SSR Journal of Artificial Intelligence (SSRJAI)

OPEN ACCESS

Homepage: https://ssrpublisher.com/ssrjai/

Volume 3, Issue 6, 2026 ISSN: 3049-0413

Artificial Intelligence Readiness and Digital Competency Among Medical Social Workers at the University of Port Harcourt Teaching Hospital

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Received: *05.05.2026* | ***Accepted:*** *05.06.2026* | ***Published:*** *08.06.2026*

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DOI: *10.5281/zenodo.20589101*

Abstract **Original Research**

Although artificial intelligence is making its way into healthcare in various forms from decision support, triage and documentation tools to predictive analytics and patient-navigation aids, its readiness among medical social workers in Nigerian tertiary hospitals remains largely under-examined. This paper examines the readiness of medical social workers to use AI and their digital competency within the University of Port Harcourt Teaching Hospital, Rivers State. I employed an integrative desk-based evidence-synthesis research strategy, drawing on recent peer-reviewed studies, Nigerian digital health policy, AI governance guidelines, and the organisational context of the hospital's Medical Social Services Department. Readiness was interpreted through an integrative sociotechnical lens, using digital access, health-data literacy, AI literacy, ethical judgement, professional identity, patient advocacy and organisational support as the main areas of analysis. The findings show that medical social workers occupy an important but exposed position in AI-supported health care; their patient work, psychosocial assessment, discharge planning, counselling, referral coordination and client advocacy can be enhanced by AI-assisted documentation and risk assessment, provided there are safeguards for confidentiality, consent, equity and professional judgement. Five readiness gaps were recognised: lack of AI-specific training, inconsistent digital workflow integration, weak profession-specific directives, data privacy and protection issues, and low interdisciplinary interaction in the use of AI-driven tools. The paper introduces a stepwise competency structure and implementation roadmap for UPTH, based on baseline assessment, capacity building and training, ethical governance, and limited monitored pilot utilisation before large-scale deployment. The article concludes that preparation for the use of AI among medical social workers should not be limited to technical skills alone, but should also support accountable, human-centred digital professionalism in social work by augmenting, rather than replacing, the core relational practice of hospital social work with vulnerable patient populations.

Keywords: artificial intelligence readiness, digital competency, medical social work, hospital social services, University of Port Harcourt Teaching Hospital, Nigeria, digital health governance.

1. Introduction

The profession is increasingly engaging with artificial intelligence as the concept enters the everyday operational discourse of health systems, offering potential avenues for organising clinical information, supporting triage, automating paperwork, enhancing predictive analytics and increasing decision

support for overloaded services (Bajwa et al., 2021). In Nigeria, this coincides with a national discourse on digital health architecture and responsible artificial intelligence, which means that medical workers are now expected to understand digital work processes and their governance implications for automated systems (Federal Ministry of Health and Social Welfare, 2026). For the social work profession, the concern is not only the availability of technology in the hospital but also the competence, institutional voice and safeguards required to use it in a way that does not undermine patient dignity, privacy and social justice (Reamer, 2023).

The University of Port Harcourt Teaching Hospital is a key player in the South-South health sector. It is positioned as a specialised treatment centre as well as a provider of education, research and technologically enhanced services (University of Port Harcourt Teaching Hospital, 2026a). The hospital's Medical Social Services Department is central to this article, since its activities include the integration of patient care with psychosocial assessment, advocacy, counselling, referral, discharge follow-up, financial and family problem support, and family reintegration into the community (University of Port Harcourt Teaching Hospital, 2026b). Communication, empathy and discretion are central to performing these functions; nevertheless, they must be supported by accurate information and timely interdisciplinary networking. Thus, AI readiness has to be seen as a professional competence in which human judgement blends with ethical digital practice.

Digital literacy is a prerequisite for safe entry into modern technology-assisted health care. The DigComp 2.2 framework categorises citizens and professionals into the following competence areas: information and data literacy, communication and collaboration, digital content creation, safety, and problem-solving (Vuorikari et al., 2022). In a healthcare context, this framework has to be supplemented by competencies such as health-data interpretation, electronic documentation, privacy protection, awareness of clinical work processes, and critical review of algorithms (Jarva et al., 2024). The professional digital skills required by medical social workers are vital, given the role they play in translating medical information into social-care decisions that affect disadvantaged population groups and their families.

AI readiness goes beyond generic digital literacy. It means that employees understand the functions of AI, are prepared to challenge outputs, are conscious of risks, have adequate skills to use digital resources, ensure the data safety of service users, and can work with technical and clinical staff (Karaca et al., 2021). Recent review articles state that health professionals recognise the promise of AI but remain concerned about limited training, weak organisational support, unclear responsibility, data security, bias, and the speed at which automated systems may be implemented beyond staff capacity for safe use (Bober et al., 2024). This dilemma is extremely critical within medical social work because poor data interpretation may affect vulnerable persons who may already suffer from poverty, disability, stigma, family dysfunction or poor health literacy.

This issue becomes all the more relevant given Nigeria's growing policy context. The National Artificial Intelligence Strategy envisages AI as a mechanism for economic development, social growth, inclusivity and sector-specific transformation, including health (Federal Ministry of Communications, Innovation and Digital Economy, 2025). On data protection, Nigeria has enacted the Nigeria Data Protection Act, which provides a legal framework requiring data controllers who process personal data to do so on appropriate legal bases, with relevant accountability and safeguard procedures (Federal Republic of Nigeria, 2023). These national policy developments necessarily require hospital-based social work units to answer not only whether staff can operate a digital system but also whether professional decisions remain transparent, lawful, explainable and accountable with the deployment of AI-assisted tools.

1.1 Problem Statement

Although the use of AI in medicine is increasingly gaining attention worldwide, there is still limited academic awareness of medical social workers' readiness within African

healthcare systems. The few existing research studies have mainly focused on doctors, nurses, students and health informatics personnel, while neglecting hospital social work practitioners (O'Connor et al., 2023). This is a significant knowledge gap because medical social workers often deal with the social consequences of illness and barriers faced by patients; they negotiate service barriers, provide counselling to troubled families, and advocate for patients, mainly those whose voices may be weakest within clinical systems. If AI incorporation is focused mostly on clinical or administrative priorities, social workers may be viewed as mere end users rather than ethical stakeholders.

At a functional operating level, AI devices that summarise cases, identify risk factors, classify social needs, or even plan discharges may look effective, but their outputs can still be based on poor documentation, biased assumptions, or a lack of relevant contextual data (World Health Organization, 2021). This is why social workers must develop a sufficient level of AI literacy to ask how an algorithm was trained, which variables are being used, whose data are missing, and whether a recommendation is applicable to the patient's specific context. If nothing is done, AI might end up diminishing rather than enriching professional judgement.

Another disturbing point is the assumption that preparation merely consists of having a computer or an interest in learning. Studies on the use of digital health indicate that transition is far from easy, as it depends strongly on infrastructure, workflow adjustment, user trust, privacy protection and continuous training rather than individual interest alone (do Nascimento et al., 2023). Medical social work practice at UPTH should therefore include digital recording, data-protection knowledge, interprofessional communication, professional conduct and supervision within its readiness agenda. The present work describes an evidence-based structure concerning medical social workers' AI readiness and digital competence within the UPTH context.

1.2 Aim and Objectives

This article aims to look at the preparedness of medical social workers towards the growth of AI and digital competency in the University of Port Harcourt Teaching Hospital, based on some recent findings about digital health, artificial intelligence governance and professional ethics and social work practice.

1. To explain the concept of AI readiness and digital competency in the medical social work field in a tertiary hospital setting.
2. To determine evidence-based competence domains needed for responsible AI engagement by medical social workers.
3. To examine the opportunities, risks and readiness gaps associated with AI use in hospital social services.
4. To suggest a staged readiness and implementation agenda that will work for UPTH Medical Social Services Department.

1.3 Research Questions

1. What is meant by the term medical social worker's readiness in a tertiary hospital in Nigeria?
2. Which areas of digital competency are important in an AI-informed medical social work practice?
3. What are the opportunities and risks to consider in planning for AI readiness in the UPTH Medical Social Services Department?
4. How can UPTH enhance the ethical, human-focused AI readiness of medical social workers?

1.4 Significance of the Study

This paper contributes to the literature by recognising medical social workers as participants in the conversation around AI readiness, rather than defining digital health only as the province of clinical and technical professionals. Scholars in the field of social work increasingly argue for the inclusion of AI literacy among professional skills because automated systems may change assessment, service

eligibility, risk classification and accountability (Ahn et al., 2025). This study therefore contributes to hospital social work by including social workers' roles in the discussion on AI readiness, since social vulnerability and clinical care intersect within this field.

In addition, this paper can support the management and professional training needs of hospitals. The WHO guidelines on AI in health state that AI must uphold patient safety, privacy, transparency, equity and accountability (World Health Organization, 2021). These principles cannot be implemented by data scientists or doctors alone; instead, they must also be ensured by hospital staff members who understand patients' experiences of technology-mediated health care. Medical social workers in particular could help identify instances of digitally mediated exclusion of patients owing to poverty, illiteracy, disability, language differences, or family isolation.

Finally, this paper's structure supports the national digital health agenda in Nigeria by translating general national aspirations into professional readiness. While the Digital Health Initiative speaks of top-down digital system transformation, meaningful transformation is realised only to the extent that hospital users are empowered to support positive health outcomes (Federal Ministry of Health and Social Welfare, 2026). Thus, the structure serves as a bridge between the national AI aim and practical medical social work duties.

1.5 Scope and Analytical Boundaries

This paper examines artificial intelligence readiness and digital competence from the perspective of medical social workers at the University of Port Harcourt Teaching Hospital. It does not aim to report findings from any primary survey conducted with UPTH staff, since no primary data were provided as the source for this paper. However, it proposes a sound and scholarly defensible AI readiness evaluation using an integrative evidence-based research method that draws on policy papers, relevant literature and institutional documents.

The write-up represents the singular point of view of one academic writer. Besides, the approach is cautiously framed because AI readiness cannot be defined simply on the basis of policy statements. AI readiness transcends policy statements and ought to be demonstrated through training, work-process assimilation, safeguarding mechanisms and professional self-conception, particularly for a department dealing with psychosocially vulnerable patients (Reamer, 2023).

2. Literature Review

2.1 Conceptualising Artificial Intelligence Readiness

AI readiness is the degree to which individuals and organisations are able to understand, assess, govern and use AI technologies in a way that supports work processes without delegating responsibility to a "black box" (Bober et al., 2024). In healthcare contexts, AI readiness includes understanding what AI can and cannot do, digital confidence, critical evaluation of outputs, and awareness of patient-safety issues (Karaca et al., 2021). Organisational readiness entails information systems, leadership, training, professional standards and ethical guidelines (Bober et al., 2024).

The Medical Artificial Intelligence Readiness Scale for medical students is useful because it regards AI readiness as a multidimensional phenomenon rather than a singular attitude or feeling. Its dimensions are cognition, ability, vision and ethics, which demonstrate how an individual might feel excited about AI while lacking the ability and critical judgement required to use it ethically and responsibly (Karaca et al., 2021). This is also important in medical social work, because while a practitioner might have the ability to work on a digital platform, they may still not be ready to challenge algorithmic bias or protect social histories and potentially sensitive personal information.

Readiness also relies on trust, which can be either excessive or insufficient. Healthcare practitioners may be reluctant to use AI if systems are poorly explained, responsibility is unclear, or tools interrupt rather than support workflow (Boyacı & Söyük, 2025). Equally, uncritical trust in a system poses its own risks, as

algorithms can produce biased, inaccurate or decontextualised outputs (World Health Organization, 2025). A balanced stance toward AI readiness therefore requires a critical-trust approach, where the practitioner uses an AI-supported tool but can question, verify and overturn automated advice if professional judgement dictates that this is necessary (World Health Organization, 2025).

2.2 Digital Competency in Health and Social Work

Digital competency is not just a technical ability; it is the ability to search, assess, create, communicate and use information in digital environments (Vuorikari et al., 2022). In the healthcare sector, it must be adapted to record keeping, interprofessional referrals, confidentiality, electronic information systems, digital communication and information sharing (Jarva et al., 2024). Social work adds another dimension because social workers often hold information on family conflict, scarcity, abuse, discrimination, disability, mental health, and social and economic disadvantage. Research into digital competence within healthcare shows that professionals differ in confidence and competence profiles, and therefore respond differently to innovation (Jarva et al., 2024). This diversity is relevant to UPTH, given that departments within a tertiary hospital may vary in their exposure to digital systems and formal digital training. This means that a social worker whose role involves working with electronic forms on a daily basis may still require training in digital-data analytics, AI ethics or digital-risk assessment. The literature around social work education is beginning to emphasise how practitioners need to be prepared for digital practice.

Digital competence in social work is not simply a technical skill; it is linked to professional decision-making, service-user engagement, rights protection and reflection (Fjeldheim et al., 2024). In turn, medical social workers need to be equipped not only to use platforms but also to understand how digital tools affect relationships, consent, power and access to support.

2.3 AI in Health Care: Opportunities and Professional Risks

Across various healthcare domains, artificial intelligence has proven useful in assisting not only image perception but also clinical judgement, patient-risk prediction, automation of routine tasks, record keeping and population-health data analysis (Bajwa et al., 2021). This means that, among other benefits, tertiary healthcare hospitals might profit from such applications through faster information processing and improved collaboration. Still, AI tools perform only as well as the data, design features and management systems that support them (World Health Organization, 2021).

Within hospital social services, AI might facilitate case-note condensation, uncover social risk patterns, monitor referrals, suggest discharge plans and analyse workload. However, these should mainly be regarded as supporting tools rather than replacements. After all, social work consists of relationship-based assessment and ethical interpretation of situations, which cannot be completely turned into automated classification without creating a risk of injustice (Reamer, 2023).

Research in nursing and midwifery indicates that AI-related research in caring professions has focused mainly on supporting direct patient care and administrative tasks, while also highlighting factors such as data quality, privacy, trust and the scarcity of AI expertise (O'Connor et al., 2023). These issues also apply to the medical social work profession because social workers engage with health data collection, coding and interpretation processes. Where social context is not considered in the data, an AI-assisted decision could misunderstand the patient's actual needs.

The Nigerian setting brings another layer of complexity. A nationwide survey among medical students shows strong interest in learning about AI, yet factual understanding of the subject remains limited, which means that determination and preparedness do not necessarily coincide (David-Olawade et al., 2025). Although that research focused on

students rather than social workers, it points to a larger professional-development challenge within Nigerian health education. Similarly, medical social workers may be eager to embrace AI, but they would still need well-structured, profession-specific courses and training sessions.

2.4 Social Work Ethics and AI Governance

Because the social work profession is grounded in regard for human dignity, self-determination, privacy, confidentiality, social justice and responsible intervention, social work ethics can support the development of AI readiness. Social work practice and the deployment of AI raise issues of privacy, informed consent, monitoring, transparency, discrimination, bias and liability (Reamer, 2023). These are more than abstract ethical issues; for example, in medical social work, a digital classification may influence whether a person is eligible for social services, whether a patient can be discharged, when family members can visit, or the patient's position on a referral priority list.

Recent social work articles support the view that AI literacy must be part of core competence, since social workers need to be capable of recognising both the benefits and the harms of algorithmic systems (Ahn et al., 2025). Boetto's EPIC structure also identifies education, partnership, infrastructure and community as ethical AI practice pillars in social work (Boetto, 2025). Combining these approaches indicates that AI readiness is not just about informal self-learning; it requires a professional system to guide practice.

International governance guidance also supports this idea. WHO considers autonomy, human safety, transparency, responsibility, inclusiveness and sustainability as key ethical principles for AI in health (World Health Organization, 2021). Its subsequent document on large multimodal models also points out that more advanced AI tools, capable of handling various inputs, might be rapidly adopted in healthcare, research and public health sectors (World Health Organization, 2025). Because of this, medical social workers ought to be able to evaluate whether an AI tool is clinically safe, socially just, explainable, lawful and aligned with the human relationship that is central to care.

Besides, in Nigeria, the Data Protection Act reiterates the importance of lawful and accountable personal data processing (Federal Republic of Nigeria, 2023). For medical social work, this is crucial because psychosocial records include very sensitive personal, family, health and socioeconomic information. As a result, AI readiness must also address the practical side of consent, confidentiality, purpose limitation, data minimisation and secure sharing of information.

2.5 Analytical Framework

In assessing AI readiness, the paper's methodological strategy understands AI readiness as a sociotechnical phenomenon. From a technical point of view, it includes elements such as digital access, AI literacy, data literacy and self-efficacy across a range of technologies. From a social point of view, it includes the ability to identify how the worker's role is situated, an appropriate sense of ethics, appropriate supervision, patient advocacy and participation in organisational governance. This reflects an assumption similar to studies in digital health, which argue that use is contingent upon organisational and human factors, not just the availability of technology (do Nascimento et al., 2023).

Measuring readiness for medical social workers at UPTH therefore entails evaluating seven interconnected domains: digital access, competence in managing digital workflows, health-data literacy, AI literacy, ethical and legal knowledge, professional judgement, and organisational support. These areas have deliberately been made interdisciplinary. They take inspiration from digital competence structures, studies on medical AI readiness, social work ethics, and Nigerian governance requirements (Vuorikari et al., 2022).

The framework also presupposes that readiness comes in different levels. Basic readiness means that workers can perform their duties through routine institutional digital systems in a secure manner. Intermediate readiness means that

workers can interpret AI-generated results, while remaining aware of their limitations and being able to explain their implications. Advanced readiness means that workers can be involved not only in tool selection but also in risk assessment, audit and interdisciplinary governance. Looking at the matter in stages is helpful because it keeps organisations from treating everyone as either ready or not ready.

3. Methodology

3.1 Research Design

My study employed an integrative, desk-based evidence-synthesis design. Given that the article intends to derive insights from validated literature, policy documents and institutional data rather than collecting fresh field data, this design was fitting. Studies show that integrative designs are effective, mainly when a subject is still developing, has professional significance, and local empirical literature is limited (do Nascimento et al., 2023).

This paper is an empirical-style evidence synthesis and contextual analysis of readiness. It does not fabricate survey results from UPTH medical social workers. Instead, it draws on peer-reviewed articles, sector-specific writings, digital competence frameworks and Nigerian policy documents to identify probable preparedness areas, hazards and key implementation points. This method protects scholarly authenticity while also producing useful findings for institutional planning.

The design was also appropriate for linking professional competence with institutional readiness. It allowed the analysis to examine AI readiness as a relationship between digital skill, health-data literacy, ethical judgement, patient advocacy and organisational support within a tertiary hospital social-work setting.

3.2 Evidence Identification and Selection

The sources that formed the evidence base were mainly peer-reviewed journals, official international guidance documents, Nigerian public policy documents and the official UPTH website, published within the 2018 to 2026 period. The sources were selected because they discuss one or more of the following four areas: AI in healthcare, AI readiness or competence, digital health competence, or AI ethics in social work and health governance.

Since the paper is about the University of Port Harcourt Teaching Hospital and its Medical Social Services Department, the institutional context was taken only from official UPTH sources. UPTH presents itself mainly as a centre for specialist healthcare, training, research and technology-oriented development (University of Port Harcourt Teaching Hospital, 2026a). The Medical Social Services Department's webpage serves as one of the UPTH sources verifying hospital social work services within the institution (University of Port Harcourt Teaching Hospital, 2026b).

Table 1. Evidence Base and Inclusion Logic for the Integrative Analysis

Evidence category	Inclusion decision	Reason for inclusion	Key sources
Institutional context	Official UPTH sources were used.	They establish the setting and confirm the Medical Social Services Department as the professional context for the article.	(University of Port Harcourt Teaching Hospital, 2026a); (University of Port Harcourt Teaching Hospital, 2026b)

Evidence category	Inclusion decision	Reason for inclusion	Key sources
Digital competence frameworks	Framework and health competence studies were included.	They provide generic and health-specific domains for digital competency.	(Vuorikari et al., 2022); (Jarva et al., 2024)
AI readiness literature	Validated readiness and attitude studies were included.	They guide the readiness domains without claiming that their scales were completed at UPTH.	(Karaca et al., 2021); (Boyacı & Söyük, 2025); (Bober et al., 2024)
AI governance and Nigerian policy	National and international official sources were included.	They establish ethical, data-protection and digital health expectations relevant to hospital practice.	(World Health Organization, 2021); (World Health Organization, 2025); (Federal Republic of Nigeria, 2023); (Federal Ministry of Communications, Innovation and Digital Economy, 2025); (Federal Ministry of Health and Social Welfare, 2026)
Social work and AI ethics	Recent profession-specific references were added.	This explains why AI readiness must incorporate social work-specific aspects of ethics, relationships and service-user rights.	(Reamer, 2023); (Ahn et al., 2025); (Boetto, 2025); (Social Work England, 2025)

Source: Author's evidence synthesis from cited sources.

3.3 Operational Constructs

The constructs were selected to fit medical social work rather than general hospital administration. I treated AI readiness as the dependent institutional outcome and digital competency as a key enabling condition. Ethical and legal awareness, professional judgement and organisational support were treated as mediating conditions because a technically competent worker may still be unready to use AI if governance, supervision and accountability are weak (World Health Organization, 2021).

Table 2. Operational Constructs for Assessing AI Readiness and Digital Competency

Construct	Operational meaning in medical social work	Indicative evidence of readiness	Relevant sources
Digital access	Availability and everyday use of digital tools, records, communication channels and hospital information systems.	Staff members can view, edit and search for case information and data securely.	(Federal Ministry of Health and Social Welfare, 2026); (Vuorikari et al., 2022)
Digital workflow competence	Effective use of technology within case assessment, referral, discharge planning and documentation processes.	These digital activities enhance rather than interrupt social work workflow.	(Jarva et al., 2024); (do Nascimento et al., 2023)
Health-data literacy	Ability to interpret patient and service data cautiously and ethically.	Staff can identify incomplete, inconsistent or context-poor data.	(O'Connor et al., 2023); (World Health Organization, 2021)
AI literacy	Knowledge of how AI operates, its limitations, bias, explainability and the role of human intervention.	Employees can question AI outputs and avoid assuming that the answers it gives are always correct.	(Karaca et al., 2021); (Ahn et al., 2025)
Ethical and legal awareness	Understanding of confidentiality, consent, data protection, fairness and responsible handling.	The use of AI is consistent with respect for patients and Nigeria's data-protection laws.	(Federal Republic of Nigeria, 2023); (Reamer, 2023)
Professional judgement	Maintaining relationship-based assessment and advocacy in a digital environment.	Automated prompts should be considered assistive technologies rather than replacements for social work reasoning.	(Boetto, 2025); (Social Work England, 2025)
Organisational support	Training, supervision, policy, infrastructure and interdisciplinary governance.	The department is involved in AI decisions and risk review.	(Bober et al., 2024); (World Health Organization, 2025)

Source: Author's construct development from digital competence, AI readiness and professional ethics literature.

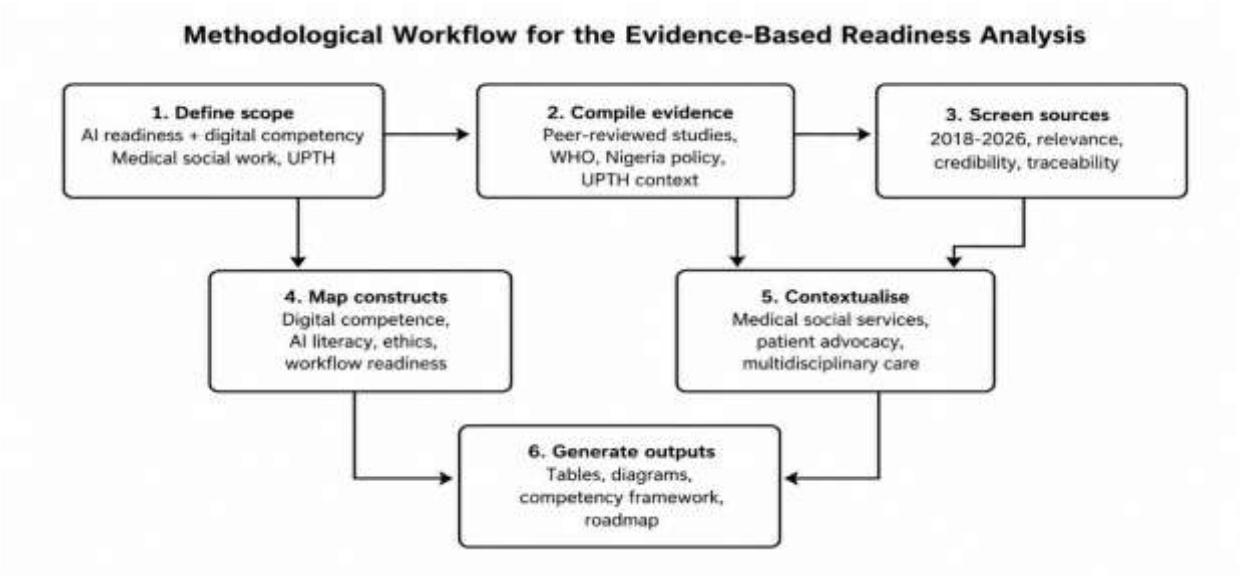
3.4 Data Analysis and Synthesis Procedure

Methodologically, the work involved a procedure of thematic synthesis. First, I conceptualised relevant ideas of AI readiness from literature on AI readiness, digital health and social work AI. Second, I categorised the

concepts into themes suitable for medical social work practice. Third, I contrasted the themes with requirements in Nigerian digital health and data protection. Lastly, I operationalised the synthesis in the form of a readiness matrix, a use-case table, a barrier-opportunity map, a scoring guide and an implementation pathway.

The synthesis was subjective and interpretive rather than statistical. No inferential statistical analysis was performed because of the absence of institutional and employee surveys, interviews or records. This methodological constraint is critical. These should therefore be interpreted as findings and implementation ideas to inform an empirical survey.

Figure 1. Methodological Workflow for the Evidence-Based Readiness Analysis



Source: Author's methodological synthesis based on integrative evidence-review logic and cited readiness literature (Karaca et al., 2021); (Bober et al., 2024); (do Nascimento et al., 2023).

3.5 Ethical and Integrity Considerations

All boundaries for academic integrity were respected in this study. Primary data were not manufactured, and there is no assumption that UPTH staff were questioned, interviewed or observed. Claims about the institution are confined to information obtained through formal publication. All policy and professional arguments are referenced appropriately.

Ethical issues are inherent to this topic, as medical social workers deal with sensitive patient information. The use of AI within the medical social work department must consider the principles of confidentiality, consent, professional accountability and data privacy (Federal Republic of Nigeria, 2023), as well as WHO's ethical considerations regarding the use of AI in health, specifically human autonomy, safety, transparency, equity and accountability (World Health Organization, 2021).

4. Results

4.1 Contextual Readiness Profile of UPTH Medical Social Work

It can be concluded from the evidence synthesis that UPTH medical social work is highly relevant, but not definitively formally ready for AI implementation. UPTH medical social work is relevant because of the social-work tasks

performed: psychosocial assessment, counselling, service coordination, and patient/family support in a tertiary hospital setting (University of Port Harcourt Teaching Hospital, 2026b). Yet it is not definitely formally ready for AI, since there is no public institutional documentation on AI training for social workers at UPTH, department-specific policies on AI use, or regular participation in AI governance.

In other words, there is readiness, but it appears to be one of opportunity rather than confirmed readiness. UPTH's institutional lean towards both technology and specialised medical services establishes a basis for digital innovation (University of Port Harcourt Teaching Hospital, 2026a). Yet professional capacity building in response to AI is necessary in order to avoid negative ethical implications such as violations of patient vulnerability, privacy and confidentiality through overgeneralisation and context-insensitive judgements in patient care (Reamer, 2023).

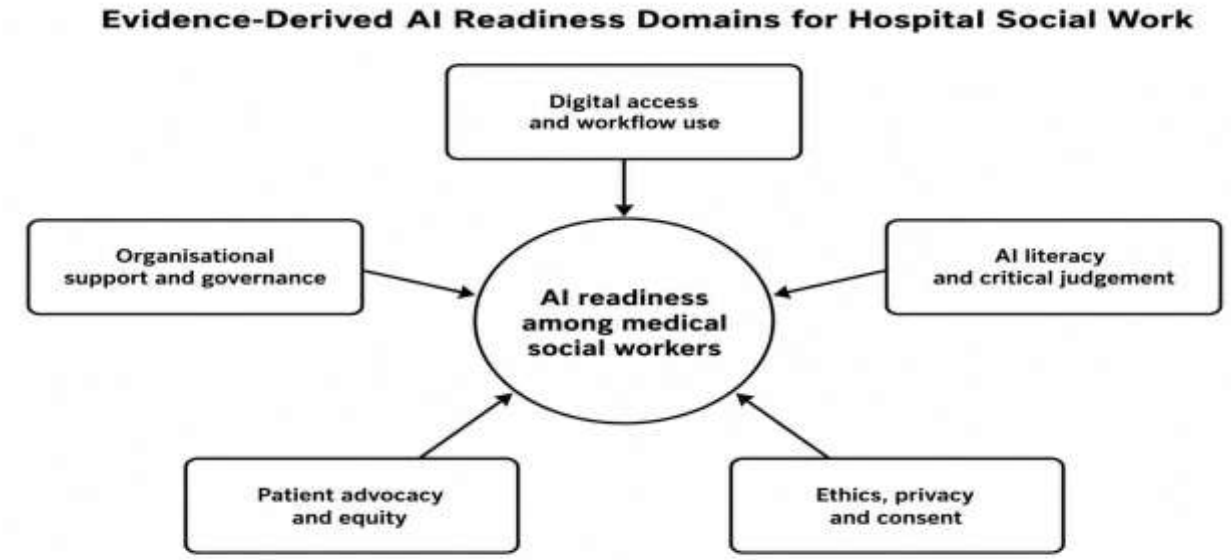
Table 3. Evidence-Derived Readiness Matrix for UPTH Medical Social Work

Readiness dimension	**Evidence-informed interpretation**	**Risk if neglected**	**Readiness implication**
Institutional digital direction	UPTH's public purpose focuses on specialist care, training, research and technology-driven service delivery.	Technology may not progress at an equal pace across departments.	Medical Social Services should be included in digital transformation planning (University of Port Harcourt Teaching Hospital, 2026a).
Departmental relevance	Medical Social Services is recognised as a hospital service that handles patients' psychosocial needs.	AI may be built without taking the social-care aspect into account.	Social workers should participate in AI workflow design (University of Port Harcourt Teaching Hospital, 2026b).
Digital competence need	Accurate information handling, referral and coordination are crucial for core functions.	Inadequate data skills could lead to inadequate documentation and dangerous decisions.	Digital competence training should precede AI deployment (Jarva et al., 2024).
AI literacy gap	Nigerian health-education evidence appears to show higher willingness than objective AI knowledge.	Employees may place too much reliance on AI tools or disregard them completely.	Baseline AI literacy assessment is needed (David-Olawade et al., 2025).
Ethical exposure	Social work manages sensitive information	Confidentiality, privacy, bias and	AI use must follow data-protection and professional

Readiness dimension	Evidence-informed interpretation	Risk if neglected	Readiness implication
	of a psychosocial and familial nature.	stigma-related harms may all increase.	ethics requirements (Federal Republic of Nigeria, 2023).
Organisational support	Getting ready for AI involves training, leadership and workflow integration.	Safe adoption is not guaranteed by individual motivation alone.	Readiness should be managed as a departmental and hospital-level process (Bober et al., 2024).

Source: Author's evidence-derived matrix from institutional, policy and professional literature.

Figure 2. Evidence-Derived AI Readiness Domains for Hospital Social Work



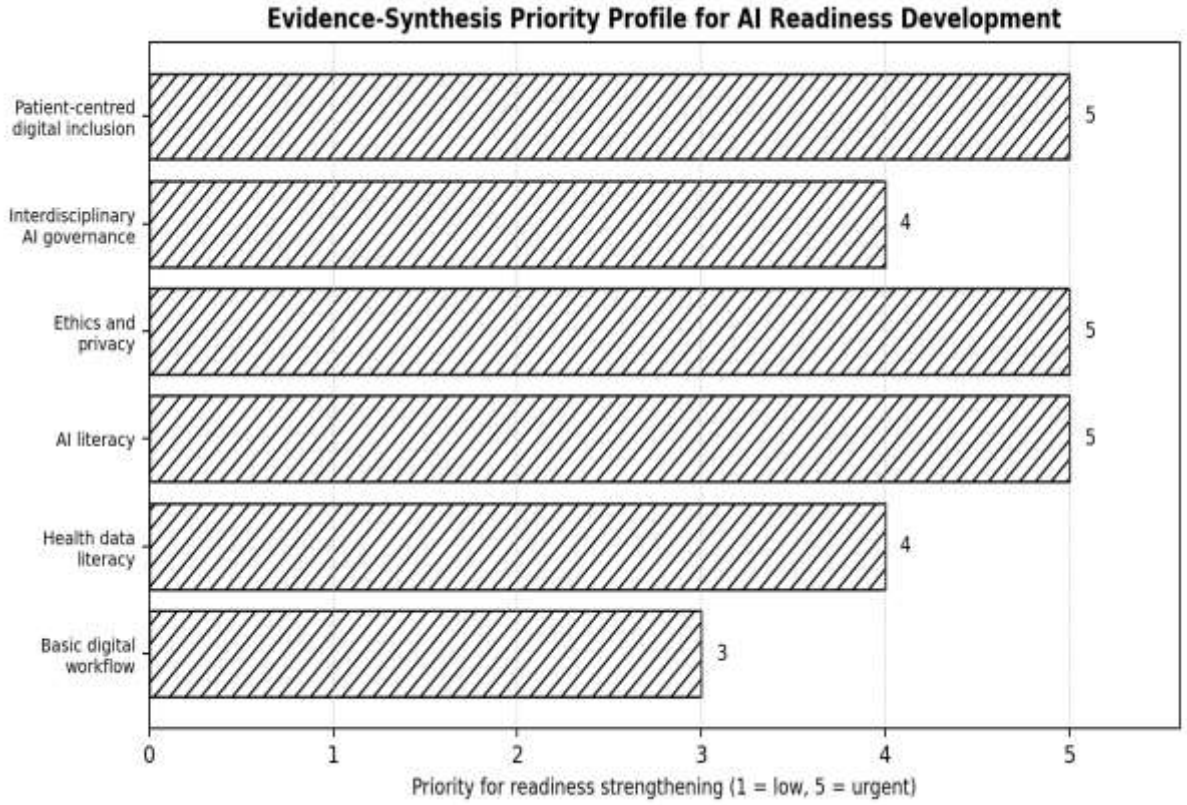
Source: Author's synthesis from digital competence, AI readiness and social work ethics literature (Vuorikari et al., 2022); (Karaca et al., 2021); (Reamer, 2023).

4.2 Priority Readiness Areas

The five priority areas identified from the synthesis were AI literacy, digital workflow integration, ethical and legal competency, interdisciplinary engagement and safeguards for the user. These five key priority areas directly respond to the evidence that healthcare uptake of AI will falter when users are untrained, tools do not integrate with workflows, or there are gaps in accountability (do Nascimento et al., 2023). These issues have an extra sting in medical social work because the social context of the user may be socially excluded and unable to contest algorithmic outcomes. AI literacy is the highest priority because the social worker needs enough understanding of how algorithms work to grasp the implications of data quality, algorithmic bias, and the need for human oversight and transparency. Medical social workers need to

understand what algorithmic results represent; this will often involve verification, appropriate contextualisation and the right to reject such results (Ahn et al., 2025). Ethical and legal competencies are also paramount because social workers handle psychologically sensitive information, and this implies the handling of sensitive personal data that requires lawful processing (Federal Republic of Nigeria, 2023).

Figure 3. Evidence-Synthesis Priority Profile for AI Readiness Development



Source: Author's evidence synthesis from AI readiness, digital health and professional ethics literature (Bober et al., 2024); (do Nascimento et al., 2023); (Reamer, 2023).

Table 4. Possible AI-Enabled Use Cases for Medical Social Work and Required Safeguards

Use case	**Potential workflow contribution**	**Minimum competence required**	**Ethical safeguard**
Case-note summarisation	Could decrease time spent reviewing lengthy patient histories and facilitate continuity of care.	Ability to check summaries against the original notes.	Human confirmation before any case decision (World Health Organization, 2025).

Use case	Potential workflow contribution	Minimum competence required	Ethical safeguard
Social-risk flagging	May identify factors such as lack of family support, financial strain and readmissions.	Capacity to contextualise and understand risk flags based on lived experiences.	Bias review and appeal pathway for affected patients (Reamer, 2023).
Discharge planning prompts	Can trigger awareness in teams to consider social barriers to safe discharge.	Awareness of multidisciplinary workflow and the patient's situation.	No automated discharge recommendation without social work judgement (Boetto, 2025).
Referral tracking	Could enhance follow-up and reduce missed welfare and community-service referrals.	Digital recording and data-quality proficiency.	Secure processing and role-based access (Federal Republic of Nigeria, 2023).
Workload analytics	May contribute to staffing levels, priority setting and service planning.	Ability to analyse aggregated data without stigmatising cases.	Aggregate reporting with privacy protection (World Health Organization, 2021).
Patient information support	Can help explain procedures, welfare options and referrals.	Ability to check understanding and tailor messages to the patient's literacy level.	Human review before patient-facing communication (Social Work England, 2025).

Source: Author's synthesis from cited AI health and social work ethics literature.

4.3 Barrier-Opportunity Mapping

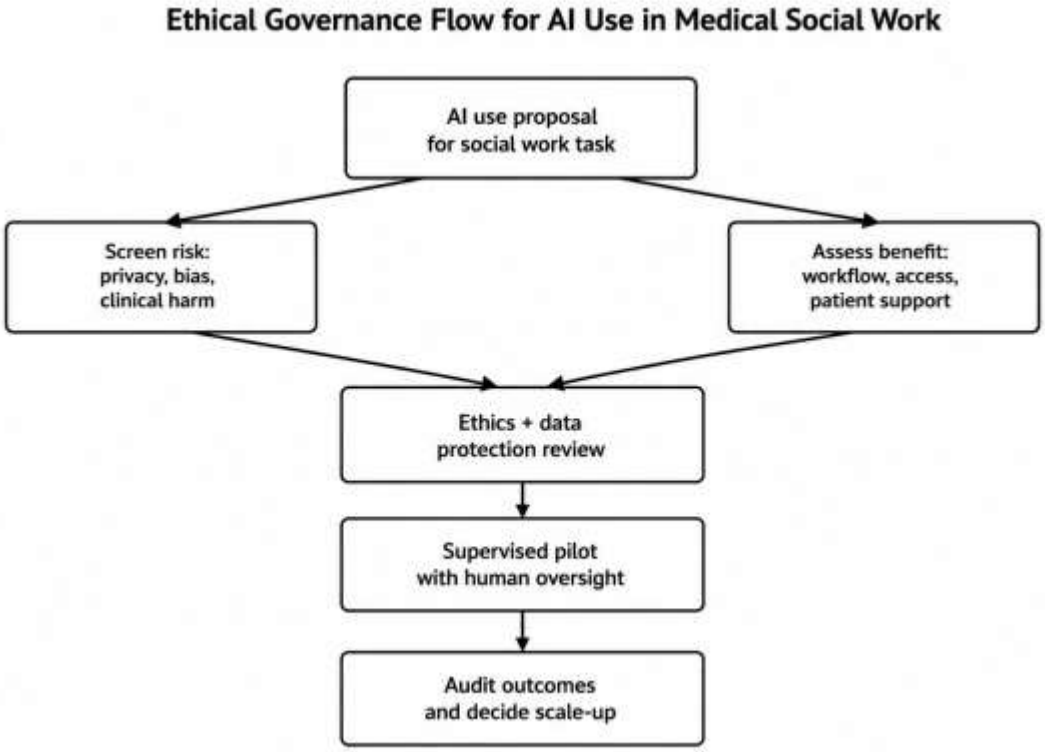
These are not UPTH-specific barriers, but they are relevant to this hospital. Worldwide, the key issues are lack of skills, infrastructure, privacy concerns, poor fit with work processes, and lack of trust in healthcare AI (Bober et al., 2024). The difficulty in Nigeria is increased by differences in digital maturity and by the need to match what Nigerian hospitals require with what the central government expects (Federal Ministry of Health and Social Welfare, 2026). The key opportunity is that medical social work has the potential to view AI from a patient-rights perspective; social workers are equipped to frame their evaluation around whether AI makes healthcare more accessible, equitable, coherent and continuous--a position consistent with the WHO goal that AI governance should be inclusive and protective of disadvantaged groups (World Health Organization, 2021).

Table 5. Barrier-Opportunity Map for AI Readiness among Medical Social Workers

Barrier	**Evidence basis**	**Opportunity**	**Recommended response**
Limited AI-specific training	While healthcare providers may feel positive towards the topic, knowledge gaps still exist within these groups.	Training can produce knowledgeable yet cautious AI users.	Introduce modular AI literacy for medical social work (David-Olawade et al., 2025).
Uneven digital workflow integration	The use of digital health depends on workflow, usability and organisational factors.	Good documentation and referral follow-up increase service continuity.	Map social work workflows before selecting tools (do Nascimento et al., 2023).
Privacy and confidentiality risks	AI technologies can handle private health and psychosocial data.	Robust governance can protect patient confidence.	Apply data minimisation, consent and access-control procedures (Federal Republic of Nigeria, 2023).
Algorithmic bias	AI outputs may perpetuate inequalities inherent in training data or administrative records.	Social workers may serve as advocates for marginalised populations.	Review tools for fairness and context-sensitive use (World Health Organization, 2021).
Weak interdisciplinary involvement	There is often technical and clinical bias in AI uptake.	Social workers can enhance patient-centred governance.	Include Medical Social Services in AI committees (Boetto, 2025).
Professional anxiety	Workers could be afraid of replacement, surveillance or loss of control over decision-making.	Clear definition of roles will facilitate acceptance.	Frame AI as assistive and subject to human oversight (Social Work England, 2025).

Source: Author's synthesis from digital health, AI governance and social work ethics evidence.

Figure 4. Ethical Governance Flow for AI Use in Medical Social Work



Source: Author's governance synthesis based on WHO AI ethics principles and Nigerian data-protection requirements (World Health Organization, 2021); (Federal Republic of Nigeria, 2023).

4.4 Proposed Scoring Rubric and Implementation Roadmap

This case demonstrates a readiness scale rather than a binary pass/fail framework. A readiness scale will permit UPTH to measure current readiness levels, train staff and measure improvement, rather than assuming that all practitioners enter with similar digital literacies. A stepped framework is also consistent with literature highlighting the complexity of AI readiness, noting that skills and knowledge are coupled with attitudes and ethics (Karaca et al., 2021).

The suggested roadmap involves baseline assessment, training, governance, piloting, evaluation and expansion. The order of this roadmap is crucial, as workers should not be exposed to AI tools in delicate social work procedures before there is awareness, clear accountability, understanding of the tool and data, and knowledge of associated risks (World Health Organization, 2025).

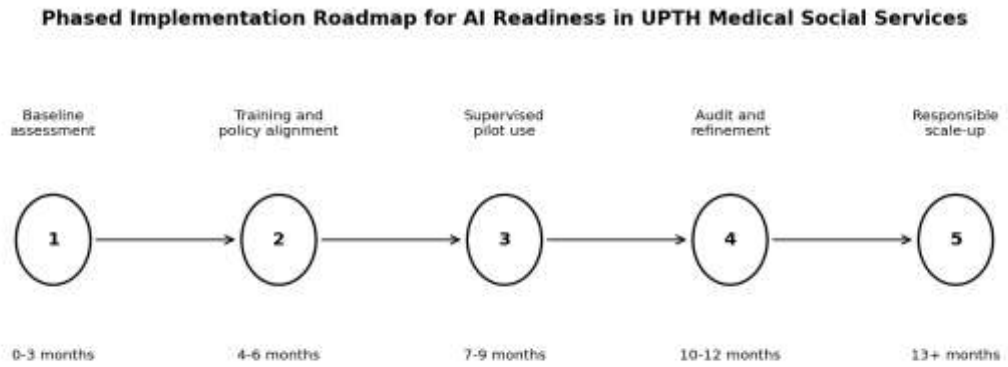
Table 6. Proposed AI Readiness Scoring Rubric for UPTH Medical Social Services

Readiness level	Description	Interpretation	Recommended action
Level 1: Foundational	Employees are able to use simple digital tools but cannot yet make adequate use of AI.	Digital competence exists, but AI readiness does not.	Start AI awareness and data protection training.

Readiness level	Description	Interpretation	Recommended action
Level 2: Developing	Staff members have a working knowledge of what AI entails and are aware of typical threats.	Readiness is emerging but still needs guided application.	Discuss and explain case-based learning and workflow mapping.
Level 3: Functional	Approved AI-enabled tools can be used by staff, provided there is validation and documentation.	There is potential benefit for routine tasks and environments with transparent policies on AI use.	Use low-risk pilot tools with oversight and audit.
Level 4: Proficient	Employees can analyse outputs, highlight tool biases and provide advice on responsible use.	The department can contribute to interdisciplinary AI governance.	Involve social workers in the review of policy, risk and purchasing.
Level 5: Transformational	AI is appropriately employed by the department to enhance accessibility, advocacy, planning and service delivery.	Enhances professional judgment and patient-centred outcomes.	Assess the tools and disseminate local knowledge.

Source: Author's proposed rubric derived from cited AI readiness and digital competence literature (Karaca et al., 2021); (Vuorikari et al., 2022); (Ahn et al., 2025).

Figure 5. Phased Implementation Roadmap for AI Readiness in UPTH Medical Social Services



Source: Author's proposed implementation roadmap informed by AI readiness, social work ethics and health-governance sources (Bober et al., 2024); (Boetto, 2025); (World Health Organization, 2025).

5. Discussion

5.1 AI Readiness as Digital Professionalism

The main argument is that medical social workers' readiness with AI must be conceptualised as digital professionalism. Knowledge and technical use of an online system can only inform, not define, social worker readiness, as one may possess the former yet lack the capacity to evaluate whether an AI-generated output is fair, accurate or reasonable. The latter is essential because readiness incorporates professional knowledge, professional responsibility, and protection of patient dignity (Reamer, 2023).

Evidence from this study further indicates that medical social workers need to begin readiness training before the adoption and implementation of AI technologies. Before or at the time of AI system procurement or piloting in hospitals, there may be minimal capacity for decision-making on the design of various facets of AI system adoption or piloted use. Early readiness helps social workers make more robust inputs regarding work processes, data governance and risk factors, preventing them from becoming passive end users of technologies designed by others in the field (Boetto, 2025).

AI readiness should also not be confused with AI enthusiasm. Evidence from health education in Nigeria indicates that learners may express interest in, or desire to be trained in, AI despite limited objective knowledge (David-Olawade et al., 2025). For medical social workers at UPTH, this means readiness needs to be assessed based on both knowledge and practice judgement, instead of the level of excitement and confidence experienced by social workers. As part of training, real-life scenarios and case studies can be used, including scenarios with ethical considerations and AI output evaluation methods.

5.2 Implications for Patients and Families

Understanding and responding to the needs of patients and families provides a foundation for AI readiness within medical social work. Patients who are identified as needing medical social work intervention are often affected by layers of need, such as poverty, limited social networks, chronic illness, physical disability, interpersonal conflict within the home and limited literacy. AI that categorises risks based on criteria that overlook these layers may present a skewed view of patients' needs and the services they require. As WHO warns, healthcare AI poses risks when the system is not transparent, inclusive and accountable (World Health Organization, 2021).

A patient-centred approach to readiness would compel the social worker to ask whether AI can improve access to services, protect client privacy, provide clear rationales for recommendations, and permit human review. In discharge planning in particular, a clinically appropriate but socially risky patient could be released without transportation, housing security, medication support or family support. AI can help identify necessary questions and topics to address with patients in discharge planning, but it cannot replace relational assessment.

Medical social workers are thus able to represent patients' interests within the AI-driven health system through actions such as identifying groups likely to be neglected, interpreting digital interventions, refusing biased classifications and ensuring that data produced by automated systems do not erase the patient voice. This type of advocacy aligns with social work values and standard methods of AI governance focused on equity and human control (Social Work England, 2025).

5.3 Implications for UPTH Management and Interdisciplinary Teams

This suggests that AI readiness at UPTH should be designed across professional groups, not just within departments or IT services. Social work should be included in committees and task forces that assess AI tools affecting patient records, care management, discharge planning or welfare-service referral; this will conform with the institutional thrust toward a technology-based hospital while safeguarding the social dimensions of care (University of Port Harcourt

Teaching Hospital, 2026a). Interdisciplinary teams also require shared vocabulary. For example, doctors, nurses, social workers, health information officers and managers working with the same client data may view and interpret it differently, and an AI tool might amplify these discrepancies with seemingly 'objective' output. Training therefore needs to include shared workshop activities where groups from each profession consider an AI output and discuss the clinical, psychosocial and legal implications. Management should ensure that AI is not viewed as a replacement. The evidence shows that issues around human interaction, data quality, privacy and trust are central across care professions (O'Connor et al., 2023). The best use of AI in medical social work appears to be as an enabler rather than a replacement. Increased documentation capacity, faster data access, better referral tracking, workload analysis, and decision support phrased in social work terms are likely applications.

5.4 Ethical Governance and Data Protection Implications

Ethically, the implications are vast, as data gathered in medical social work are likely to be personal and socially meaningful. The Nigeria Data Protection Act sets out a legal framework in which data are to be handled responsibly, and it is the responsibility of hospital departments to develop internal processes that enable those legal obligations to be put into practice (Federal Republic of Nigeria, 2023). With regard to AI readiness, this requires the social worker to understand what constitutes consent, access, purpose, data retention and secure sharing of data prior to its use with an AI-supported technology.

AI governance should also take account of explainability. If a patient is highlighted by an AI as high-risk, it is important for the social worker to be able to query what information led to this output, what the outcome indicates, and what can be done to correct errors. Transparency and accountability are also recognised as ethical principles by WHO regarding health-related AI (World Health Organization, 2021). These are not abstract principles; explainability is a tool for ensuring that AI output affects decisions about patient care in a safe and considered way.

Bias review is also necessary. Issues related to social determinants such as poverty, race, sex, disability, neighbourhood of residence, household structure and employment status are often unevenly represented within the electronic patient record. If such records are incomplete or biased, the outputs generated by AI may further perpetuate social inequality. Medical social workers, by virtue of their profession's concern for social factors, are uniquely positioned to judge whether a digital output fails to accurately represent the reality of the patient.

5.5 Limitations of the Study

The most prominent limitation is the lack of primary data from medical social workers at UPTH. As a result, the article cannot offer reported measures of staff skills, attitudes or readiness. Instead, it offers an evidence-based framework and analysis to inform an empirical examination. A future research study ought to administer a validated, or suitably adapted, AI readiness assessment, hold interviews and analyse the digital workflow of the department.

A further concern relates to the rapid pace of AI technologies; new tools, hospital policies or national guidelines could result in differences in AI readiness between the time of publication and the time when new studies are conducted. If anything, this strengthens the article: readiness should not be a one-off training opportunity but should be dynamic (World Health Organization, 2025). A third limitation is that literature on the application of AI in social work does not approach the size of literature found for medical and nursing professions. Thus, the article has consulted broader healthcare studies as well as literature on social work ethics. While an interdisciplinary perspective is a reasonable way to form the arguments made here, subsequent research in Nigeria ought to gather direct data from medical social workers.

6. Conclusion and Recommendations

6.1 Conclusion

This article reviewed AI readiness and digital literacy among medical social workers in the University of Port Harcourt Teaching Hospital.

Findings here have illustrated that AI readiness ought not to be narrowed to the availability of digital technologies or to the motivation for learning new systems. For the medical social worker, readiness is an occupational status comprising digital skill, AI literacy, ethical reasoning, patient advocacy, privacy protection and organisational support.

Findings indicate that AI can assist the practice of medical social work by automating certain aspects of documentation, supporting referrals to services, and offering social-risk prompts for intervention planning, assistance with discharge planning and workflow management. It must be understood that these are dependent outcomes; where AI serves an assistive, explainable and human-controlled role, these benefits may be achieved. If tools are provided in the absence of training, workflow mapping or ethics governance, then they could magnify privacy concerns, reify bias and erode relationships with clients (Reamer, 2023).

The context of UPTH is one in which forward-thinking readiness for AI should occur because of the hospital's specialised and technology-driven mission, and the Medical Social Services Department's role in translating medical care to clients' social well-being (University of Port Harcourt Teaching Hospital, 2026a). Therefore, the department should be regarded as an ethical constituent in the ongoing development of AI systems in the Medical Social Services Department, rather than merely a secondary user of systems selected without its direct involvement.

6.2 Recommendations

1. A baseline assessment of UPTH AI and digital readiness among Medical Social Services staff should be conducted before the deployment of AI tools. Assessments could examine digital access, workflow capacity, AI awareness, health-data literacy and ethical training needs.
2. A tiered AI literacy curriculum should be introduced within Medical Social Services. Such training should explore what AI is, how AI output is generated, potential biases, how to check validity, and how to retain human discretion.
3. The role of medical social workers within digital health and AI governance committees should be incorporated into hospital management. The integration of medical social workers in such committees would account for client psychosocial vulnerability, patient advocacy, consent and equality.
4. It is advisable that UPTH should have a data-protection policy for AI-supported social work. A policy like this must cover legal data processing, access control, secure documentation, patient consent, data-breach reporting, and limitations on automatic processing of sensitive psychosocial data.
5. Initial deployment of low-risk use cases such as referral tracking, workflow metrics and documentation support should be explored first, before developing tools that influence casework, such as assessment or prioritisation tools. Low-risk tools should then be evaluated based on precision, functionality, fairness and effects on patient care.
6. Future researchers could investigate AI readiness at UPTH through a primary empirical study using a questionnaire and interviews with medical social workers. Research at UPTH could then produce quantitative readiness scores, as well as comparisons across years, departments or groups of workers.

6.3 Proposed Future Empirical Instrument

For a future empirical study, these constructs should be operationalised in a survey for UPTH medical social workers. This survey should investigate confidence in digital workflow, knowledge of AI concepts, perceived usefulness and risk of AI, data-protection knowledge, ethical decision-making ability, and organisational support. Scenarios should be used within the survey, as self-reported confidence may be higher than the true level of preparedness (Karaca et al., 2021).

The research design would then involve a

mixture of structured surveys and brief interviews in order to score readiness using survey data, while also gathering information on practical barriers, for example workload, availability of training, documentation styles and issues around patient privacy. This method would overcome the drawback of solely relying on a quantified readiness score.

Ethical approval would need to be sought, and staff anonymity protected within the future study, as staff would be assessing the readiness of their current workplace. A non-punitive system should be in place, and data should be reported at aggregate level. No individual member of staff would be recognisable in the reports or publications.

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