy*. Available at: https://www.gov.uk/government/publications/national-ai-strategy (Accessed: 08/08/2024)
[13] Department for Science, Innovation and Technology (DSIT) (2024) *Introduction to AI Assurance*. Available at: https://assets.publishing.service.gov.uk/media/65ccf508c96cf3000c6a37a1/Introduction_to_AI_Assurance.pdf (Accessed: 18/11/2024)

- **Contestability and Redress:** Where appropriate, users, affected third parties and actors in the AI lifecycle should be able to contest an AI decision or outcome that is harmful or creates material risk of harm

- **Societal wellbeing and public good:** Societal wellbeing in the context of AI means not only ensuring that AI is developed in a way that minimises and mitigates harms, but also actively promoting ethical applications of AI that solve societal challenges and deliver good for society

Local authorities are already experimenting with using AI in case recording and the Department for Education (DfE) has funded pilots to test commercially available AI products and innovate bespoke AI applications. The findings set out in this supplementary report illustrate that while there are many opportunities for AI in case recording, these advancements come with their own set of risks and ethical challenges that must be carefully managed to ensure the wellbeing of vulnerable children and families, and the benefits of AI are experienced equitably. The risks and ethical challenges of AI should not be minimised, and it is essential that regulatory and ethical standards keep pace with development.

Overheads

First, we must consider where unnecessary workload emerges. Overheads offer a helpful framework to consider the intersection of unnecessary workload and technology. An overhead refers to the indirect costs or resources expended that are not directly attributable to a specific task, activity, or project but are necessary for the general operation and maintenance of a system or organisation.

Communication, process and retrieval overheads

In the context of case recording in social care, concepts of unnecessary workload and high administrative burden can helpfully be understood through the lens of communication, process and retrieval overheads:

- **communication overhead:** the proportion of time and resources spent on communication efforts with diverse and distributed networks relative to other core social work activities

- **process overhead:** the amount of system capacity spent on organisational and statutory processes relative to other core social work activities

- **retrieval overhead:** the effort and time required to locate, access, and retrieve information from various sources within an organisation or system

High communication, process, and retrieval overheads are common in complex systems with diverse and distributed stakeholders. High overheads represent the ‘hidden costs’ of poorly designed and incrementally developed systems and contribute to unnecessary workloads. These costs are often unquantified in terms of time, and other organisational resources, and financial investment. While some administrative burdens are purposeful and unavoidable, it is possible to reduce these overheads and monitor them as measurable outcomes.

See Appendix A – Communication, process, and retrieval overheads to learn more.

The overheads of social work vs the function of social work

It is important to distinguish between the overheads of social work and the function of social work while also accepting that there is some overlap and interdependence. The overheads of social work, such as communication, process, and retrieval overheads, refer to the administrative and operational activities of social work. In contrast, the function of social work relies on the ‘human element’ and centres on building relationships and connection, providing direct support, and delivering services that have a tangible positive impact on individuals and communities. The function of social work remains the heart of the profession, dedicated to meaningful interactions and interventions.

There is more scope to find AI and automation solutions to issues related to the overheads of social work - specifically administrative burden and case recording - than in the function of social work. It is our humanity and trust that is central to this:

- **humanity:** AI cannot replace human qualities in social work, such as real relationships and connection, care, and support. However, it is important to note that AI can effectively imitate cognitive empathy and connection
- **trust:** trust is at the heart of relationships. There is low trust in AI being involved in decision-making (predictive analytics) due to poor accuracy, biases, and other ethical considerations

While it is true that AI can enhance how we practice by coaching us to be better, more organised and efficient, enhance analysis, or helping us think through solutions, it can’t perform the most important social work activities. At least not yet.

Where AI is adopted, human oversight is crucial to ensure accuracy and maintain ethical standards. There are two approaches that aim to balance machine efficiency with human oversight, ensuring that AI systems operate effectively and ethically:

- **human-in-the-loop (HITL):** a model of AI integration where human oversight and intervention are maintained throughout the automated processes to ensure accuracy, ethical considerations, and nuanced decision-making

- **human-on-the-loop (HOTL):** a model of AI integration where humans oversee and monitor AI processes and outcomes, intervening when necessary to ensure accuracy and ethical standards

Table 2 - The overheads and functions of social work

Overheads and functions	Description	Responsibility
The overheads of social work	Process, communication, retrieval overheads. The administrative and operational activities of social work - necessary but not as impactful.	Human AI and automation with human in the loop (HITL) or human on the loop (HOTL)
The function of social work	The heart of the profession, dedicated to meaningful interactions and interventions. Relationships, direct work, support, decisions.	Human AI may be used as a tool to enhance practice

Methods

A mixed methods approach was used during the scoping exercise. This included:

- a desk review of existing literature and policy documents to frame the context and identify key issues
- 18 in-depth interviews were conducted with a diverse group of stakeholders, including representatives from the Department for Education (DfE), academics, developers, local authority staff encompassing service managers, data and performance experts, and digital services personnel, as well as private providers. These interviews aimed to gather insights into current practices, challenges, and the potential future directions of AI in these sectors
- the National Workforce Action Group – Review, Testing and Implementation Network (NWAG RTIN) participated in two discussions on using AI, focused on the opportunities, ethical implications and practical challenges of using AI in case recording
- two focus groups for practitioners and line managers using AI in case recording
- the Voice of the Child Conference outlining the research using AI software
- DfE led conference to explore using AI in social work

This mixed-methods approach enabled a broad discussion with a range of stakeholders, highlighting both current applications and future possibilities for using AI in case recording in children's social care.

While the scoping aimed to engage a wide range of stakeholders, some stakeholders are notably absent from the conversation. Engaging children and families in meaningful dialogue about the use of AI in case recording is essential to ensure they are involved in a meaningful discussion about privacy, consent, bias, transparency and digital poverty. This would usefully inform decisions about how AI is being, and could be, used in the future.

While there was some engagement of professionals with data and digital expertise, there is a need to expand this reach and engage with small and big tech companies to better understand the potential roadmap for using AI in children's social care and identify opportunities for innovation partnerships.

Stakeholder engagement occurred following the general election on 4 July 2024 and prior to the Autumn Budget Statement on 30 October. When the election was announced on 22 May 2024, government spending was paused pending the election outcome. This

created some uncertainty among stakeholders, including DfE, about the continuation and direction of DfE digital innovation projects that had been funded under the Conservative government.

On 25th November 2024, the Department for Education (DfE) led a discussion with stakeholders that included representatives from local authorities, Ofsted, British Social Work Association and Local Government Association (LGA) about using AI in social work. DfE facilitated a discursive conversation to hear from participants about promising opportunities, as well as any concerns, to inform future discussions with the Minister. Stakeholders shared a primarily positive outlook on the potential to adopt AI in social care and illustrated several current applications, while acknowledging the need for responsible development. Officials acknowledged the need for a thoughtful and ethical approach to adoption, considering the sector's varying levels of readiness and maturity.

Assumptions and questions

During the scoping exercise, some clear assumptions emerged:

- if we can reduce communication, process and retrieval overheads, we can reduce unnecessary workload and free up time for more impactful work with children and families
- more impactful work would include more face-to-face time with children and families

Some important questions surfaced:

- what AI applications are already in use and how are they shaping case recording?
- how can artificial intelligence and automation help reduce communication, process and retrieval overheads (unnecessary workload) in relation to case recording?
- what are the risks and ethical challenges and how can they be mitigated?

Key Findings

There is a wide range of potential use cases for using AI in case recording in children's social care

Many local authorities are curious and optimistic about using AI in recording cases in children's social care. Some have already implemented or tested AI products or started innovation projects. The scoping exercise identified various AI applications that could reduce unnecessary workloads for social workers and improve information use. These include transcription, generated documentation, automation, virtual assistants, and bespoke AI applications:

- **transcription:** transcription software converts speech to text from audio or video inputs. Transcription software can be used to record and transcribe conversations and meetings in real-time. Features include templated and age-appropriate outputs, language support, summarisation and actions. Language support works best with the five most common languages,[14] and doesn't do well with less known languages, strong accents, cultural context, or technical language

- **generated documentation:** GenAI can draft, edit, and format various types of documents (such as meeting notes, case notes, referrals, reports, forms, and plans) from case records, recordings or other information, generating outputs that align with the desired style and structure. This might include templated outputs such as care plans or education, health and care plans (EHCP). This automation reduces the time and effort required for manual case recording, minimises errors, and ensures consistency across documents

- **automation:** automation refers to a system or process that can operate with minimal or no human intervention, although human oversight is always recommended. Examples include:

    - **automated tasks and workflows:** automating tasks and workflows involves using technology, that may or may not include AI, to perform repetitive and routine activities without human intervention. Automating aspects of the system can potentially reduce social work overheads while improving accuracy and compliance. Automation works best where processes are well defined, such as triggering workflows, case assignment, approvals, and notifications. Processes can be fully or partially automated and can have a human in the loop or on the loop

[14] English, Spanish, Chinese, French, German

    - **AI Agents:** AI agents are an emerging technology designed to automate tasks, learn from experiences, and make decisions based on predefined rules or adaptive algorithms, and can be integrated into virtual assistants for a more bespoke user experience, however, user experiences indicate this technology is currently unreliable and produces unpredictable results

- **virtual assistants:** AI virtual assistants use artificial intelligence to perform tasks such as scheduling appointments, answering questions, managing emails, and providing reminders, thereby enhancing productivity and convenience

- **bespoke AI applications:** bespoke AI applications are customised tools designed to meet specific needs and requirements. These applications are tailored to handle unique challenges by leveraging data and AI to deliver targeted solutions. Some examples include life story work, mapping, and quality assurance tools. For instance, quality assurance tools can be used to evaluate care plans against best practice examples or predefined criteria to enhance compliance and quality of support

Transcription and virtual assistants have been trialled and adopted by some local authorities, and feedback indicates time savings from quicker generation of case notes, reports, forms and meeting minutes. Some local authorities are exploring automated tasks and workflows. To learn more, see Appendix B – Examples of AI Applications.

There is an opportunity to make better use of information in case records using AI

Local authorities collect a high volume of information from and about children and families from a wide range of sources and record it predominantly as unstructured information in case notes (See Table 3 - Structured and unstructured information). While guidance recommends a concise analytical style, case notes are often lengthy and descriptive meaning important information can get lost on the child's record.[15] Artificial intelligence (AI) offers an opportunity to work with social workers natural recording style and better utilise unstructured information through enhanced search, retrieval, and analysis.

[15] Research in Practice (2017) *Good Recording Practice Tool*. Available at: https://www.researchinpractice.org.uk/adults/publications/2017/june/good-recording-practice-tool-2017/ (Accessed: 18/11/2024)

Table 3 - Structured and unstructured information

Type of information	Description	Examples	Challenges	Opportunities
Structured Information	Structured information refers to information that is highly organised and easily searchable. This type of information is typically stored in predefined formats such as databases or spreadsheets, where each data point is clearly defined and categorised.	Structured information may be quantitative or qualitative. Examples of structured information include, names, addresses, and dates of birth, or feedback from people using services.	Can be challenging to capture the richness and complexity of human experiences within the confines of structured fields. Data definitions can vary making comparison unreliable.	More searchable and quantifiable. More straightforward to retrieve, analyse, and report.
Unstructured Information	Unstructured information does not have a predefined format or structure. It is often text-heavy narrative.	Case notes and narratives written by social workers, which often include detailed descriptions and use technical language or jargon. Documents, emails and correspondence between professionals and people who access services. Transcripts of interviews or meetings.	Unstructured information is not easily searchable or quantifiable, which can pose challenges for analysis and reporting. Important information about the child and family can be buried in the case file.	Contains valuable, nuanced information about people's circumstances, interactions, and decision-making processes. Adds richness and detail to assessments. Reflects the 'natural' recording style of social workers.

Enhanced search and retrieval

The capacity for AI to search, retrieve, and analyse high volumes of structured and unstructured information, far exceeds the capacity of a human. AI can sort through extensive recordings, extracting, categorising and synthesising critical information that may otherwise be overlooked. For example, North Yorkshire has developed two applications that make better use of information: Cognitive search (Box 1) and Policy buddy (Box 2). These applications use natural language queries, which allows users to search and retrieve information using everyday language instead of complex search syntax, which is more user friendly. These products have a far higher set-up and ongoing compute costs than 'off-the-shelf' products because they read and index every piece of data in the system but have the potential to save on time and labour costs.

Box 1: Cognitive search

The cognitive search function enables social workers to write a question or prompt in natural language and retrieve a summary of information from disparate sources, such as case notes, reports, and documents.

A time audit showed that a search for a safety plan was reduced from an average of 3 minutes to an average of 10 seconds.

To learn more, see Appendix C – Cognitive search.

Note: Cognitive search is also known as AI-powered search, semantic search, intelligent search, or contextual search. These terms are often used interchangeably, depending on the specific features and technologies being highlighted.

Box 2: Policy buddy

Policy buddy enables social workers to write a question in natural language about legislation, policy and guidance and receive a summarised response.

Policy buddy saves time for social workers, who would otherwise need to search through volumes of information and synthesise outputs from different sources.

Enhanced analysis and insights

AI can help extract meaningful insights from large volumes of structured and unstructured information, enabling more holistic and informed analysis. AI can support social workers

by generating case summaries and analysis from the child's record that can be output into templated documents, such as forms, reports, or plans, or other predefined criteria.

AI can be used to provide real-time insights by analysing and synthesising critical information as soon as it is entered into the system. This allows social workers, practice supervisors and quality assurance staff to make informed decisions promptly, potentially improving the efficiency and effectiveness of support and interventions.

AI and automation have the potential to reduce unnecessary workload, however, some assumptions about how social workers time is reallocated must be examined more closely

The scoping discussions surfaced the assumption that if we can reduce communication, process and retrieval overheads using AI, we can reduce unnecessary workload and free up time for children and families and potential labour cost savings.

These assumptions warrant closer examination. While there are clear examples of AI powered tasks taking less time, such as the cognitive search results described in Box 1, more information is needed to understand how productivity is affected across the workforce and how time is reallocated.

Some local authority AI users explained that there is potential to reduce overheads, but they are not eliminated. AI generated output can be inaccurate or lack nuance, and users must quality assure the output, which can be time consuming. The social workers time shifts from inputting data to quality assuring the GenAI output. This observation is echoed in some studies about the impact of AI on the productivity of knowledge workers, that found a range of factors can influence time savings, including:

- trust in self: trust in one's own skills will influence degree of trust in generated output[16]
- trust in GenAI: the user's degree of trust in GenAI output will influence how much time is allocated to editing and verification[17]

[16] Lee, H.P., Sarkar, A., Tankelevitch, L., Drosos, I., Rintel, S., Banks, R., & Wilson, N. (2025). *The Impact of Generative AI on Critical Thinking: Self-Reported Reductions in Cognitive Effort and Confidence Effects From a Survey of Knowledge Workers*. Microsoft Research. Available at: https://www.microsoft.com/en-us/research/publication/the-impact-of-generative-ai-on-critical-thinking-self-reported-reductions-in-cognitive-effort-and-confidence-effects-from-a-survey-of-knowledge-workers/ (Accessed 27 Feb. 2025).
[17] Cui, Z., Demirer, M., Jaffe, S., Musolff, L., Peng, S., & Salz, T. (2024). *The Effects of Generative AI on High Skilled Work: Evidence from Three Field Experiments with Software Developers*. SSRN. Available at: https://ssrn.com/abstract=4945566 (Accessed 27 Feb. 2025).

- skill level: less skilled and less experienced knowledge workers see more productivity increase,[18] whereas more experienced workers had minimal impact

While these studies relate more generally to knowledge workers, it is likely that some learning is transferable to social work and points to a need to better understand productivity in the context of social work with workers of different skill level. It is important to quantify any net time savings and how social worker time is allocated when AI is used in case recording.

The assumption that net time savings will translate to more face-to-face time with children and families may not materialise. Given social workers routinely work above their contracted work hours (average 45 hours per week),[19] it is likely that any net time savings would be absorbed into shorter average working weeks.

Likewise, some thought needs to be given to assumptions about potential cost savings. AI is power and data hungry which comes at a cost. There are also set-up and ongoing costs related to infrastructure, digital devices, quality assurance, and learning and development and so forth. Time savings from reduced overheads may not equate with net cost savings. The cost-benefits analysis requires a multifactorial and nuanced approach to better understand how the use of AI impacts the system in the short and long term.

AI represents an opportunity to reimagine aspects of case recording, including how children and families contribute to and access their own records and other important information

AI and related technologies have the potential to provide a more inclusive experience and a more representative case recording system that captures and reflects the perspectives of children and families. Examples include:

- AI driven apps and portals that enable direct input by children and families
- using speech to text or chatbot prompts to support direct recording and bridge learning and language barriers
- using speech to text to co-develop case recordings

[18] Ibid
[19] British Association of Social Workers (BASW) (n.d.) *80:20 Campaign: How much 'direct' time do social workers spend with children and families?* Available at: https://basw.co.uk/about-basw/social-work-around-uk/basw-england/campaigns/80-20-campaign (Accessed: 08/08/2024)

- draw and write directly into tablets to enhance collaboration and engagement

Box 3: North Tyneside & Northumberland

North Tyneside and Northumberland piloted tablets loaded with AI software to generate signs of safety tools and case recordings with children and families. They used speech to text and other direct inputs (e.g. drawing and writing directly into the tablet) to co-develop case recordings in real time. The output could then be sent directly to the child and family and be uploaded to the case management system. Children and families could contribute to and see their case recordings, which felt inclusive.

There is opportunity to change how children and families access their own information, other important information and connect with professionals. Children and families have access to a high volume of information and local resources but may find it difficult to navigate websites and the wider system when language, learning needs, literacy or digital literacy might be a factor. Virtual assistants and chatbots can help bridge these gaps. Using AI in these ways has the potential to complement social work practice and provide an additional layer of resources to children and families.

There are risks and ethical challenges associated with using AI in case recording in children's social care

The consensus was that more work needs to be done to address risks and ethical challenges associated with using AI in case recording, with a strong emphasis on including the voices of children and families in these conversations. The primary concerns related to:

- **bias** - algorithmic bias can result in discriminatory practices, disproportionately affecting marginalized communities and perpetuating systemic inequalities. Furthermore, biased algorithms may fail to accurately capture the complexities of individual cases, leading to inappropriate or harmful care decisions

- **privacy and data protection** - there are significant concerns about AI interacting with children and family's personal information, particularly where third-party applications may not comply with GDPR or where UK regulations may not be enforceable. The lack of transparency of AI models raises concerns about what happens to information once it is fed to an AI application

- **informed consent** – how is informed consent obtained from children and families for AI to interact with their personal information. Ethical issues emerge about the

use of AI applications and the integration of AI into children's information systems if there is no option to opt out

- **deskilling and over-reliance** - using AI in case recording and automating systems might lead to a decrease in social work skills and critical thinking and could lead to over-reliance, especially among newly qualified practitioners

- **environmental impact** - concerns about the substantial energy consumption associated with training and operating large AI models, which contributes to carbon emissions and exacerbates climate change. The process of training one large AI model can emit as much carbon as five cars in their lifetimes[20]

[20] Strubell, E., Ganesh, A., & McCallum, A. (2019). *Energy and Policy Considerations for Deep Learning in NLP*. ACL

Digital poverty is a barrier to the adoption of AI and risks exacerbating existing inequalities

Digital poverty is a significant barrier to the adoption of AI for children and families, and local authority staff[21] (see Box 4). For children and families, digital poverty is an equalities issue linked to poorer educational, employment, and economic outcomes. It affects participation and access to information, impacting health literacy and health outcomes.[22]

Social workers and social work employers also experience digital poverty, which acts as a barrier to case recording and, going forward, the adoption of AI. Some feedback indicated social workers have existing difficulty connecting to the case management system and doubted if local systems had the capacity for AI integration. This could result in families in some regions missing out on the benefits of AI being used by their social worker.

This digital divide will impact on the ability of children, families, and social workers to engage with and benefit from AI technologies described in the findings, which require reliable internet access and a certain level of digital literacy. Additionally, the cost of digital devices and internet services can be prohibitive for those in economically disadvantaged regions.[23] As a result, the potential benefits of AI could remain out of reach for many, which runs the risk of exacerbating existing inequalities and hindering overall progress in these communities.

The government's AI Opportunity Plan commits to significant investment in AI infrastructure, but it's critical these benefits are shared equitably.

[21] Digital Poverty Alliance (2023) *Digital Poverty in the UK: A socio-economic assessment of the implications of digital poverty in the UK*. Prepared by Deloitte. Available at: https://digitalpovertyalliance.org/digital-poverty-in-the-uk-a-socio-economic-assessment-of-the-implications-of-digital-poverty-in-the-uk/ (Accessed: 08/08/2024)
[22] Ibid
[23] Ibid

Box 4 – Digital poverty

It is estimated that 13-19 million people in the UK population aged 16+ (24-34%) are in digital poverty. Digital poverty refers to the lack of access to digital technologies and the internet, often due to inadequate devices or connectivity. There are four pillars to digital poverty:

Broadband access: 14% of individuals lack broadband connection.

Digital devices: 16% of individuals lack access to appropriate devices.

Digital participation: 10% of individuals fail to get online regularly.

Digital skills: 19% of individuals lack foundation digital skills and 22% lack work digital skills.

Joined up leadership and smart investment is essential to drive responsible development and adoption of AI in children's social care

The AI Opportunities Action Plan[24] from DSIT outlines the steps the government will take to invest in the national infrastructure and foundations to accelerate the adoption of AI.[25,26] DSIT have developed a framework for the responsible development and use of AI in public services[27] (See Appendix E - Resources to support the responsible development and deployment of AI). While these are welcome strategic steps that are important to advance the wider adoption of AI, there is a need for joined up leadership and smart investment to drive responsible development and adoption of AI in children's social care. For the full benefits of AI in case recording (or other activities that social workers undertake) to be realised, these enabling structures need to be in place.

[24] Department for science, innovation and technology (2025) *Independent report: AI Opportunities Action Plan* (accessed 10 April 2025)
[25] Department for Science, Innovation and Technology. (2025). *AI Opportunities Action Plan*. Presented to Parliament by the Secretary of State for Science, Innovation and Technology by Command of His Majesty. CP1241. Available at: https://www.gov.uk/government/publications/ai-opportunities-action-plan/ai-opportunities-action-plan (Accessed 7 Feb. 2025).
[26] Department for Science, Innovation and Technology (DSIT) (2021) *The National AI Strategy*. Available at: https://www.gov.uk/government/publications/national-ai-strategy (Accessed: 08/08/2024).
[27] Department for Science, Innovation and Technology (2024b) *Responsible AI Toolkit*. Available at: https://www.gov.uk/government/collections/responsible-ai-toolkit (Accessed: 18/11/2024).

Local investment

Bridging the digital divide and ensuring equitable access to AI technologies will require investment at a local level to improve infrastructure, address access to devices, and enhance digital literacy and participation. Some local authority staff expressed low confidence in the ability of existing systems to support AI adoption, citing outdated infrastructure as a key concern. Additionally, several social workers have reported difficulties accessing their case management system and experiencing issues with local connectivity.

GenAI models are designed to be compatible with existing systems, making them more accessible and easier to implement, however, they still require substantial computational resources due to their need to process large-scale data and complex algorithms. GenAI tends to have lower computational demands in comparison to complex bespoke models, however, programmes such as Microsoft 365 with Copilot still demand far higher processing, memory, and storage in contrast to running Microsoft 365 without Copilot. If local authorities progress beyond GenAI to automation, bespoke or predictive AI models, these compute costs can grow either as set-up or ongoing costs, or both.

These challenges raise important questions about whether Generative AI systems, or any other AI technologies, can be effectively supported without upgrades to current systems.

Other factors influencing AI adoption

Aside from technological readiness, there are other factors influencing the adoption of AI in case recording:

- **governance:** developing robust governance structures for using AI in social care is essential to ensure ethical, transparent, and effective implementation. Consistent governance structures are essential for mitigating risks such as algorithmic bias, data privacy concerns, and the potential for misuse. Governance frameworks should address these issues by establishing clear guidelines, accountability mechanisms, and standards for data management, quality assurance, and ethical AI use

- **Interoperability:** interoperability[28] with legacy case management systems was a recurring theme during the scoping exercise. Developers reported resistance from providers about allowing integration of AI systems with case management systems, which is reportedly unique to the UK. Consideration needs to be given to

[28] Interoperability refers to the ability of different systems, devices, or applications to connect, communicate, and work together seamlessly within a larger network.

how AI systems and legacy systems will work together and what data governance and technical standards are needed for AI integration

- **skills and knowledge:** GenAI has a relatively low learning curve, however, local authorities that have tested GenAI models highlighted that digital literacy among some social workers is poor and there is a need to provide training on ethical and appropriate use. Additionally, concerns around the impact on critical thinking and deskilling point to a need for learning and development opportunities to mitigate these risks[29]

These are complex challenges that require coordination at a national level across government departments and agencies, rather than something the Department for Education or local authorities can solve alone.

[29] Appendix D contains some questions for supervisors to use with social workers about their use of AI.

Policy and practice implications and analysis

The opportunities and benefits of using AI in case recording

The use of AI in case recording has shown significant potential to transform social work practices in children's social care. The key benefits in case recording relate to reducing process, communication and retrieval overheads (unnecessary workload) and making better use of information. Local authorities are in the discovery and experimental phases of AI adoption and are beginning to realise the benefits of using AI in case recording. It seems that the question for local authority's is not **should** we adopt AI to support social workers but **when** and **how**?

Feedback indicated that wider adoption of GenAI applications would be beneficial. These applications have the potential to:

- help reduce unnecessary workload
- improve efficiency and productivity
- reduce cognitive load[30]
- improve consistency and quality of case recordings

There is evidence to suggest that these products have a relatively low learning curve, and the ethical issues are manageable at a local level.

Local authorities experimenting with bespoke AI technologies, show that there is some promise in applications that support practice through better use of information and enhanced analysis and insight. Automation of tasks and workflows, which may or may not involve AI, holds potential for significantly reducing process and communication overheads and appears to be a somewhat untapped opportunity for local authorities. Automated referrals or form generation could potentially save time and improve compliance.

The benefits of AI have focused on improving efficiency and reducing workload, however, there is evidence that AI applications are helping to bridge common gaps that impact on practice. For example, providing some language support, age-appropriate outputs, improving quality and consistency of case recordings, and reducing cognitive load for social workers. Bridging such gaps opens opportunities to reimagine aspects of case

[30] Cognitive load refers to the amount of mental effort and working memory resources required to perform a particular task. It encompasses the demands placed on an individual's cognitive system, including processing information, problem-solving, and decision-making. Managing cognitive load effectively is crucial in ensuring that individuals can perform tasks efficiently without becoming overwhelmed, fatigued, or burnt out.

recording to enable children and families to contribute in different ways. AI has the potential for important information to be more accessible and provide opportunities for diverse and marginalised voices to be included.

Responding to the risks and ethical challenges of using AI in case recording

The risks and ethical challenges of using AI in children's social care are at the forefront of the conversation. While transcription, virtual assistants, cognitive search, and some other AI technologies have been well received, there are still concerns around bias, privacy and data protection, consent, deskilling and overreliance, and environmental impact.

Policy gaps

It is imperative to initiate a national dialogue regarding the responsible development and implementation of AI in children's social care. Moreover, it is essential to establish national guidance to govern both current and future adoption of such technologies.

Some sector leaders, such as the Department for Science, Innovation and Technology (DSIT), Department for Education, Ofsted, and BASW, have taken steps to produce resources to support the responsible development and deployment of AI (See Appendix E), however, feedback indicated a need for a more joined-up approach focused on the specific needs of children's services. Some local authorities using AI are aware of risks and ethical issues and have created local guidelines and frameworks. However, fragmented approaches and lack of oversight and support pose risks.

The need for national guidance on the safe and ethical use of AI in social work practice has been echoed throughout the sector (Ofsted, British Association of Social Workers (BASW), Social Workers Union, Foundations, and universities)[31]. National guidance should:

- be grounded in the five cross-sectoral principles to guide and inform the responsible development and use of AI[32]

[31] Koutsounia, A. (2024) *AI could be time-saving for social workers but needs regulation, say sector bodies*. Community Care. Available at: https://www.communitycare.co.uk/2024/10/04/ai-could-be-time-saving-for-social-workers-but-needs-regulation-say-sector-bodies/ (Accessed: 08/08/2024)
[32] Department for Science, Innovation and Technology (DSIT) (2024) *Introduction to AI Assurance*. Available at: https://assets.publishing.service.gov.uk/media/65ccf508c96cf3000c6a37a1/Introduction_to_AI_Assurance.pdf (Accessed: 18/11/2024).

- provide local government with access to clear, comprehensive and consistent guidelines on how to procure AI in the public interest to mitigate risks and avoid damaging public trust[33]
- establish AI assurance principles for children's social care
- monitor outcomes and impact of AI in children's social care, including algorithmic transparency and impact standards[34]
- put protections in place for children and families, and social workers, with clear guidance around consent and communication with the public about AI use
- mitigate risks and outline ethical principles for its use
- ensure accountability to citizens and uphold human rights
- establish benchmarks for governance in social care

The conversation should include central and local government, Ofsted, Cafcass, multiagency partners and NGOs. Children, families, and social workers voices are considered central to these conversations, particularly in relation to issues of ethics and consent around AI interacting with personal information. Feedback indicated that policies should encourage the adoption of AI tools while ensuring that ethical considerations are addressed, including providing training and support to children, families and social workers to enhance digital literacy and ensure the safe and effective use of AI tools.

[33] Ada Lovelace Institute (2024) *Local government needs better support for responsible procurement of AI*. Available at: https://www.adalovelaceinstitute.org/press-release/local-government-better-support-responsible-procurement-ai/ (Accessed: 28/12/2024).
[34] Department for Science, Innovation and Technology, and Central Digital and Data Office (2023) *Algorithmic Transparency Recording Standard Hub*. Available at: https://www.gov.uk/government/collections/algorithmic-transparency-recording-standard-hub (Accessed: 28/12/2024).

Conclusion

The exploration of using artificial intelligence (AI) in case recording within children's social care has indicated potential for improving efficiency and reducing unnecessary workload. While some AI applications have already been piloted, developed and adopted, adoption is not widespread.

Key findings indicate that there are a wide range of potential use cases for using AI in case recording in children's social care. GenAI is the most tested and used AI and applications that enable transcription, document generation and reduce administrative burden have proven popular with users. AI offers the opportunity to make better use of information in case records through enhanced search, retrieval, and analysis, which can reduce social work overheads. However, some assumptions about how social workers time is reallocated must be more closely examined. AI offers an opportunity to reimagine case recording and how children and families interact with their records. AI has the potential to bridge learning and language gaps and provide a more personalised and accessible experience for people who access services.

However, the adoption of AI also brings forth ethical challenges and risks that must be carefully managed to maintain public trust in services. Moving forward, it is crucial to ensure children and families are involved in meaningful dialogues about AI's role in case recording. The use of AI in case recording, and other aspects of social care, must be governed by cross-sectoral principles that guide and inform the responsible development and use of AI but are tailored to the specific needs of the vulnerable populations accessing social care support.

Digital poverty is a barrier to the adoption of AI for children, families and social workers. There is a need for joined up leadership and smart investment to ensure the benefits of AI are experienced equitably and to avoid widening inequalities. Furthermore, involving social care professionals in the responsible development and deployment of AI is crucial to ensure the technology upholds ethical standards, protects privacy, and remains accountable to the needs of children and families.

National guidance would mitigate risks and outline ethical principles for its use of AI in social care. Children, families, and social workers voice are considered central to these conversations, particularly in relation to issues of ethics and consent around AI interacting with personal information.

In conclusion, while AI presents promising opportunities for transforming case recording in children's social care, it is essential to balance innovation with ethical considerations and stakeholder engagement to achieve the best outcomes.

Appendices

Appendix A – Communication, process, and retrieval overheads

Concepts of unnecessary workload and high administrative burden can helpfully be understood through the lens of communication, process and retrieval overheads (see Table 4 below).

Table 4 - Communication, process and retrieval overheads

Term	Definition	Example
Communication overhead	The proportion of time and resources spent on communication efforts with diverse and distributed networks relative to other core social work activities.	Communication is essential for effective case management but also introduces a 'hidden cost' due to the time and cognitive resources required. High communication overhead is common in complex systems where the need for communication, coordination, and information sharing among diverse and distributed networks becomes inefficient or overwhelming.[35]
Process overhead	The amount of system capacity spent on organisational and statutory processes relative to other core social work activities.	This includes the proportion of time, effort, and resources consumed by administrative and procedural tasks within an organisation and can be measured as direct and indirect costs of managing workflows within and across teams, departments and organisations. High process overheads can divert resources away from core business and productivity.[36,37]
Retrieval overhead	The effort and time required to locate, access, and retrieve information from various sources within an organisation or system.	For social workers, this often means sifting through multiple databases, case files, and communication records to find specific details needed for effective case management. This burden is compounded by poorly designed information systems, lack of interoperability between databases, and the sheer volume of data that must be handled. High retrieval overheads can lead to significant delays, increased stress, and reduced time available for direct work with clients.[38]

[35] MacMillan, J., Entin, E. E., and Serfaty, D. (2015) *Communication overhead: the hidden cost of team cognition*. Available at: https://www.researchgate.net/publication/332528200_Communication_overhead_the_hidden_cost_of_team_cognition (Accessed: 28/12/2024)
[36] The concept of process overhead is not attributed to a single individual but has evolved through contributions from various fields, including computer science, project management, and operations research.
[37] Kaufman J (2020) *The Personal MBA*. Portfolio. Available at: https://www.amazon.com/gp/product/0525543023/
[38] Cohen, L., Smith, J., and Johnson, R. (2023) *The Impact of Retrieval Burden on Social Work Practice*. Journal of Social Work, 58(3), pp. 123-145.

The impact of high communication, process and retrieval overheads

Poorly designed systems, outdated technology, and digital poverty contribute to high communication, process and retrieval overheads, which are experienced as unnecessary workload and inefficiency. But what does this look like in practice:

- social workers dedicate a significant proportion of time manually gathering information, discovering family connections, and communicating with and coordinating a diverse and distributed network

- CMS have poor interoperability – they don't talk to other systems – and do not have the capacity to perform routine communication processes, to execute common case management processes or workflows such as sharing information or organising case conferences, or to synthesise information stored in different parts of the information system (for example, case, notes, forms, or documents)

- a social worker might need to manually search through different systems to piece together a child's history or to find relevant documents for a case review. This not only consumes valuable time but also increases the risk of missing critical information, which can impact decision-making, and the quality of care provided[39]

Consequently, social workers dedicate a large proportion of time to these activities, which reduces the amount of time available to spend with children and families. These overheads represent a high unquantified investment in the cost of the case management system and social work activity.

Measuring communication, process and retrieval overheads

Measuring communication, process, and retrieval overheads in a social work context with introduced AI and automation can be clearly defined by specific metrics. Some examples include (see Table 5 below):

[39] Cohen, L., Smith, J., and Johnson, R. (2023) *The Impact of Retrieval Burden on Social Work Practice*. Journal of Social Work, 58(3), pp. 123-145.

Table 5 - Examples of communication, process, and retrieval overheads

Overhead Type	Measurement
Communication overhead	The proportion of time and resources spent on communication efforts with diverse and distributed networks relative to other core social work activities.
Communication overhead	Children, families, carers, and professionals' satisfaction with social work communication (timeliness, accessibility, relevance)
Process overhead	Percentage of workflow steps that are automated
Process overhead	Time taken to complete process (proportionate to manual completion of the task %)
Process overhead	Timeliness of information shared by automated systems
Retrieval overhead	Average time taken to locate and access information from case record

Appendix B – Types of AI used in case recording in children's social care

Transcription

- **description:** Transcription software converts speech to text from audio or video inputs. Transcription software can be used to record and transcribe conversations and meetings in real-time.
- **adoption:** Transcription appears to be the most widely adopted AI application in children's social care in England and feedback indicates a high acceptance rate and relatively low learning curve.
- **features:** AI significantly enhances the capabilities of transcription software through integration of enhanced features, such as generating structured and templated outputs (like forms, plans, minutes and actions), generating age-appropriate outputs, and language support.
- **issues:** Transcription can struggle with jargon or technical information, however, using products with custom vocabulary, social work terminology can be input to improve accuracy.

Virtual assistants

- **Description:** An AI virtual assistant is a software application that uses artificial intelligence to perform tasks or services for an individual based on commands or questions. These assistants operate using natural language processing and machine learning to understand and execute user requests, providing an interactive experience that can offer support in various activities ranging from scheduling meetings, sending messages, to providing information and recommendations.
- **Features:** Natural Language Processing (NLP) enables the assistant to understand, interpret, and respond to user queries in a conversational manner. Virtual assistants are commonly used to produce automated documentation such as summarising meeting notes and actions, case notes and reports, drafting and summarising emails, and edit documentation and improve the quality of writing.
- **Issues:** There are some concerns around privacy and security issues. Users may become overly reliant on virtual assistants, potentially reducing their problem-solving skills and autonomy. While AI has advanced, virtual assistants sometimes misinterpret queries or provide inaccurate responses. Not all users may find these

technologies easy to use, particularly those who are less tech-savvy or have disabilities.

Generated documentation

- **Description:** Generative AI can draft, edit, and format various types of documents (such as meeting notes, case notes, referrals, reports, forms, and plans) from case records, recordings or other information, generating outputs that align with the desired style and structure. This might include templated outputs such as care plans or education, health and care plans (EHCP). This automation reduces the time and effort required for manual case recording, minimises errors, and ensures consistency across documents.

- **Features:** documentation can be generated from transcripts and structured and unstructured information from the case management system. AI can be used to automate (in full or in part) the generation of case recordings to structured templates such as case notes, forms, reports, letters, plans and chronologies.

- **Issues:** AI can generate inaccurate output and can ‘hallucinate’. The assumption is that automated documentation will reduce the time spent on case recordings, however, quality assurance must be factored in.

Automated tasks and workflows

- **Defining Automation:** Automation refers to a system or process that can operate with minimal or no human intervention. Automating aspects of the system can significantly reduce the administrative burden for the workforce while improving accuracy and compliance. Automation can be achieved through AI, machine learning or rules-based systems and may or may not rely on AI. Automated tasks and workflows could significantly reduce the process and communication overheads.

- **Description:** Automated tasks and workflows use technology to perform routine tasks and manage processes with minimal human intervention. Workflow and task automation works best in scenarios where tasks are repetitive, time-consuming, and there are well defined processes and procedures.

- **Features:** Automated tasks and workflows can help reduce process and communication overheads, while enhancing efficiency and accuracy, and the ability to monitor performance and case progression. Automated processes can trigger alerts and monitor other quality assurance and case progression metrics. Automated workflows can streamline case management by automatically triggering tasks or workflows based on predefined criteria.

- **Issues:** If the system encounters an unexpected situation it cannot manage, it may result in errors or incomplete tasks, necessitating human intervention to rectify the problem. There is the risk of over-reliance on automation, leading to complacency, reduced critical thinking and poorer manual skills. Automated workflows require initial investment, including retraining staff and ongoing costs to continuously maintain and update the technology to ensure it remains relevant and effective.

Bespoke AI applications

Bespoke AI applications are customised tools designed to meet the specific needs and requirements of an organisation or sector. These applications are tailored to handle unique challenges by leveraging data and AI to deliver targeted solutions.

Some examples include life story work, mapping, and quality assurance tools. These tools help reduce workload by generating output from structured and unstructured information on the child's record. Some examples include:

- **life story work**: there are a range of AI life story work tools available that compile and present a child's life history in an engaging, age appropriate, coherent manner, ensuring that significant events and relationships are documented accurately and meaningfully. These tools can amalgamate both structured and unstructured information, creating a comprehensive and emotionally resonant narrative that supports the child's understanding of their past and identity

- **mapping tools**: mapping tools assisting social workers in visualising and analysing complex family dynamics and relationships. By automating the creation of genograms and ecomaps, these tools provide a clear, visual representation of a child's support network and potential areas of concern, facilitating more thorough and informed assessments

- **quality assurance**: quality assurance tools leverage AI to monitor case progression and compliance with established standards, automatically identifying areas requiring attention. These tools can support social workers by providing real time feedback about cases and also support practice supervisors and people with quality assurance responsibilities with their roles

Appendix C – Cognitive search

What cognitive search is

Cognitive search is an advanced search technology that uses artificial intelligence (AI) to understand and retrieve structured and unstructured information from a range of sources in the information system, such as case notes, forms, and documents.

It combines natural language processing (NLP), machine learning, and semantic search capabilities to provide more accurate and relevant search results.

Cognitive search is also known as AI-powered search, semantic search, intelligent search, or contextual search. These terms are often used interchangeably, depending on the specific features and technologies being highlighted.

What cognitive search does

During implementation, the cognitive search system reads and indexes **all** the case information. An index is a structured representation of the data which allows for efficient retrieval. As information is added, the AI reads and indexes the new information.

This process has a high compute demand and is costly, however, ongoing costs are lower because the system will index new information as it comes in.

Once the information is indexed it can be queried using natural programming language (NLP). The social worker can search and retrieve information from different sources within the information system, such as case notes, documents, forms, audio and video files, and images.

How cognitive search can help social workers

Cognitive search is particularly useful for retrieving information from unstructured data, such as case notes. Search queries in natural language will return information buried deep within the file to help tell the child's story and recognise patterns and trends.

There is a quantifiable time and labour saving from using this technology. North Yorkshire's research shows that a simple search for a document, such as a safety plan, can be completed in 10 seconds (current average 3 minutes).

Some of the important characteristics of cognitive search

Cognitive search has some characteristics that help social workers make better use of unstructured information in case records:

- **natural language processing (NLP):** natural language processing (NLP) is a way for computers to understand and work with human language. Cognitive search uses NLP to understand the context and meaning of the text in case notes. This allows it to interpret and retrieve relevant information even if the exact keywords are not used
- **semantic search**: unlike traditional keyword-based search, cognitive search can understand the intent behind a query. For example, if a social worker searches for ‘instances of neglect’ the system can identify and retrieve case notes that describe neglectful situations, even if the word ‘neglect’ is not explicitly mentioned
- **pattern recognition**: cognitive search can analyse large volumes of unstructured data to identify patterns and trends. This can help in recognising recurring issues or risk factors across different cases, enabling more proactive interventions

Appendix D - Resources to support the responsible development and deployment of AI

Here are some helpful resources to support your learning and decision making:

AI Assurance Guidance:[40] This guide introduces key AI assurance concepts and terms and situates them within the wider AI governance landscape. It includes the six cross-sectoral principles to guide and inform the responsible development and use of AI. As an introductory guide, this document focuses on the underlying concepts of AI assurance rather than technical detail and includes suggestions for further reading.

AI Ethics and Governance in Practice:[41] The Alan Turing Institute has developed a series of workbooks and an online platform to help the public sector apply AI ethics and safety to the design, development, and deployment of algorithmic systems.

Responsible AI Toolkit:[42] This toolkit of guidance aims to support organisations and practitioners to safely and responsibly develop and deploy AI systems. The toolkit was developed by the Responsible Technology Adoption Unit and will be updated over time with new resources. The toolkit includes a range of tools such as:

- Algorithmic Transparency Recording Standard: The Algorithmic Transparency Recording Standard (ATRS) helps public sector organisations provide clear information about the algorithmic tools they use, and why they're using them. Algorithmic transparency means being open about how algorithmic tools support decisions
- New Guidance for Evaluating the Impact of AI Tools, that aims to enhance the safety and confidence with which government departments and agencies can adopt AI technologies, ensuring that public sector innovation keeps pace with the private sector. It reflects an understanding of the unique challenges posed by AI and the need for tailored approaches to address these challenges
- Generative AI Framework that defines ten common principles to guide the safe, responsible and effective use of generative AI in government organisations
- Ofsted's approach to artificial intelligence (AI):[43] Ofsted produced a policy paper that outlines how Ofsted will use Artificial Intelligence (AI) responsibly and fairly. It

[40] Department for Science, Innovation and Technology (DSIT) (2024) *Introduction to AI Assurance*. Available at: https://assets.publishing.service.gov.uk/media/65ccf508c96cf3000c6a37a1/Introduction_to_AI_Assurance.pdf (Accessed: 28/12/2024)
[41] Leslie, D., Rincón, C., Briggs, M., Perini, A., Jayadeva, S., Borda, A., Bennett, S.J., Burr, C., Aitken, M., Katell, M., Fischer, J., Wong, J., and Kherroubi Garcia, I. (2023) *AI Ethics and Governance in Practice*. The Alan Turing Institute. Available at: https://www.turing.ac.uk/research/research-projects/ai-ethics-and-governance-practice (Accessed: 08/08/2024)
[42] Department for Science, Innovation and Technology (2024b) *Responsible AI Toolkit*. Available at: https://www.gov.uk/government/collections/responsible-ai-toolkit (Accessed: 18/11/2024)
[43] Ofsted (2024) *Ofsted's approach to artificial intelligence (AI)*. Available at: https://www.gov.uk/government/publications/ofsteds-approach-to-ai (Accessed: 08/08/2024)

also sets out Ofsted's position on the use of AI by education and social care providers

- Digital capabilities for social workers:[44] The BASW/SCIE Digital Capabilities Statement is a practice framework that outlines the knowledge, skills and values that social workers should have in order to use digital technology in practice with adults, children and families in England
- The AI Safety Institute[45]: The AI Safety Institute is a directorate of the UK Department for Science, Innovation, and Technology. The institute works to the core tenet that governments have a key role to play in ensuring advanced AI is safe and beneficial. The AI Safety Institute is the first state-backed organisation dedicated to advancing this goal. The institute are conducting research and building infrastructure to test the safety of advanced AI and to measure its impacts on people and society. We are also working with the wider research community, AI developers and other governments to affect how AI is developed and to shape global policymaking on this issue

[44] British Association of Social Workers (BASW) (2023b) *Digital capabilities for social workers*. Available at: https://basw.co.uk/policy-and-practice/resources/digital-capabilities-social-workers (Accessed: 18/11/2024)
[45] Department for Science, Innovation and Technology (2025b) *The AI Safety Institute*. Available at: https://www.aisi.gov.uk/ (Accessed: 28/12/2024)

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