An opportunity to seize or a threat to mitigate? UK public health specialists' views on artificial intelligence (AI)

Findings from a survey of 188 public-health professionals registered with the Faculty of Public Health.

Research Report

Faculty of Public Health

Artificial Intelligence and Digital Public Health Special Interest Group

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Introduction

Background

Since the public release of large language models like Open AI's ChatGPT, Google's Gemini, and Anthropic's Claude, there has been widespread interest in the potential for artificial intelligence (AI) to improve people's lives - at home and at work(1–3). The transition from a specialist tool restricted to highly skilled programmers, to an intuitive, open-access conversational tool available to anyone with an internet connection, has led to rapid public engagement, cross-sector interest and broad political support for accelerating attempts to integrate AI across many health-influencing systems, including education, justice, welfare, and healthcare (4–9). There is also growing recognition of the potential for AI to cause harm. Warnings from prominent AI developers of AI's existential threat to humanity are accompanied by growing evidence of harm at individual, organisational, and societal levels (10–12). As of July 2025, the AI Incident Database has logged over 1,144 distinct incidents globally (13).

Artificial Intelligence will impact public health specialists on two fronts; as a new tool promising to augment public health practice, and as a digital determinant anticipated to have pervasive effects on population health. Public health specialists' influence on this new digital determinant and its impact on health will be determined by their willingness and capacity to capitalise on the many potential applications of AI in public health (5), as well as their ability to mitigate potential harms and inequities(9,14–16). UK public health specialists' current use and views on artificial intelligence are unknown. This study aimed to capture the needs of public health professionals regarding their understanding, use, and concerns about artificial intelligence

Study design

We undertook a cross-sectional, web-based survey of members of the UK Faculty of Public Health (FPH).

Survey instrument

The online questionnaire (administered in Microsoft Forms) explored current and future uses of artificial intelligence (AI) in public-health practice [quantitative], preferences for continuing professional development [quantitative], and practitioners' hopes and concerns for the impact of AI on public health practice and the public [qualitative]. Draft questions were piloted with three public health specialists for clarity before launch, resulting in the addition of free text questions and additional answer options to capture the wider FPH membership. The survey combined:

- closed items on demographic and professional characteristics, current use and confidence, preferences for training in AI.
- multiple selection items on AI/ML awareness, barriers and enablers for further use of generative AI, current information sources.
- four optional open-ended questions:
    1. "What are your hopes for how AI can help public health?"
    2. "What are your concerns for the dangers of AI in public health?"
    3. "What specific problems or tasks would you like AI to address in your areas of work?"
    4. "Is there anything else you would like to mention?"

Participants and recruitment

All public health professionals registered with the Faculty of Public Health (FPH) were eligible. The FPH is the professional standard-setting body for public health specialists in the UK, responsible for setting standards for training, examination, and practice (17). Participation was voluntary and anonymous, and no incentives were offered. A convenience sampling approach was chosen to maximise reach within a short timeframe. The survey link was disseminated opportunistically through the FPH e-newsletter, the AI & Digital Public Health Special Interest Group (18) mailing list, and informal specialist networks on social media.

Data collection and analysis

Responses were collected between 17 December 2024 and 3 March 2025. A total of 205 responses were received, of which 188 met inclusion criteria. Respondent characteristics are described in Appendix 1.

Quantitative description

Closed-item responses were summarised with frequencies and percentages using MS Forms.

Qualitative thematic analysis

Thematic and framework methods (19) of content analysis were applied to free text responses. ERH read all free-text responses and used an inductive approach to generate and group open codes into a provisional thematic structure which was iteratively refined, as described below, into a coding framework. The coding framework was applied using framework analysis to all free-text responses. During charting, further consolidation or subdivision was carried out until saturation was achieved. The results of the framework coding were reviewed KB; disagreements in thematic groupings were resolved by discussion and changes incorporated into the final thematic hierarchy (themes, subthemes) which were applied manually to every response to generate the reported theme counts. Discrete concepts were counted once per respondent, with subtheme tallies yielding the quantitative content counts presented

Use of Generative AI in Analysis and Reporting

Thematic framework interrogation:

this study employed Generative AI with a structured, human-in-the-loop process: iteratively developing the provisional thematic structure using an LLM (ChatGPT, o3 model series) as a "critical reviewer" to challenge and refine themes. The AI was prompted to propose alternative theme names and category groupings based on the human-generated concepts. ERH systematically evaluated AI-generated suggestions, retaining and refining only those fully supported by data(20–23). This iterative dialogue was designed to encourage reflexivity, surface researcher assumptions, and strengthen the provisional coding framework. At all stages, human researchers retained full control over the analytical choices, interpretation, and content of this report.

Critical review of the draft report:

The report narrative was drafted by the authors, and every participant quote included was sourced directly from the original data and inserted manually. Gemini 2.5 Pro was used as a tool for critical appraisal of the first draft. The AI was prompted to review sections of the report, providing structured, constructive feedback on narrative, clarity, phrasing, and argumentation. This feedback was used by the authors inform revisions and strengthen the overall quality of the report.

Authors' Interpretation

A central ethical dilemma splits the profession.

This survey of UK public health specialists reveals a profession at a critical juncture: cautiously optimistic about the potential of artificial intelligence but acutely aware of its pitfalls and their own readiness to engage. The juxtaposition of high hopes for efficiency with deep fears of inaccuracy creates a fundamental ethical dilemma that splits the profession.

For some, *"generative AI has no use cases which are of value to society, let alone public health".* The ethical minefield of harms from biased data and opaque algorithms, flawed outputs, and the potential to exacerbate health inequalities, are unacceptable risks that should preclude the use of AI in public health. Others feel that "the moral scale has tipped*…given the productivity gain, I feel a moral imperative to use AI"* to achieve the greatest possible improvements in health and reduction in inequalities for the most people. For them, the unacceptable risk would be not using AI and losing potential life gained. Navigating this tension between the moral imperative to be efficient and the ethical duty to do no harm is the central challenge facing public health specialists.

This ambivalence is reflected in practitioners' behaviour; characterised by an almost equal divide between practitioners with no experience and practitioners (54%) in the 'early tinkering' stage of adoption. Their use of generative AI tools to draft, summarise, and ideate is largely informal, experimental, via personal accounts, and driven by personal initiative rather than organisational strategy.

A recurring narrative of a pervasive AI capability gap among UK public health specialists.

Respondents' conceptual understanding of AI masks a profound deficit in the technical knowledge required for safe and effective implementation. Less than 5% feel they are using AI effectively in their roles, fewer than one in ten respondents were aware of AI model evaluation metrics, and over a third (36%) reported having no knowledge of machine learning. This pronounced skills gap is likely an underestimate given that respondents may be more interested and engaged in the topic than the general workforce.

Respondents warn that a synergistic gap in the public health workforce's capability and opportunity to use AI in practice will result in public health specialists and public health organisations being "left behind". These are foundational risks; if professionals lose (or fail to develop) critical AI skills that underpin safe adoption, and become passive conduits for AI outputs, the dangers highlighted across all other themes increase in likelihood and impact.

The challenge for public health is not only learning how to use AI tools for themselves, but learning how to critically appraise, commission, and govern them at a system-level. Even among the small cohort of decision-makers (6% of the sample), confidence dropped sharply when moving from high-level strategy to the technical specifics of model validation and maintenance. Only one respondent reported feeling comfortable evaluating key components of an AI product such as its development, performance, bias, and safety. This is a critical skills gap; lacking this capability jeopardises public health's current role in appraising, commissioning, and evaluating health interventions and risks marginalising the profession's future role in governing these influential technologies.

A clear divergence; high hopes for established machine learning and significant concerns around newer generative AI.

A key insight from the data is that public health specialists do not view AI as a monolith. There was considerable optimism for the use of ML in augmenting traditional public health functions like data analytics, risk stratification, and epidemiological modelling. These applications are seen as an enhancement of existing skills.

Conversely, there is significant scepticism regarding generative AI, stemming from its perceived unreliability. Output accuracy was the single most-cited concern, with respondents fearing that these tools generate "plausible-sounding but wrong content that evades specialist scrutiny". This fear of "truth-sounding nonsense" that can propagate at scale is seen as the critical "Achilles' heel" for generative AI's use in evidence-based public health. This suggests a strategic path for workforce development: building confidence through the adoption of more mature ML tools for analytics, while concurrently developing the critical appraisal skills necessary to navigate the risks of generative AI.

Respondents demonstrated a clear understanding that the impact of AI extends far beyond their own practice, viewing it as a systemic issue with profound societal consequences touching health, economics, politics, sustainability, and social justice. Concerns were raised about AI's potential to amplify structural inequalities through biased model performance and the digital divide. Furthermore, respondents identified risks related to shifts in power to commercial and political actors, the erosion of data privacy, creation of new forms of societal and individual harm, and the significant environmental impact of AI infrastructure.

A strategic path for workforce development; from personal productivity to systemic impact

The most common hope for AI was its potential to create capacity by automating routine administrative and writing tasks, freeing up a stretched workforce for higher-value strategic work. It is notable that these efficiency use cases are immediately and reliably achievable with the generative AI tools publicly available today. Using generative AI for these immediate efficiency gains could serve as an important first step in familiarising the public health workforce with the basic capabilities and limitations of these new tools.

Automating daily tasks offers a gateway to AI, but for public health to truly shape the impact of AI, practitioners must rapidly move beyond viewing it solely as a personal productivity tool. The strategic challenge is to move from individual-level tools towards applying AI to systems-level processes so as to mitigate the profound social, equity, and health risks that respondents themselves identified in their concerns. The ultimate goal must be to develop the skills to deploy and govern AI in a way that tackles the systemic determinants of health. These transformative aspirations did emerge in some practitioners' hopes for AI, more often with regard to AI-enabled innovation of healthcare services. AI is seen by around half of respondents as a potential amplifier of core-public health skills, enabling public health specialists to convert complex, multi-source data into richer insights that sharpen strategy, policy, and collaboration for more timely, equitable, and impactful decisions. Just over one quarter of respondents view AI as a catalyst for redesigning public-health services to be more equitable, person-centred, and innovative, using data-driven insights to target priority populations, identify barriers to services, personalise engagement, and re-engineer systems for better outcomes with fewer resources.

A call for leadership.

With no single, authoritative source of guidance, practitioners' access to AI governance is highly dependent on their specific employer, sector, and professional network. This fragmented policy environment likely contributes to the workforce's uncertainty about the appropriate and safe use of AI in their practice. In the face of complex new technical, ethical, and risk landscapes, respondents were unambiguous in their call for leadership and guidance to translate opportunistic use into confident, systematic adoption. 93% wanted guidance from the Faculty of Public Health on the safe, ethical, and equitable use of AI in public health, while 55% identified a need for robust and clear organisational policies to increase their confidence in using AI. The finding that 78% are currently unaware of any relevant guidelines for using AI in public health underscores this need.

Without authoritative professional guidance and appropriate organisational infrastructure, the public health workforce is left to navigate this complex new reality alone, resulting in the current state of hesitant, piecemeal adoption. Workforce readiness is therefore the pivotal issue. Respondents identified three enablers they believe would unlock responsible, scaled-up use of AI in public health:

- Authoritative professional guidance from the Faculty of Public Health that supports practitioners to implement trustworthy, responsible, and ethical Public Health AI.
- Clear organisational policy and infrastructure: consistent guidance on approved tools, data security standards and risk thresholds, backed by access to compliant enterprise licences.
- Targeted, practical training: short-form courses and resources that show how to match specific AI tools to defined tasks, critically appraise outputs for bias, accuracy and safety, and embed them ethically in existing workflows.

A vision of the future for public health with artificial intelligence.

Most UK public health specialists are not opposed to AI, but they are unsure and unprepared. They are caught between a desire to harness AI for efficiency and innovation, and a deep-seated, well-founded concern about its risks to accuracy, equity, and public trust. The public health workforce's ability to capitalise on AI-applications while mitigating AI-harms represents a critical safeguard for the public that must be developed with urgency. Fostering confident, accountable leaders in AI will require urgent and coordinated investment in building workforce capability alongside the development of robust professional and organisational governance. Without this, the public health profession risks being left behind, merely reacting to a technology that it has the potential, and the duty, to shape for the public good.

Building this workforce capability is not an unassailable barrier. Many public health skills can be directly translated to AI; in performance evaluation, for example, the familiar 'positive predictive value' of a screening test is the same as the AI performance metric 'precision'. The path forward, then, is not about learning a new discipline from scratch, but about public health recognising and applying its own undervalued strengths to this new context. The profession brings at least three critical contributions to the responsible use of AI. First, it brings methodological rigour, where existing skills in critical appraisal and epidemiology provide powerful frameworks for evaluating AI tools, discerning value from hype, and foreseeing unintended consequences. Second, it offers systems leadership, using its expertise in cross-sector collaboration and public engagement to navigate complex implementations and build societal trust. Finally, and most importantly, public health provides an ethical compass. It must leverage its unique skills in advocacy and consensus-building to influence policy, leading the charge to ensure AI reduces, rather than exacerbates, health inequalities. The challenge is one of translation, not invention; public health has the tools to move from being a cautious observer to a confident leader in the ethical application of AI. Doing so is imperative if we wish to ensure these powerful new tools are harnessed for the fundamental goal of a healthier, more equitable society.

Recommended Strategic Priorities

The findings from this survey articulate a clear and urgent need for coordinated action to support the UK public health workforce. Practitioners are poised to engage with AI but are held back by a critical and self-aware gap in capability, confidence, and governance. The following recommendations are designed to bridge this gap, creating a pathway from the current state of cautious, informal experimentation to a future of confident, systematic, and ethical use of AI to improve and protect the public's health. Acknowledging the rapid pace of AI development and the diversity of perspectives across the sector, these recommendations should be viewed as initial strategic priorities rather than fixed, permanent recommendations. They are intended to form a 'living' framework that must be subject to continuous review and adaptation, drawing on emerging literature, cross-sector learning, and ongoing engagement with Faculty membership.

The recommendations are structured around three core pillars for action identified by respondents to support public health practitioners to implement equitable, responsible, trustworthy, and ethical AI:

1. Build workforce capability through targeted education.
2. Support the responsible use of AI in public health with practical professional and organisational guidance.
3. Shape the AI ecosystem through collaboration and advocacy.

1) Build Workforce Capability Through Targeted Education

To fully realise the potential of AI in public health, there is an urgent need to equip the current and future workforce with relevant knowledge, skills, and capabilities. Building workforce capability is a sustainable, inclusive, and evidence-informed pathway for the Faculty to guide the responsible integration of AI across public health practice. This is necessary for the safe adoption of AI in public health and is a central enabler for public health specialists to meaningfully contribute to AI policy, strategy, evaluation, and regulation. Training must be practical, multi-levelled, and integrated into existing professional development pathways. This bottom-up development approach offers a chance to create a cooperative model across the sector, fostering shared learning and leadership rather than a purely top-down directive. At present, few professionals bridge both AI and public health disciplines, so this focus on capability building represents an opportunity to grow new experts who can translate between these fields.

- **The Faculty of Public Health should:**
    - **Integrate AI into Professional Training and CPD:** To ensure baseline competency across the workforce, AI literacy and critical appraisal skills should be formally embedded within:
        - The public health specialty registrar curriculum –prioritising this action given the need for expedited development of registrar competencies to meet the FPH curriculum review timelines.
        - The curriculum for practitioner registration.
        - FPH members should be encouraged to include learning and development in AI and digital as part of CPD, from awareness through to expert knowledge.
        - Specialist training for senior leaders and decision-makers, who the survey identified as having significant learning needs despite their responsibilities.
    - **Develop core digital public health companies, including the application of artificial intelligence and machine learning across public health practice.** Establish a clear competency framework for digital public health, recognising that a sliding scale of skills is needed from foundational AI literacy for all practitioners to advanced appraisal and implementation skills for specialist and leadership roles.

    - **Signpost Practical, Accessible Training:** Practitioners expressed a preference for short-form, practical education. Training should focus on the highlighted needs;
        - Understanding which AI tools are suited to specific public health tasks.
        - Critically appraising AI outputs for accuracy, reliability, bias, and fairness.
        - Ethically and safely integrating AI tools into daily workflows.
        - Explicitly addressing when to use, and when to override, AI-generated outputs to maintain professional judgement.
        - Address the access needs of the Disabled Public Health workforce by ensuring all AI tools and associated training materials strictly adhere to accessibility and inclusive design principles.

    - **Establish a formal mechanism for the ongoing, collaborative review of emerging literature and real-world learning,** ensuring these insights are rapidly integrated to keep all guidance and training materials current.

- **Public Health Organisations should:**
    - Support their public health workforce to develop skills in AI.
    - Where possible, **provide access to compliant, secure enterprise AI products** to mitigate the risks associated with staff using personal accounts for professional work.
    - Address organisational risk aversion that leaves the public sector "trailing behind," by establishing clear pathways and support for staff seeking to upskill in AI as well as advanced users seeking to innovate safely.

- **FPH members should**
    - Champion ethical and inclusive approaches to AI, and act as critical friends in multi-agency or cross-sector AI initiatives, holding systems to account for equity and public good outcomes.
    -

2 Support the responsible use of AI in public health with professional guidance, practical tools, and robust organisational governance.

Public health must lead in ensuring artificial intelligence is developed and used equitably, ethically, and in alignment with population health values. This complex challenge requires a sociotechnical approach, for which clear guidance is the foundational step. The demand for this support is evident: 93% of survey respondents would find FPH guidance on AI useful for their practice, and 55% stated that robust organisational policies would increase their confidence in using AI.

- **The Faculty of Public Health should:**
    - Curate and share practical resources that support public health practitioners to implement trustworthy, responsible, and ethical AI (e.g., equity impact assessments, inclusive data governance, evaluation frameworks).
    - Update the Nuffield Council on Bioethics public health report with an AI case study.
    - Support the safe and ethical use of AI in public health by applying and extending FPH ethical standards to common public health use cases, providing tools to support decision making for members in using AI, and updating guidance as practice develops through cross-disciplinary collaboration.
    - Establish and maintain "living" professional guidance for the responsible use of AI in public health, applying and extending existing guidance where feasible.
        - Facilitate structured discourse and engagement with the FPH membership in the development and ongoing improvement of this guidance, to ensure it is grounded in real-world experience.
        - Ensure this guidance is aligned with other key health bodies like the NHS and UKHSA to provide a coherent national framework.

    - Engage with public health employers across Local Authorities, the NHS, and National Agencies to work towards alignment and compatibility in guidance issued by the Faculty and Public Health Employers.

- **Public Health Organisations should:**
    - Develop clear policies on the approved use of AI tools, data security standards, and risk thresholds, with reference to, and compatible with, the FPH professional guidance and decision-support tools.
    - Provide organisational guidance and infrastructure that supports the responsible use of open source, approved tools for defined tasks, backed by access to compliant enterprise licences.

3. Shape the AI Ecosystem Through Collaboration and Advocacy

Public health specialists understand that AI is a systemic issue with broad societal consequences. The profession must use its collective voice to shape the development and regulation of AI to ensure it serves the public good. Public health has an opportunity to provide system leadership across sectors to capitalise on the opportunities for public health and mitigate the direct and indirect harms to health and equity.

- **The Faculty of Public Health should:**
    - **Foster interdisciplinary collaboration and communities of practice and innovation.** The FPH and other public health bodies should create opportunities for shared learning to demystify AI and accelerate the adoption of effective practices across public health systems. This could include:
        - Convening expert networks to support interdisciplinary collaboration and horizon scanning on AI innovations relevant to public health.
        - Hosting forums and debates to openly discuss the hopes and concerns identified in this report.
        - Facilitate an approach to share knowledge and good practice, such as case studies and evaluations of AI-tools used in public health to avoid duplication of effort.
        - Partnering with academic institutions, developers, and the voluntary sector to co-design and evaluate AI solutions for public health challenges.
    - Support the public health workforce to align core public health competencies with AI development and implementation processes (e.g. population data analysis, ethical frameworks, systems thinking) to highlight the profession's value and promote interdisciplinary collaboration.
    - **Champion Responsible AI in National Policy and Regulation:** The FPH must advocate for a policy landscape where health equity and safety are paramount. Key advocacy points should include:
        - Requiring mandatory Equity Impact Assessments for AI tools procured for use in health and social care.
        - Lobbying for regulation that enforces transparency, accountability, and robust data privacy and security governance.
        - Ensuring the environmental impact of AI is a key consideration in procurement and policy decisions

- **Public Health Organisations should:**
    - Promote clear and coordinated public communication strategies to maintain public trust in the use of AI in public health.
    - Foster community engagement and transparency by actively involving the public in the co-design and evaluation of AI tools.

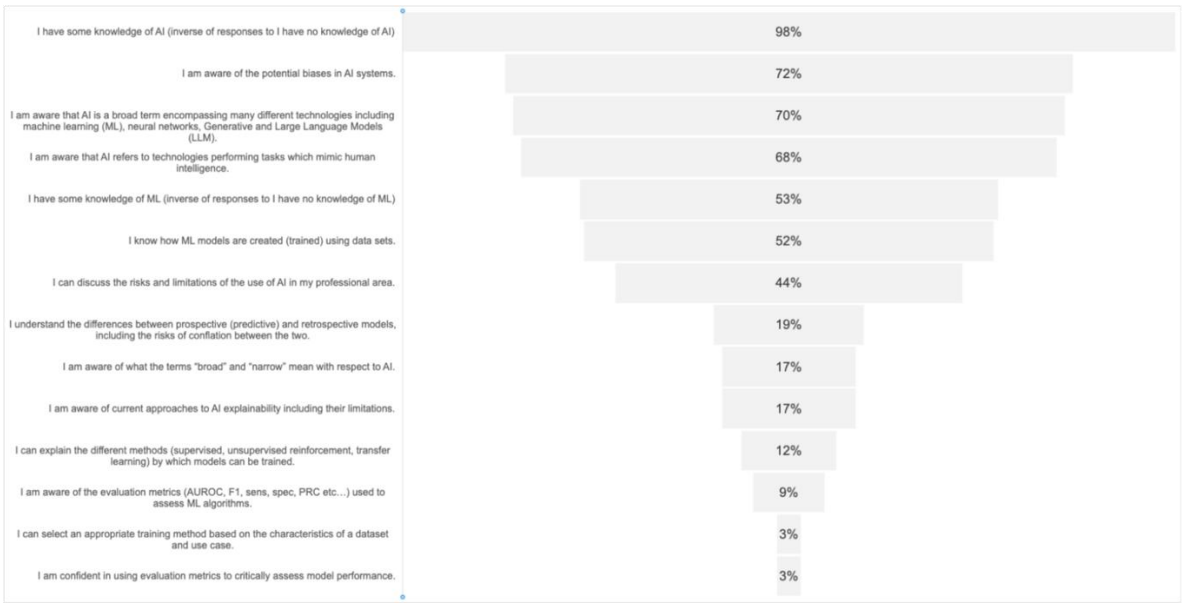
Quantitative Findings: Public Health Readiness for AI

Understanding and Engagement with AI

1. Respondents' understanding of artificial intelligence (AI) and machine learning (ML) (n=188)

Over ⅔ of respondents are aware that AI refers to technologies performing tasks which mimic human intelligence (68%), that AI is a broad term encompassing many different technologies including machine learning (ML), neural networks, Generative and Large Language Models (LLM) (70%), and of the potential biases in AI systems (72%). Respondents were less confident that they could discuss the risks and limitations of the use of AI in their professional area (44%). A minority (17%) were aware of current approaches to AI explainability including their limitations. Significantly fewer respondents felt confident with their understanding of machine learning, with 36% of respondents reporting they have no knowledge of ML (in contrast to <1% reporting no knowledge of AI). Just over half (52%) of respondents reported knowing how ML models are trained. This fell to 12% feeling that they could explain the different training methods (supervised, unsupervised, reinforcement, transfer learning), and to 3% reporting they would be able to select an appropriate training method based on the characteristics of a dataset and use case. 18% reported that they understood the differences between prospective (predictive) and retrospective models, including the risks of conflation between the two. Awareness of the evaluation metrics (AUROC, F1, sens, spec, PRC) used to assess ML algorithms was low at 9%, with a very small number of respondents (3%) reporting confidence in using evaluation metrics to critically assess model performance.

Figure 1. Knowledge and Capabilities in AI and Machine Learning Funnel Chart. *Chart shows the proportion of respondents (n=188) identifying with each statement that 'best reflects your current understanding of' Artificial Intelligence or Machine Learning. The highest response item was awareness of potential bias in AI systems (72%). The lowest responses related to confidence in using evaluation metrics to critically assess model performance (3%) and having no knowledge of AI (2%).*

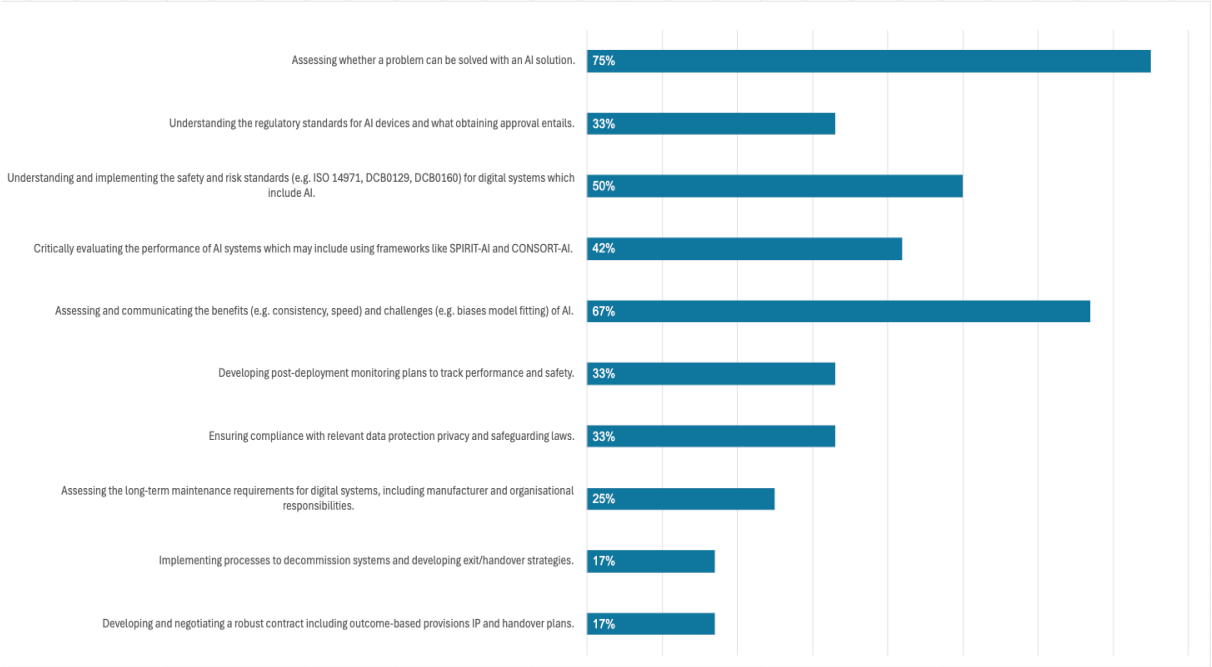


2. Understanding among decision-makers of organisational use of AI

A small number of respondents (6%) currently hold decision making responsibilities related to artificial intelligence (AI) or machine learning (ML) in their organisation. These include responsibility for AI implementation (31%), AI strategy (28%), and AI policy (17%). Responses for 'AI procurement' and 'other' decision making responsibilities are not reported due to small numbers. Of the 12 'decision-makers' in the sample, one reported feeling comfortable evaluating all of the following AI development stages; training, fine tuning, internal validation, external validation, local validation, performance (including comparative performance), bias, safety, and model drift. Over half felt comfortable assessing bias (58%) and safety (58%). Comfort in evaluating performance (including comparative performance) (42%), training (33%), fine tuning (25%), internal, external, and local validation (each 33%) were lower across this subsample.

Most decision-makers reported being comfortable with assessing whether a problem can be solved with an AI solution (75%) and assessing and communicating the benefits (e.g. consistency, speed) and challenges (e.g. biases model fitting) of AI (67%). Half (50%) reported being comfortable understanding and implementing the safety and risk standards (e.g. ISO 14971, DCB0129, DCB0160) for digital systems which include AI. A third of decision-makers were comfortable understanding the regulatory standards for AI devices and what obtaining approval entails; developing post-deployment monitoring plans to track performance and safety; and ensuring compliance with relevant data protection privacy and safeguarding laws. Less than a third were comfortable assessing the long-term maintenance requirements for digital systems, including manufacturer and organisational responsibilities; implementing processes to decommission systems and developing exit/handover strategies; and developing and negotiating a robust contract including outcome-based provisions IP and handover plans.

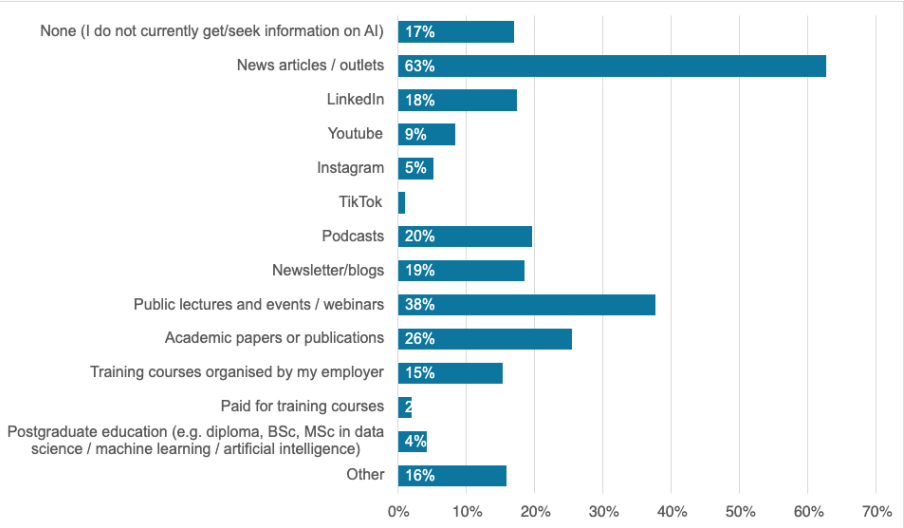
Figure 2. Comfort with Supervising or Undertaking AI Commissioning Steps*. Chart shows the proportion of decision-makers identifying which steps in the AI commissioning process they feel comfortable supervising and/or undertaking. The highest response item was 'assessing whether a problem can be solved with an AI solution' (75%). The lowest response items related to 'Implementing processes to decommission systems and developing exit/handover strategies' and 'developing and negotiating a robust contract including outcome-based provisions IP and handover plans (17%)*



3. Respondents' uptake of information and training in AI (n=188)

The predominant source of information on AI for public health specialists is traditional media, with 63% of respondents getting information about AI from news outlets, and 26% from academic publications. These sources are followed by public lecturers / events / webinars (38%). New media is also a source of information for a significant number of respondents, who obtain information from podcasts (20%), blogs/newsletters (19%), and LinkedIn (18%). Other major social media sites were less frequently reported as a source of AI information; Youtube (8.5%), Instagram (5%), TikTok (1%). A minority of respondents have undergone training courses organised by their employer (15%), paid for by themselves (2%), or undertaken postgraduate education (e.g. diploma, BSc, MSc) in data science, machine learning, or artificial intelligence (4%). 17% of respondents do not currently seek information on AI.

Figure 3. Respondents' Uptake of Information and Training in AI. *Chart shows the proportion of respondents (n=188) identifying their sources of information and training on AI. The highest response item was 'news outlets' (25%). The lowest response item was 'TikTok' (1%).*



4. Respondents' awareness of guidelines on the use of AI in public health (n=188)

H (n=188)78% of respondents (188 total responses) were **not** aware of specific guidelines or policies relating to understanding and/or use of AI in their field.

Among the minority (22%, n=42) who were aware of guidance, the responses revealed a highly fragmented landscape with no single, authoritative source. Instead, practitioners cited a patchwork of policies originating from distinct sectors, including central government bodies like the DHSC and UKHSA, local employers such as NHS Trusts and local authorities, academic institutions, and professional or regulatory bodies like the BMA and MRC. This fragmentation suggests that a practitioner's access to and understanding of AI governance is highly dependent on their specific employer, sector, and professional network.

The guidance mentioned ranges from high-level, permissive frameworks (e.g., the HMG Generative AI Framework) to highly restrictive, prohibitive rules at a local level (e.g., blocking specific tools or forbidding use in recruitment). The nature of the guidance is varied. Some are aimed at specific domains like academic research, student assessment, or clinical medical devices, which may not directly apply to the daily, non-clinical work of many public health specialists. This fragmented and sector-dependent environment likely contributes to the workforce's uncertainty about the appropriate and safe use of AI in their practice

5. Respondents' current use of generative AI

A subset of respondents (n=39[1]) provided their current use of generative AI; 54% currently use generative AI in their public health practice, 38% do not currently use AI but would like to, and 8% do not want to use generative AI to support their public health work.

Figure 4. *Current Use of Generative AI in Public Health. Chart shows the proportion of respondents (n=39) identifying with each statement that best reflects their current use of Generative AI. The highest response item was 'I am currently using GenAI products professionally' (54%). The lowest response item was 'I do not use GenAI and I do not want to use GenAI' (8%).*

Of those using generative AI (n=21), most are using an AI tool at work with a free personal account (43%), just under one quarter (24%) were using a premium account, and just over one quarter were 29% using a workplace account. The most widely used tools were ChatGPT (38%), Microsoft co-pilot (30%), and Gemini (13%). Around half (48%) report using AI confidently i.e. in a way that maintains quality, safety, and minimises bias. A third (33%) use AI cautiously, i.e. they are not sure if they could be more effective or if their data is safe. A small number of respondents feel they use AI effectively (i.e. they can select the right tool for the right task 14%, or can create small custom models to automate tasks 5%).

Figure 5. Confidence in Using Generative AI. *Chart shows the proportion of respondents (n=21) identifying with each statement that best reflects their confidence in using Generative AI. 48% use AI confidently (in a way that maintains quality, safety, and minimises bias) and 5% use AI effectively and can create small custom models through which to automate tasks/functions.*

[1]Surveying UKHSA staff (n=141) revealed similar use; current engagement 42%, desire to engage 47%, opposition 11% .

Preferences for AI Training and Guidance

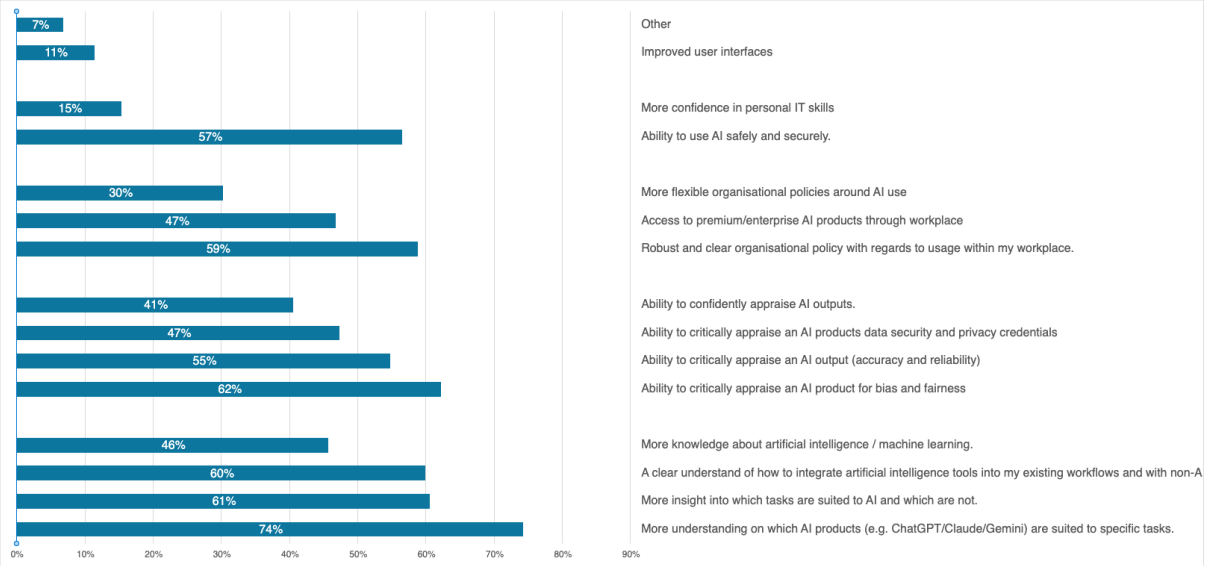
6. Support for guidance from the Faculty of Public Health (n=188).

93% of respondents would find guidance from the FPH on safe, ethical, equitable use of AI useful for their day to day practice.

7. Self-identified needs for increasing confidence in the use of generative AI *(n=175)*

Over half of the 175 respondents felt they would be more confident in using generative AI in public health practice if they had; more understanding on which AI products (e.g. ChatGPT/Claude/Gemini) are suited to specific tasks (69%); more insight into which tasks are suited to AI and which are not (56%); a clear understand of how to integrate artificial intelligence tools into existing workflows and with non-AI-products (56%); robust and clear organisational policy with regards to usage within my workplace (55%); ability to critically appraise an AI output (accuracy and reliability) (51%); ability to critically appraise an AI product for bias and fairness (58%); ability to use AI safely and securely (53%). 44% felt that access to premium/enterprise AI products through their workplace and the ability to critically appraise an AI products data security and privacy credentials (44%) would increase their confidence, while 43% felt more knowledge about artificial intelligence / machine learning would be helpful. 38% felt they would be more confident in using AI if they were more able to confidently appraise AI outputs.

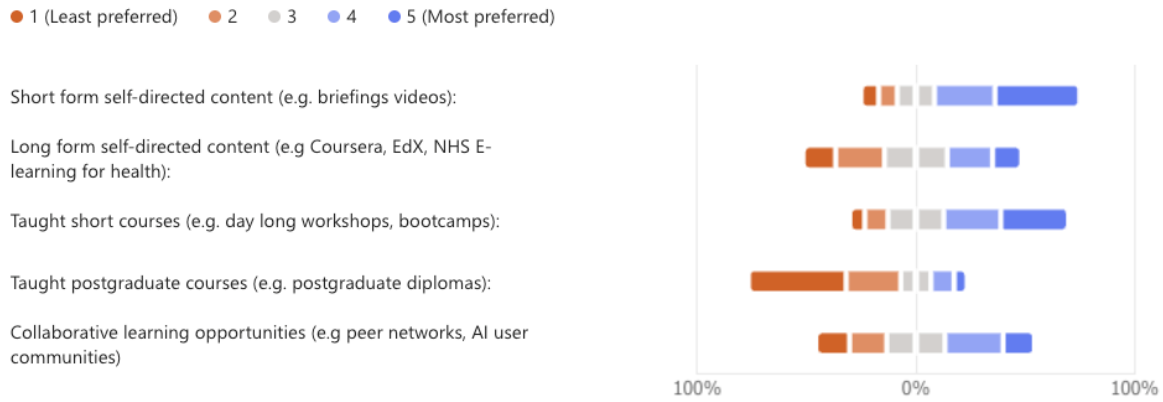
Figure 7. *Chart shows the proportion of respondents (n=175) self-identifying needs for increasing confidence in Generative AI. The highest response item was 'more understanding on which AI products (e.g. ChatGPT/Claude/Gemini) are suited to specific tasks' (69%).*



8. Preferences for the format of education on GenAI (n=188)..

Among respondents [188 responses], preferences for generative AI education were mixed, with a general preference for short form self-directed content (e.g. briefings, videos) (39% first preference, 28% second preference), followed by taught short courses (e.g. one day workshops, bootcamps) (31% first preference, 26% second preference). Taught postgraduate courses (e.g. postgraduate diplomas) were the least popular (45% least preferred, 25% second-least), followed by long form self-directed content (e.g. Coursera, EdX, NHS E-learning for health) (15% least preferred, 22% second-least) Opinions on collaborative learning opportunities (e.g. peer networks, AI user communities) were split, with 41% indicating a positive preference, and 32% indicating a negative preference for these approaches.

Figure 7. Preferences for the Format of Generative AI Education. *Chart shows the preferences for generative AI education formats among respondents (n=188). The highest preference was for 'short form self-directed content (e.g. briefings, videos)' (39% first preference). The least popular format was 'taught postgraduate courses (e.g. postgraduate diplomas)' (45% least preferred).*



Voices from the Field: Public Health Experts on their Hopes and Concerns for AI

Concerns For The Health Of The Discipline And The Population

152 respondents answered the free-text question “What are your concerns for the dangers of AI in public health?”. Three themes emerged: concerns regarding the characteristics of generative AI tools (theme C1; Encoded Harm, 163 mentions), concerns relating to the impact of increasing use of artificial intelligence on the public health workforce (theme C2: Impact on the Profession & Practice of Public Health, 116 mentions), and concerns relating to the harms of generative AI on the population (theme C3: Individual, Social, & Environmental Harm. 108 mentions).

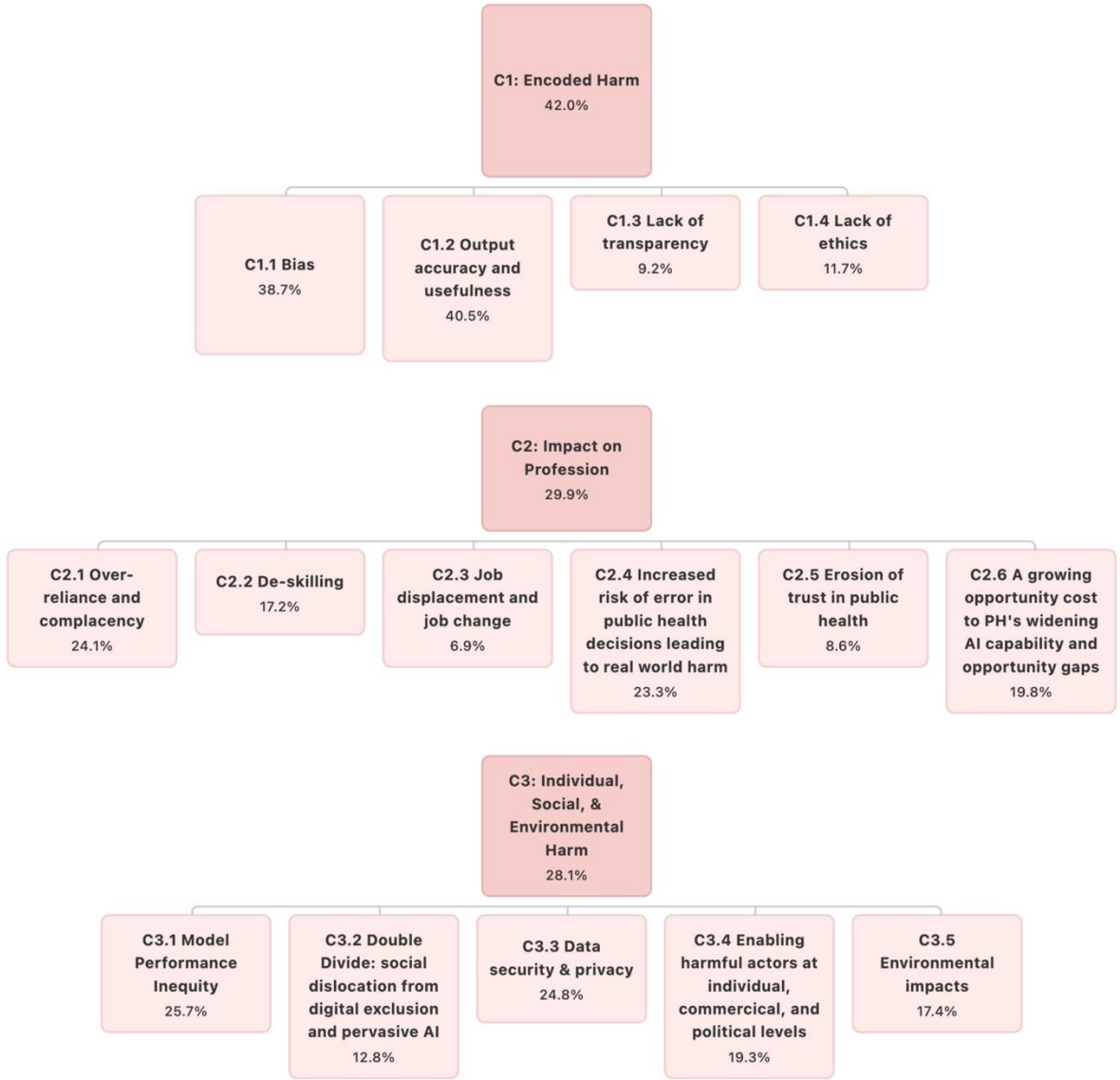


***Figure 9**. **Thematic map of concerns for AI on public health**. The map displays three main themes of concern: C1: Encoded harm (41.8%), C2: Impact on the profession & practice of public health (26.8%), and C3: Individual, social, & environmental harm (31.7%). Each theme is broken down into sub-themes, with the size of each box corresponding to the percentage of responses grouped within that theme*

Theme C1: Encoded Harm

This theme relates to the inherent properties of artificial intelligence, and questions whether these will result in harm, whether applied to public health or any other discipline The top concern for public health specialists is that biased data (C1.1) and biased algorithms (C1.2) result in poor quality outputs i.e. outputs that are imprecise or contain misinformation and hallucinations (C1.3) - 68% of answers mention these risks, eclipsing any other theme. While some question the usefulness of all AI derived information, most are concerned about our ability to detect poor quality outputs, a challenge compounded by a lack of transparency with 'black-box' AI models (C1.3). Respondents explicitly and implicitly link undetected error as a risk for AI causing real-world harm at scale (links to C3 themes). The risk of AI-related harms were seen as directly related to the tools accuracy and transparency, with a lack of ethics in AI development seen as an exacerbating factor for risk of harm (C1.4).

- C1.1 Bias (63 mentions, 41%).

Four in ten respondents cited concerns relating to bias, with broad agreement that bias is the primary source of risk relating to the use of AI in public health. Respondents expressed concerns about bias in the quality and representativeness of the underlying training data (49 mentions, 32%), and in the resulting algorithms (48 mentions, 32%), summarised by one respondent - "Flawed or biased training data resulting in flawed and biased models". These concerns were often linked to concerns around AI tools producing poor quality outputs (subtheme C1.2), and disparate model performance across populations leading to a widening of inequalities (subtheme C3.1).

Of particular concern was the representativeness of training data and the potential to "encode unfairness toward protected groups". Related to this was the concern that the use of AI in data analysis would result in a loss of granularity and the inappropriate generalisation of insights across groups. The potential to embed these biases into workflows and processes with increased integration of AI tools into public health practice was raised. Concerns were also raised about the breadth of data, with some respondents feeling that the use of AI tools would result in "echo chambers regurgitating the same evidence", with practitioners basing "large programmes on very small original work".

Some respondents raised the possibility of identifying and mitigating these risks. Most felt this is beyond their capabilities (C2.5), as one respondent notes "I am aware that training on historical data may introduce racist sexist outdated views, etc but I don't know if there is any way to reduce this in models or check their work, or what the best method for this is." However, some respondents were more confident "*that Public Health are well positioned to mitigate that [potential bias].*"

- C1.2 Output accuracy and usefulness (66 mentions, 43%)

Output accuracy issues were the single most-cited group of concerns. Respondents suggest that AI based tools will generate plausible-sounding but wrong content that evades specialist scrutiny. This sub-theme was closely related to concepts in theme C2 such a lack of critical appraisal of outputs, complacency of specialists, and a deskilling of the workforce, which were seen as essential safeguards against poor quality outputs. As one respondent puts it, the concern is that widespread use of AI will result in the "replacement of actual thinking and reasoning with 'truth-sounding nonsense'".

The fear is that integrating AI in public health systems, for example in surveillance dashboards, evidence summaries, options appraisals, evaluations, or public facing health content, risks AI-generated inaccuracies being repeated by other systems and ingested into decision pipelines, facilitating error propagation at scale and the amplification of real-world harms. Specific anxieties cluster around three failure modes:

1. **Hallucinations;** models provide 'invented' information, presented to appear as if directly sourced from input data but lacking factual basis.
2. **Misinformation;** through hallucinations, the propagation of false information from the training data, or intentional malicious use, generative artificial intelligence could be a source of misinformation (false or inaccurate information) or disinformation (false information intended to mislead). Misinformation was the most frequently cited concern (17 mentions).
3. **Loss of nuance:** complex data is oversimplified and over summarised, resulting in the loss of epidemiologically significant signals.

A minority argue the risk is manageable with appropriate supervision by a public health specialist, noting that concerns around "quality and appropriateness of the output" would always be present "unless ratified by an expert." Yet many respondents question whether public health teams have the appropriate resourcing and skills to robustly appraise AI tool outputs (see subtheme C2.5). Most agree the danger is amplified when combined with issues of bias (subtheme C1.1), and may ultimately erode public trust in public health decisions, services, and advice (see subtheme C2.3).

This subtheme also includes responses that question the usefulness of AI produced responses. Some respondents expressed frustration at the 'poor quality' of LLM outputs, remarking they "hate how generic everything they produce is". The current use of LLM's is seen as undermining systems for assessing competence and increasing workload within these processes. For example, "even now job applications submitted to us are clearly generated via AI tools that undermine the application system and waste all of our time as we are bombarded with countless applications that lack substance, but have to be sifted."

- C1.3 Lack of Transparency (15 mentions, 10%)

Several respondents raise the issue that "AI-driven decision-making can lack transparency, making it difficult to challenge or correct errors, especially for marginalised communities." They raise the issue of a lack of "transparency about sources" making it "difficult to appraise sources", and a "lack of transparency about models, 'black box'". Hidden logic is seen as a gateway through which bias (C1.1) and misinformation (C1.2) slip undetected into practice, and as a catalyst for flawed decision-making (C2.2). Even with apparently logical outputs, difficulty interrogating how the answer was reached compounds the over-reliance risk flagged in Theme C2.1 and raises issues around accountability. If professionals cannot explain how a model reaches a decision, for example around resource allocation, there is a risk that the public will question the veracity of the decisions, linking directly to subtheme 2.3 (erosion of trust).

- C1.4 Lack of Ethics in AI Development (19 mentions, 13%)

Labour and copyright infringements were the predominant concern related to the ethics of AI development, with several respondents expressing the sentiment that "If not built on ethical principles, AI could exacerbate existing challenges rather than solve them."

Theme C2: Impact on the Profession & Practice of Public Health

Theme 2 captures concerns relating to the impact of increasing use of artificial intelligence on the public health workforce. An erosion of expertise and judgement (C2.2) is seen by some as an expected outcome as public health practitioners become over-reliant on AI's outputs (C2.1) and too complacent to conduct appropriately rigorous critical appraisals of those outputs. These concerns outnumbered fears of job displacement (C2.3) by more than 3-to-1, signalling that the quality of work, rather than the quantity of jobs, dominates practitioners' anxieties.

Concerns for the practice of public health are split. Some respondents fear that embedding AI in public health practice will introduce error and distort public health decision-making, resulting in real world harm (C2.4), undermining of public health expertise, and a loss of public trust (C2.5). Conversely, other respondents fear that public health is moving too slowly to implement AI tools and training. They highlight a lack of capability and opportunity to use AI in public health (C2.4) as a barrier to effective adoption and appraisal of AI, which is seen as essential given a perceived inevitability of widespread use.

- C2.1 Over-reliance and complacency (28 mentions, 18%)

This was the joint-largest subtheme (with C3.1) by number of mentions outside of theme C1, with respondents voicing the belief that there would be an "over-reliance and dependence on automated systems that might miss important human insights". This concern often co-occurs with concerns around the validity of outputs (theme 1) and the resulting impact on society (theme 3). The sentiment that (poor quality) AI outputs would be used without critical appraisal was repeated consistently across responses. Respondents fear a creeping dependency in which practitioners "over-estimate its usefulness" and allow unverified information to influence their practice. This is seen as most critical when it influences the decision-making of professionals who "will not notice that AI has done a poor job because they do not have the skills to do it independent of AI in the first place".

- C2.2 De-skilling (20 mentions, 13%)

Closely related to subtheme C2.1, and often co-mentioned, was a concern that using AI would result in de-skilling the workforce. Whereas over-reliance describes practitioner *behaviour*, de-skilling refers to the erosion of practitioner's *capabilities*. Respondents worry that routine use of generative tools will hollow out core public health skills. Most responses raised vague concerns around "loss of skills in the public health workforce", with some mentioning specific skills such as report writing, data analysis, critical appraisal, "erosion of professionalism" and "reduction in original thinking".

Another mechanism proposed for AI-induced loss of skills among the public health workforce was not from skill erosion but a failure of skill acquisition if AI is employed in learning and training; "I am very concerned about people accepting the outputs of these tools without sufficient critical assessment. For instance, I have encountered instances where colleagues have used them to help them learn about topics such as statistics. A learner is in a particularly vulnerable position in not being armed to critically assess the quality of AI output." These were not limited to senior members, but shared by those in specialist training who had concerns about "people who are in training using AI to help create outputs rather than learning how to think for themselves (myself included)."

- C2.3 Job displacement and role change (8 mentions, 5%)

There were significantly fewer concerns about outright job loss than other workforce issues. Respondents raise the possibility of job loss within public health, with significant impacts on the "scope of work for people with less technical skills" and concerns that AI will be used to "replace skilled workforce", resulting in "pressure to justify why we need CPHs when we 'could just be using AI'." Some respondents raise this as part of a wider issue of "disruption to society in terms of job loss".

Respondents foresee two pathways to displacement: direct automation of routine analytic roles, and an indirect devaluation of expertise as AI tools gain authority. No respondent explicitly welcomes job shedding; even efficiency enthusiasts elsewhere in the survey frame automation as a way to *free time*, not eliminate posts. It is notable that no responses raised the possibility of AI creating new roles within public health.

- C2.4: Increased risk of error in public health decisions leading to real world harm (27 mentions, 19%)

Respondents recognise that "no system is perfect" and ask what are the "implications of any 'mistakes' made by AI" in the context of public health work if there is widespread integration of AI tools. The largest concern was the fear that even small unreliability (C1.1, 1.2), if unfiltered, could propagate through policy and clinical pathways to create outsized, real-world harm.

A minority of responses within this subtheme raise concerns around large scale safety errors, for example arising from "misapplication [of AI] in safety-critical systems resulting in emergencies." More commonly, public health specialists are concerned around the risk of AI "providing misinformation or wrongly interpreting information that misleads decision-making". A commonly expressed concern is that AI will lead to "important decisions being made based on potentially unreliable information".

Comments span clinical, research, and policy contexts, underscoring that every level of public health decision-making is perceived as vulnerable. Respondents connect this subtheme to Subtheme C1.2 (inaccurate outputs) and Subthemes 2.1 and 2.2 (over-reliance and deskilling): inaccurate outputs and unquestioning, underskilled staff provides the perfect storm to "undermine the quality of decision-making without adequate critical appraisal'.

A few respondents suggest that decision making has already been compromised by the excitement around novel technologies, with AI used as "a buzzword to solve all issues" while neglecting to recognise the "opportunity cost of significant investment in new shiny technologies by government when we aren't doing basic PH right".

- C2.5: Erosion of trust in public health (10 mentions, 7%)

Some respondents believe that "erosion of trust" is one of "the biggest dangers of AI in public health". Implicit in these responses is that the discovery of flaws in an AI-tool, or harm resulting from the tool's use, is expected to be interpreted by the public as class-wide effect and cause loss of trust in AI-tools in general, rather than being contained to a specific AI tool. Respondents describe a "wider societal impact" from the discovery of these harms (e.g. flawed outputs, decisions, advice, or actual injury) due to the resulting degradation of the public's trust in "institutions, public health messaging, and community cohesion." There is a view that the loss of trust will be associated with an "undermining of the public health profession" and the " role of the expert". Some answers specifically mention concerns that AI will "perpetuate disinformation, and could increase skepticism particularly about vaccines", "driving polarisation". Importantly, this risk varies by individual and community, with some respondents warning that "If AI is used without proper oversight, it risks undermining trust in public health systems, which is already fragile in many communities."

- C2.6 A growing opportunity cost to public health's widening AI capability and opportunity gaps (23 mentions, 14%)

Across these responses, there was a general concern that knowledge and use of AI "is a neglected area in PH" and "not keeping pace" with the rapid speed of AI development or implementation in other sectors. This applied to both individual skills in using and appraising AI, and organisational readiness to integrate AI tools into public health workflows. Respondents warn of "missed opportunities if we are slow to adopt". These opportunity costs ranged from loss of influence; "we clearly need to skill up

as a workforce in order to have a credible voice at the table", to loss of effectiveness; "public health being left behind", to moral status ""The moral scale has tipped for me; given the productivity gain, I feel a moral imperative to use AI".

The dominant concern within this subtheme was the capability gap, captured well by the response; "My concern is that I don't know enough to answer this question, and that I have a sense of some danger but haven't the knowledge to grasp it in more concrete evidential terms." Individual-level concerns centered around "difficulty in critically appraising AI outputs", with one respondent worried that "the methods we have been traditionally trained to use" may not be applicable to appraising AI outputs. Respondents were "Keen for more learning and training in this area" but as one responder notes, upskilling in AI is challenging because "The pace of change is rapid and accelerating faster than I thought. There is little time in highly pressured, under-resourced public health leadership roles to engage meaningfully with AI developments which further compounds risks and anxieties."

Development of individual capability in AI was seen as hampered by a lack of support (guidance and tooling) from public health organisations and employers. Respondents claim employers are "slow to adopt or issue useful guidance". They highlight a "Lack of consistent guidance across organisational boundaries in terms of what is acceptable use of AI in PH", and express a desire for guidance specific to public health which "needs to be done once across the country" as "Getting small local departments all making their own decisions is a waste of time and will create unwarranted variation." However they caution that "If the faculty produces guidance then in order for it to be useful it must be compatible with the policies of the main employer organisations for public health professionals."

A second barrier to use of AI in public health is a "lack of consistent availability of tools across organisations we work in" with employers "slow to provide AI tools" resulting in "employees either using AI on the side or too scared to use it." Respondents raising this issue attribute the lack of opportunity to organisational risk-version, citing "Fears of AI preventing its safe deployment in certain areas, leaving the public sector trailing behind" whether that was "Government and NHS reluctance to allow any risk or change in this area in day to day professional tasks" or "outdated ways of working in local authority settings (limiting openness to or trust of AI opportunities)". One respondent remarks that "Good governance is essential. There is no point in avoiding using AI - we need to learn how to use it well and to understand its limitations and biases."

Theme C3: Individual, Social, & Environmental Harm

Theme C3 explores the potential for AI to cause harm to population health, acting at the individual, social, and environmental levels. Theme 3 spans six distinct pathways of harm; from widening inequity due to differential model performance between groups (performance inequity, C3.1) or differential access and resources to benefit from AI (double divide, C3.2), to the risk to privacy, of empowering harmful actors (C3.4), and finally via the environmental costs (C5.6) of AI development and use. Many respondents explicitly link technical bias (Theme 1) to downstream inequity: AI is viewed as an amplifier of structural inequalities and enabler of societal harms.

- C3.1 Model Performance Inequity (28 mentions, 18%)

Often linked directly with issues of bias (Theme C1), this subtheme captures concerns that AI models will perform optimally for some groups (socioeconomically advantaged, high users of healthcare), and poorly for others (namely data-sparse groups, who are more likely marginalised, stigmatised, and disadvantaged communities). This discrepancy in performance between populations may lead to a widening of existing disparities in health, "exacerbating entrenched social, cultural, gender-based biases". There is concern that using AI to tailor services creates services optimised for those for whom we have data, rather than for those with the highest unmet need, which could have many unwanted effects including that "those who aren't already accessing services may be driven further away from services". Respondents raise concerns that "the focus on digital and introducing AI in frontline services risks embedding health inequalities and excluding the most vulnerable of our society, for as yet unclear and unproven benefits."

- C3.2 The Double Divide: social dislocation from digital exclusion and pervasive AI. (14 mentions, 9%)

A related but distinct set of concerns centres around the digital divide. Unequal access (to devices, connectivity, or AI tools) and varying digital literacy will result in varying impacts across populations (even when model performance is equal across groups). "Inequality in access to and understanding of AI amongst vulnerable populations - widening inequality" There is a concern that the result of this varied uptake is that "AI is supercharging wealth inequality here and globally" and that this acceleration in disparity growth will become the "largest driver of poor population health in future". However, not all respondents agree that widespread integration of AI across social structures will necessarily result in net benefits to high uptake groups, with some cautioning that AI could result in a "loss of human interaction and related impacts on loneliness", may "impact on child development, human relationships, trust and education", and risks triggering a "continuous cost of living and unemployment crisis". In light of the potential for AI to precipitate broader societal changes, one respondent suggests that now is the time that "we need to consider what we need to protect and what needs to be redefined". A "double divide" is proposed - where groups at both ends of the adoption spectrum risk harm through social dislocation. On one end, digital exclusion prevents vulnerable populations from accessing AI's benefits, widening inequality. Groups with very high AI uptake are also at risk from a "loss of human interaction and related impacts on loneliness," as pervasive AI alters social connections. This suggests that whether through exclusion or over-immersion, AI could deepen societal divides.

- C3.3: Data security and privacy (27 mentions, 18%)

Data security, confidentiality, and privacy are frequently cited governance fears. Respondents are concerned about "AI software learning confidential information about populations or individuals" whether by their own hand - "worried about who gets to see the text I am inputting", or others - "people will share business-sensitive information that could then be reproduced in some form for others". They raise concerns about "privacy violations" particularly around "managing…sensitive health data". Privacy breaches are seen as a trigger for the erosion of trust (C2.5) and a gateway for harmful actors (C3.4).

- C3.4 Enabling harmful actors at the individual, commercial, and political level (21 mentions, 14%)

In this subtheme respondents draw attention to the role of AI in facilitating transfers of power that are misaligned with broader social goals and health equity. A small number of respondents (9 mentions, 6%) fear that AI will not only amplify existing threats but also provide new tools harmful actors, for example enabling fraud, cyber-crime, and hostile surveillance. This theme links closely with data security and privacy (C3.3). Concerns cluster around two mechanisms: indirect exploitation (e.g. deep-fake content) and direct system compromise from the "introduction of cyberattacks and malicious software into public health systems" (e.g. malware, data theft). There were two mentions of AI systems themselves becoming "rogue" and posing an "existential threat.. to humanity in the short- and long-term".

The same number of respondents (9 mentions, 6%) express concern over the control of information and the use of personal data by commercial actors. They note the potential for a "Further shift in balance of power to corporations" "who are accountable to their shareholders rather than public good." They warn that the impact as "Power and control gets more and more concentrated in a new aristocracy and oligarchy", who are viewed as "problematic when it comes to healthcare and social benefic", is the potential for "greater population inequalities".

A small number of responses (5 mentions, 3%) fear that partisan actors will weaponise AI to steer opinion or policy, citing "misuse by social media and some governments." They focus on the "misuse and misinterpretation of evidence" i.e. use of AI to justify deliberately flawed decision making, with concerns that "misinformation [may be] used to create arguments for false rhetoric".

Across these responses are calls for stronger governance to reduce the risk of "undermining of public trust, democracy and rule of law through misinformation and disinformation". Respondents perceive policy frameworks as lagging behind the technology curve, leaving a vacuum that could be filled by commercial or political interests. They point to "the speed at which it is being adopted with very little apparent regulation". Most responses relating to regulation frame their answers as a current lack of oversight [inferred as at the national or international level] exacerbating the risks outlined throughout the concern themes. Others however "can't see that [regulation] happening effectively in the current global context." and question whether AI is even 'containable' with stronger regulation, expressing concerns that "the organised efforts of society will have too little influence over AIs to assure their development and use with beneficence, non-maleficence and justice."

- C3.5 Environmental impact (19 mentions, 13%).

Over 10% of respondents expressed concerns around the sustainability of artificial intelligence, highlighting the environmental cost of "AI infrastructure (e.g. energy and water, particularly in vulnerable parts of the world)". These respondents shared a general feeling that the "Environmental impact [is] not being adequately considered" and " seems to be lost in the conversations". These responses share the conviction that climate impacts are one of the most prominent risks posed by AI and require urgent attention, with one respondent warning that "the environmental cost of fossil fuel AI data centres springing up daily across the world will undo the work of 30 years of environmentalism in the next 24 months". This sub-theme, though mid-range in frequency, broadens the equity discussion beyond social divides to intergenerational justice. Comments frame the environmental impacts as an ethical contradiction; asking how this technology can provide a net public good considering its potential to significantly impair efforts to improve planetary health - as one respondent remarks; "when we are trying to get fossil fuel consumption down, is it really worth burning them so we can write emails or summarise a paper quicker?

Hopes for how AI can help public health

145 respondents answered the question “What are your hopes for how AI can help public health?”, with three themes emerging. The majority of respondents (66%) conceptualise artificial intelligence in public health primarily as a labour-saving tool, with hopes that AI would increase the efficiency with which practitioners could carry out day-to-day public health work, releasing time to focus on higher-value, strategic input (theme H1, Creating Capacity for High-Value Work By Increasing Efficiency, 153 mentions). There are also hopes that AI would provide public health with new, transformative capabilities, improving the effectiveness of specialist practice (Theme H2: Augmenting Effectiveness of Specialist Practice, 125 mentions), and a dissenting theme, where respondents expressed little optimism for the impact of AI (Theme H3: No hope (8 mentions).

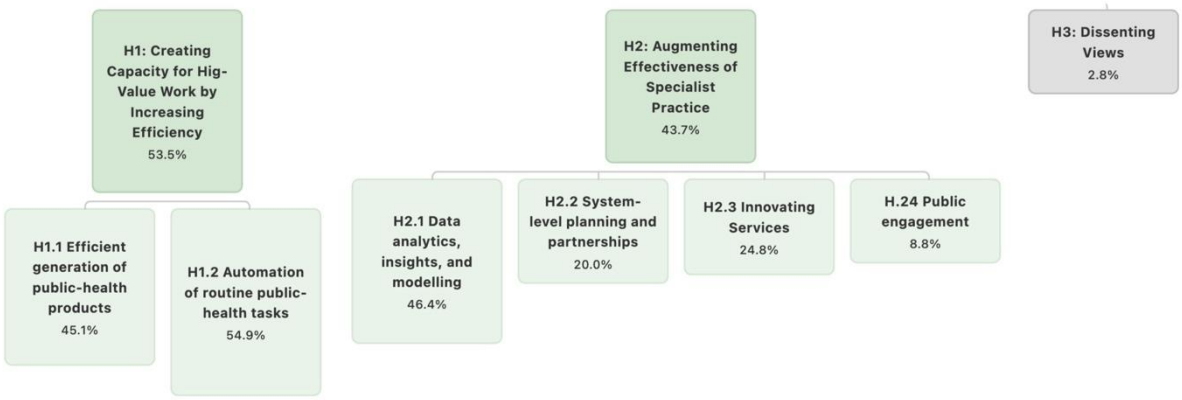


Figure 10. Thematic Map of Hopes for AI in public health*. The map illustrates three main themes of hope: H1: Creating Capacity for High-Value Work by Increasing Efficiency (53.5%), H2: Augmenting Effectiveness of Specialist Practice (43.7%), and H3: No hope (6%). Themes H1 and H2 are further detailed into sub-themes, with the size of each box corresponding to its percentage of mentions.*

Theme H1: Creating Capacity for High-Value Work By Increasing Efficiency

Efficiency (theme H1) use cases dominated the hopes section, with significant repetition of suggested use-cases. The majority of respondents (66%) to this question suggested the use of AI to speed up the production of written public health products (such as reports and briefings) (H1.1), or to automate routine administrative tasks (such as minute taking or interview transcription) (H1.2). The predominant hope is that AI will perform primarily as a labour-saving tool, releasing time for higher-value work requiring specialist input.

- H1.1 Efficient generation of public-health products (69 mentions, 48%).

Participants want AI to draft or refine the products that underpin public health practice; evidence summaries, needs assessments, policies, strategies, evaluations, reports, slide decks, and plain-language briefings. The overriding sentiment in these responses is the hope that “time-consuming but low-value tasks can be outsourced [to AI], which increases productivity, especially for CPHs/DPHs to free up capacity to deliver high-value work.” Respondents sought less to increase productivity in terms of output, but rather to provide time back in their day to “focus on strategic input”. The desire to “add resource by automating and drafting products” appears to derive from both an intrinsic motivation for productivity, and extrinsic necessity to “improve capacity within stretched local teams” so they can “tackle the demands faced by reduced funding and capacity”.

- H1.2 Automation of routine public-health tasks (84 mentions, 58%).

The most frequently mentioned use-case is automation of high-volume administrative tasks which are seen as the main drain on specialist capacity. These include applying AI to minute-taking, email triage, document summarisation, and interview transcription. Many respondents expressed feeling there was a high "administrative burden associated with our jobs" and "that PH experts can better use their skills on core PH work". Some respondents envisage "one-click" dashboards that continually refresh with the latest data. The hope is that reducing the time taken to go from data to insight will "enable the evidence-base to be used more in PH decisions, because reliable evidence is easier to access & collate for decision-making purposes"

Theme H2: Augmenting Effectiveness of Specialist Practice

Theme H2 captures the desire for public health specialists to use artificial intelligence to do their work better, not just faster. AI for augmenting specialist skills, particularly in data analysis and generating insights (H2.1), was highly desired, with mentions by nearly four in ten respondents. The second sub-theme (H2.2) relates to the use of the analysed data to improve public health decision making and the development of policies and strategies that are more effective in reducing inequity. The hope is that AI will improve the focus on equity and high-risk populations when priority-setting, optimising resource-allocation, and designing interventions. Just under one quarter of respondents mention using AI as a catalyst for system-wide innovation (H2.3). Respondents articulate hopes that AI will reshape how services reach, resonate with, and ultimately benefit diverse populations, provided systems remain trustworthy and safe. Closely related to the innovation subtheme, relevant to service improvement but applicable across public health practice, is the use of AI-tools for improved public engagement (H2.4),

- H2.1 Data analytics, insights, and modelling (58 mentions, 40%)

The third largest sub-theme encompasses the use of artificial intelligence to improve the analysis of qualitative and quantitative data. It is hoped that widespread use of AI data analysis tools will enable the generation of more rapid (ideally real time), accurate, complex, and useful insights from large, unstructured, and linked datasets, particularly wider determinant data. The potential for AI-enabled epidemiology to rapidly generate 'full-picture' insights for decision makers (combining retrospective data using tools for evidence synthesis, prospective data using tools for predictive modelling, and present data from real-time dashboards) is anticipated to be a potentially practice-changing capability.

Some respondents point out that "AI is already being used in public health as a lot of data crunching that happens in epidemiology is already a subset of AI as defined today." However, many respondents hold hopes that AI will augment public health specialists' ability to generate insights from data far beyond their current capabilities. It is hoped that AI will increase speed and complexity of analyses, provide more targeted insights, and enable an enhanced public health response.

Consistent with efficiency hopes of theme H1, many respondents view AI as a mechanism for making public health "more efficient in gathering and interpreting intelligence". AI tools are hoped to "expedite research" and "transform data and intelligence to provide real time data analysis, at an increasingly complex level" with "improved presentation of real time data". In a departure from theme H1, increasing response speed is framed not as an efficiency benefit, but as an enabler of enhanced effectiveness; by providing mechanisms for public health specialists to access or generate "accurate and up to date" information, AI has the potential to improve public health actions, such as our "response to emerging health threats", every day decision making, collaborative working, and public engagement.

Respondents have aspirations that AI will result in a step-change in current capabilities through "Identifying patterns from large data sets that humans wouldn't have the capacity/time to identify". AI is viewed as a tool that can "help with more complex data analysis", "generate insight from large data sets" and make "better use of data from multiple sources". Making use of big data is one such application, where "databases can be tailored objectively for analyses" with AI conducting "automated capture of 'pseudonymised' items, automated data cleaning, automated output for MVA [multivariate analysis], etc.," enabling public health specialists to "keep a consistently fast pace with information updates in a given area, e.g. velocity and veracity".

It is hoped that improved "predictive and risk assessment models" and "better data mining" will improve public health's ability to describe and understand populations, to identify groups for whom public health interventions can have the greatest impact, and to improve "horizon scanning and detection of future public health threats". It is hoped that these advances will result in "more targeted use of limited resource".

A small number of respondents distinguished between their hopes for machine learning versus generative AI. They were "very hopeful about its [machine learning] uses for screening and identifying at risk populations/individuals across a wide range of public health areas" whereas they were "not currently convinced of the benefits [of generative AI]".

Importantly, while some respondents felt that AI is "an excellent tool to help with data research and data analysis if used correctly", this was not a consensus view, with other respondents holding reservations about the utility of AI in generating insights. They felt there may be "some potential uses using defined datasets, (rather than open LLMs) for data analysis but not for interpretation. " This is an important distinction, and links directly with theme C1 concerns around the validity and utility of AI outputs.

- H2.2 System-level planning and partnerships (25 mentions, 17%)

It is hoped that AI can be used for "supporting work to identify and target populations with the greatest impact (e.g. AI models to understand stratification of risk outside of clinical settings, i.e. through wider determinants of health data sets)".

Respondents highlight strategy development and implementation (20 mentions, 14%) as a specific area where they see value in using AI, specifically for " identifying pockets of population in need of intervention" and "supporting us to identify avenues for opportunity that might have otherwise been missed." Through "modelling on health needs" and "more accurate and efficient prediction of disease risk" it is hoped that AI will help develop health strategies that "begin to get to populations that we aren't able to get to."

Another specific use envisaged of AI-powered data analysis is the use of artificial intelligence in guiding public health policymaking (8 mentions, 6%). Uses of AI within this theme included "understanding background literature (but grey and white literature)", "providing starting points for research", "providing support on summarising good quality evidence rapidly", devising "solutions to complex and technical problems", generating options appraisals, "prediction models", and policy evaluations. There is a common desire for "faster assessments" as "PH always is regarded as 'slow' to give an answer ..we need to change this perception". Responses share the hope that the application of AI could help increase the speed of providing data-driven, evidence-informed advice.

A small number of respondents (4 mentions, 3%) imagine AI as a method to "share good practice ideas" and for "preventing duplication of work" across organisations. Speed of producing insights from data also features, for example using AI to facilitate "working collaboratively across areas to gather

large datasets to produce quick evaluation of projects". The low count for collaboration suggests this potential of AI remains under-explored and poorly articulated.

- H2.3 Innovating Services (31 mentions, 21%)

AI is proposed as a tool that can "make services and delivery safer and easier", with the "possibility of better outcomes / fewer resources required". The focus of responses seeking to improve equity was split between AI for risk stratification and AI for personalising interventions, the latter mostly achieved through individualising information and/or providing conversational methods of accessing content (e.g. chatbots)

AI tools are hoped to generate useful insights for "sense making around service redesign and review", enabling public health to design interventions that can have the greatest impact in reducing inequity in access, provision, or outcomes. For example providing "opportunities for healthcare and healthcare public health through mapping journeys" where the hope is to apply AI to analyse "pathways to determine where people need to focus and prioritise their time" and to " identify how inequalities happen across care pathways & intervene", for "informing interventions", and to provide "improved… data that is better used to develop services and target individuals"

Other respondents view AI as an opportunity to re-think how public health services are delivered "to be much more patient friendly, responsive, efficient and reduce waste", with increased "provision of support and services online" creating a positive data feedback loop which improves service efficacy for users as they engage. AI is suggested as an enabler of "true targeting of services at a micro level" which can "reduce inequalities by improving accessibility and cultural competence" of services. Use cases were suggested in health promotion where AI could be used "to support someone who has quit smoking to stay quit… With AI identifying individuals who are at risk of relapse and then contacting them and providing support".

Risk stratification and prediction, pathway modelling / journey mapping, real time data analysis, horizon scanning, resource allocation, and service targeting were highlighted as areas where AI could enhance current practice. Many responses lacked resolution beyond 'improving X" (accessibility, services, response to outbreaks, screening etc.). While there was consistent hope that AI can be used to improve all functions of public health, a clear vision articulating the pathways through which the application of AI will lead to specific improvements is needed.

- H2.4 Public engagement (11 mentions 8%)

This subtheme was closely related to the innovation subtheme; there is a desire to use AI tools such as "chatbots", translation, and micro-segmented/targeted messaging to "support with making information more accessible", clear, and interactive.

Some respondents propose using AI to help "to create better public facing content" by "tailoring pre-determined material to a user group", for example assisting the "Generation of outputs to a specific reading age" or by "make[ing] the tone of the written word more empathetic or engaging". Others see AI taking a more active role in crafting communications, for example by "mining online data for existing counter arguments to positive public health policies, and suggesting counter counter arguments!".

Some view AI as an opportunity to shift away from public health specialists determining the information needs of certain groups, to providing accessible methods for people to engage with the information they want, when they want. These responses focus mostly on the integration of "chatbots for eg health improvement services"

Theme H3: No hope

It is important to note that there were dissenting views (8 mentions 6%) regarding the value of AI in public health practice. These views of having 'no hope' for AI in public health comprise the third theme of the hopes section as they were expressed in response to the question "What are your hopes for how AI can help public health?" and are distinct in character to responses provided to the question "What are your concerns for the dangers of AI in public health?".

These views ranged from being unsure of the risk:benefit balance for AI, to feeling that AI could not outperform a human workforce, and finally seeing AI as ethically problematic and a net drain on societal value.

Some respondents signalled that they were aware of the harms and unsure of the benefits. They recognise that "AI "will be transformative", and despite being "*not very optimistic"* , still held hope "that it can help a little without harming too much".

Others "*don't really have any"* hopes for AI in public health, remaining "*very sceptical as to its applications for benefit, and the benefit:harm balance."* They felt that *"there is nothing of value that AI can do that could not be done better by a workforce of humans given the time and resources to innovate."*.

A small number of respondents expressed strong concerns around "*the enormous ethical problems with AI",* feeling that "*generative AI has no use cases which are of value to society, let alone public health."* They cite concerns around "*misinformation and job losses from speculative AI being introduced into the UK without regulation", and the "shocking sensitivity rate" of AI tools adding "stress and workload"*. They call on the Faculty of Public Health to "examine~~s~~ and publicly discuss~~es~~ the enormous ethical problems with AI" and the potential for it to "do far more harm than good to the health of our residents and communities."

Specific Tasks

122 respondents answered the question "*What specific problems or tasks would you like AI to address in your areas of work?".* These responses were consistent with the thematic structure of hopes for AI, with the addition of a fourth theme "Upskilling the Workforce". Of note, 8% of respondents indicated that given their current knowledge, they were unsure or did not know what tasks could be helped with AI, exemplified by one respondent- "*Don't know what you don't know!"* Unique responses, organised by category:

- Document preparation & writing support
    - Report writing (intelligence reports, strategies, needs assessments, briefings, health impact assessment, grant proposals). .
    - Report editing
    - Responding to emails
    - Supporting documentation in clinical practice
    - Slide decks
    - Lecture notes
    - Planning
    - Questionnaires
    - Summarising text.
    - Phrasing/ framing to maximise impact.
    - Create agendas
    - Generate code (in R).
    - Generate infographics.
    - Proofreading
- Administrative task automation
    - Meeting minute taking
    - Following acute response algorithms, collecting data from public and healthcare workers.
    - Transcribing conversations
    - Summarising documents
    - Diary management.
    - Streamline back office functions, e.g. running benefit checks to understand eligibility for services.
    - Local profile updating.
- Evidence retrieval & synthesis
    - Policy review and summarisation
    - Initial research
    - Literature / evidence / systematic reviews
    - Critical appraisal
    - Finding relevant work / best practice to avoid duplication.
    - Quick answers to complex questions.
    - Support with reading and understanding the large quantity of information needed in public health.
    - Evidence review without human or ideological bias to generate truly evidence-based advice.
    - Summarising evidence.
    - Grading of strength of evidence base and assessment of likely biases.
    - Developing and answering key questions from published literature & other sources
- Data management & analytics
    - Preliminary data analysis
    - Theming of insights, feedback
    - Summarising engagement and consultation work
    - Automation of intelligence analysis
    - Cleaning data
    - Analysing large epidemiological datasets
    - Writing code for analyses.
    - Data linkage
    - Data mining / analysis
    - Handling complex information
    - Epidemiological investigations to any PH issue.
    - Root cause analysis
    - Comparative analysis of historical datasets
    - Explanatory variables for observed disparities and variances
    - Risk stratification
    - Understanding factors that drive inequalities
    - Automated data extraction from free text for disease registration
    - Conversational data analytics

- Surveillance & early warning
    - Keeping data in reports / dashboards up to date.
    - Real time outbreak prediction
    - Public health surveillance with live analytics and automated warnings for deviations
- Modelling & forecasting
    - Climate modelling and prediction
    - Predictive modelling
    - Using multimodal data for better risk assessment.
    - Causal models
    - Models of interventions of policy impact on health.
- Options appraisal & decision support
    - Directing focussed interventions
    - Providing novel ideas for action.
    - Helping with process and intervention development.
    - Better integration of data into day to day work.
    - Creativity.
    - Developing targets and indicators
    - Population health management
    - Innovative ways to improve cost-effectiveness.
- Content personalisation & conversational agents
    - Chat agents for health improvement
    - Appointment allocation and booking.
    - Health literacy education
    - Combating misinformation
    - Simplifying text
    - Social marketing
    - Translation
    - Bespoke behaviour change - - to support lifestyle changes and providing ongoing support, based on individuals needs
    - To enable and facilitate independent living for vulnerable people in the community
    - Information leaflets
    - Developing lay summaries of reports.
    - Dissemination of products
    - Create better public facing content
    - Science-policy interface; language adaptation of research outputs for politicians.
    - Presenting persuasive public health messages.
    - Tailoring of messages based on metadata at an individual level.
- Diagnostics
    - Rapid pathogen identification
    - Detection of contamination in food and water.
    - First-level screening tool for conditions such as cancer.
- Facilitating others
    - Empowering community self-organisation to scale the work of charity and voluntary sector organisations in helping the most vulnerable
- Training & capacity building
    - Debugging code
    - Advanced training

19 respondents provided free text responses to their current use of AI. These included:

- Writing; letters and emails, reports, minutes.
- Editing / redrafting content; changing the reading age, structuring documents or cutting down words, proofreading, augmented generation of code.
- Summarising content; evidence, documents, overviews of projects, frameworks, research.
- Engaging with content; chat with large documents.
- Generating ideas; pros and cons list, interview questions, workshop structures, expanding on innovative ideas or project considerations, idea generator, making comparisons between choices to help make decisions, developing frameworks, testing theories.
- Learning e.g. excel, coding, exploring unfamiliar topics, help using complex software, exploring complex problems to gain better understanding on how to approach, understand new concepts ((particularly to support statistical analyses).
- Supporting the application within NHS Trust.

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Appendix 1 - Survey Instrument

Eligibility

This survey is for members of the Faculty of Public Health only.

1. What is your FPH membership status?
    - Associate
    - Speciality Registrar (pre-DFPH)
    - Practitioner (PFPH)
    - Diplomate (DFPH)
    - Membership (MFPH)
    - Fellowship (FFPH)
    - Non-member
    - Other

Current use of Generative AI

By GenAI we mean chatbot products such as ChatGPT, Claude, Co-Pilot etc.

2. Which statement best describes your current use of Generative AI? *
    - I do not use GenAI and I do not want to use GenAI.
    - I do not use GenAI but I would like to use GenAI.
    - I am currently using GenAI products professionally.

3. What are your main use cases?
[free text]

4. How would you describe your use of Gen AI?
    - Using a chatbot/GenAI (e.g. ChatGPT, Gemini, Claude etc…) in my work with a free personal account.
    - Using a chatbot/GenAI in my work with a paid/premium personal account with default privacy settings.
    - Using a chatbot/GenAI in my work with a paid/premium personal account with data privacy settings enabled.
    - Using a chatbot/GenAI with an enterprise/workplace account.
    - Other [free text]

5. Please select all of the Gen AI product(s) that you use:
Select all that apply.
    - Anima
    - ChatGPT
    - Claude
    - Gemini
    - Heidi Health
    - Lyrebird Health
    - Meta AI
    - Microsoft Co-pilot
    - Nabla
    - Perplexity

- Tortus/OSLER
- Other [free text]

6. How would you describe your confidence in using Gen AI? *
- I use AI cautiously (I am not sure if I could be more effective or if my data is safe)
- I use AI confidently (in a way that maintains quality, safety, and minimises bias)
- I use AI effectively (in addition to confident use, I can choose the right AI tool for the right task)
- I use AI effectively and can create small custom models through which to automate tasks/functions

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Barriers to adoption/use of GenAI

7. Please select all the current barriers preventing you from using Gen AI?
Select all that apply.
- Lack of confidence in personal IT skills.
- Lack of knowledge about artificial intelligence / machine learning.
- Uncertainty around which tasks are suited to AI and which are not.
- Difficulty understanding which AI products (e.g. ChatGPT, Claude, Gemini) are suited to specific tasks.
- Challenges with tool usability and interface navigation. Integration challenges with existing workflows and tools.
- No access to premium/enterprise AI tools through workplace.
- Absence of, or unclear policy with regards to AI usage within my organisation.
- Data security and privacy concerns.
- Lack of confidence in AI output (accuracy and reliability).
- Lack of confidence in appraising AI outputs.
- Concerns about AI bias and fairness.
- Concerns/uncertainty about using AI safely and securely.
- Other [free text]

Drivers for further use of GenAI

8. Please select all of the factors that would increase your confidence further when using Gen AI products?
Select all that apply.
- More confidence in personal IT skills.
- More knowledge about artificial intelligence / machine learning.
- More insight into which tasks are suited to AI and which are not.
- More understanding on which AI products (e.g. ChatGPT/Claude/Gemini) are suited to specific tasks.
- Improved user interfaces.
- A clear understand of how to integrate artificial intelligence tools into my existing workflows and with non-AI products.
- Access to premium/enterprise AI products through workplace
- Robust and clear organisational policy with regards to usage within my workplace.
- More flexible organisational policies around AI use Ability to critically appraise an AI products data security and privacy credentials
- Ability to critically appraise an AI output (accuracy and reliability)
- Ability to confidently appraise AI outputs.
- Ability to critically appraise an AI product for bias and fairness

- Ability to use AI safely and securely.
- Other [free text]

Understanding of Artificial Intelligence

In this section we are discussing AI more broadly - i.e. in all its forms rather than just Generative AI.

Please select all the relevant statements which best reflect your current understanding of Artificial Intelligence (AI): *Select all that apply.*

- I have no knowledge of AI.
- I am aware that AI refers to technologies performing tasks which mimic human intelligence.
- I am aware that AI is a broad term encompassing many different technologies including machine learning (ML), neural networks, Generative and Large Language Models (LLM).
- I am aware of what the terms “broad” and “narrow” mean with respect to AI.
- I can discuss the risks and limitations of the use of AI in my professional area.
- I am aware of the potential biases in AI systems.
- I am aware of current approaches to AI explainability including their limitations

10. Machine Learning (ML) underpins much of what AI does, please select all the relevant statements which best reflect your current understanding of Machine Learning: * *Select all that apply.*

- I have no knowledge of ML.
- I know how ML models are created (trained) using data sets.
- I understand the differences between prospective (predictive) and retrospective models, including the risks of conflation between the two.
- I can explain the different methods (supervised, unsupervised reinforcement, transfer learning) by which models can be trained.
- I can select an appropriate training method based on the characteristics of a dataset and use case.
- I am aware of the evaluation metrics (AUROC, F1, sens, spec, PRC etc…) used to assess ML algorithms.
- I am confident in using evaluation metrics to critically assess model performance.
- None of the above.

11. Please select all the sources where you currently get information on AI: * *Select all that apply.*

- None (I do not currently get/seek information on AI)
- News articles / outlets
- LinkedIn
- Youtube
- Instagram
- TikTok
- Podcasts Newsletter/blogs
- Public lectures and events / webinars
- Academic papers or publications
- Training courses organised by my employer
- Paid for training courses
- Postgraduate education (e.g. diploma, BSc, MSc in data science / machine learning / artificial intelligence)
- Other [free text]

12. Are you aware of any specific guidelines or policies relating to understanding and/or use of AI in your field? *

- No
- Yes

13. If you answered yes, please list the sources: E.g. educational frameworks, guidance for use within your field, local/organisation policies, responsible AI framework - where possible please also provide the organisation that produced the guidance.
[free text]

14. Would you find guidance from the FPH on safe, ethical, equitable use of AI useful for your day to day practice?

- Yes
- No

15. On a scale of 1 to 5, where 1 is the least preferred, and 5 is the most preferred, please rank the following training approaches you would prefer for getting info/education on GenAI: *

1 (Least preferred) 2 3 4 5 (Most preferred)

- Short form self-directed content (e.g. briefings videos):
- Long form self-directed content (e.g Coursera, EdX, NHS E-learning for health):
- Taught short courses (e.g. day long workshops, bootcamps):
- Taught postgraduate courses (e.g. postgraduate diplomas):
- Collaborative learning opportunities (e.g peer networks, AI user communities)

Conceptualising the opportunity and potential harms of AI in public health

16. “What are your hopes for how AI can help public health?”

17. “What are your concerns for the dangers of AI in public health?”

18. “What specific problems or tasks would you like AI to address in your areas of work?”

Decision making

19. Do you have decision-making responsibilities related to artificial intelligence (AI) or machine learning machine learning (ML) in your organisation?

- Yes
- No

20. What decision making role do you have?

- AI policy
- AI strategy
- AI procurement
- AI implementation
- Other [free text]

21. Select all of the following AI development stages which you would be comfortable in evaluating if you were asked to assess an AI product: *Select all that apply.*

- Training
- Fine tuning
- Internal validation
- External validation
- Local validation
- Performance (including comparative performance)
- Bias
- Safety
- Model drift
- None of the above

22 Select all of the following steps in the commissioning of AI systems which you feel comfortable in supervising and/or undertaking: *Select all that apply.*

- Assessing whether a problem can be solved with an AI solution.
- Understanding the regulatory standards for AI devices and what obtaining approval entails.
- Understanding and implementing the safety and risk standards (e.g. ISO 14971, DCB0129, DCB0160) for digital systems which include AI.
- Critically evaluating the performance of AI systems which may include using frameworks like SPIRIT-AI and CONSORT-AI.
- Assessing and communicating the benefits (e.g. consistency, speed) and challenges (e.g. biases model fitting) of AI.
- Developing post-deployment monitoring plans to track performance and safety.
- Ensuring compliance with relevant data protection privacy and safeguarding laws.
- Assessing the long-term maintenance requirements for digital systems, including manufacturer and organisational responsibilities.
- Implementing processes to decommission systems and developing exit/handover strategies.
- Developing and negotiating a robust contract including outcome-based provisions IP and handover plans.
- None of the above

About you

In this section we want to understand a little about you and your background

23. What gender do you identify as?

- Man
- Woman
- Non-binary
- Prefer not to say
- Other [free text]

24. Please select your age range:

- 19 or under
- 20-24
- 25-29
- 30-34
- 35-39
- 40-44
- 45-49
- 50-54

- 55-59
- 60-64
- 65-69
- 70-74
- 75-79
- 80 and over

25. What is your ethnic group:

- Asian, Asian British or Asian Welsh
- Black, Black British, Black Welsh, Caribbean or African
- Mixed or Multiple ethnic groups
- White: English, Welsh, Scottish, Northern Irish or British
- White: Irish
- White: Gypsy or Irish Traveller, Roma or Other White
- Prefer not to say
- Other [free text]

26. Please select your highest level of education
- GCSEs or entry level or equivalent
- A-levels or equivalent
- Apprenticeship or Vocational Qualification
- Foundation Degree or Higher National Diploma (HND)
- Bachelor's Degree (e.g. BA, BSc)
- Master's Degree (e.g. MA, MSc, Meng)
- Doctoral Degree (e.g. PhD, DPhil)

27. In which sector is your main job?
- Health/NHS - Primary or Community Care
- Health/NHS - Secondary/Tertiary Care (e.g. NHS Trusts)
- Health/NHS - Regional body (ICS)
- Health/NHS - National body (e.g. NHSE, PHW, PHScot, DHNI)
- Government Agency (e.g. UKHSA, OHID)
- Local authority
- Other public sector
- Private sector
- Voluntary / Third Sector Academia Other

28. What professional body are you (or will you be) registered with?
- UKPHR
- GMC

29. Is there anything else you would like to mention?
[free text]

Appendix 2 - Participant Demographics

Category	Response	Count	%
Faculty of Public Health Membership	Associate	4	
	Speciality Registrar (pre-DFPH)	28	
	Practitioner (PFPH)	9	
	Diplomate (DFPH)	11	
	Membership (MFPH)	49	
	Fellowship (FFPH)	85	
	Non-member	17	
	Other	2	
Gender	Man	67	36%
	Woman	111	59%
	Non-binary	2	
	Prefer not to say	7	7%
	Other	1	
Age Range	19 or under	1	1%
	20-24	0	
	25-29	6	3%
	30-34	37	20%
	35-39	33	18%
	40-44	37	20%
	45-49	24	13%
	50-54	21	11%
	55-59	14	7%
	60-64	8	4%
	65-69	6	3%
	70-74	0	
	75-79	1	1%
	80 and over	0	
Ethnicity	Asian, Asian British or Asian Welsh	21	11%

	Black, Black British, Black Welsh, Caribbean or African	3	2%
	Mixed or Multiple ethnic groups	18	10%
	White: English, Welsh, Scottish, Northern Irish or British	119	63%
	White: Irish	11	6%
	White: Gypsy or Irish Traveller, Roma or Other White	10	5%
	Prefer not to say	6	3%
	Other	0	
Educational Attainment	GCSEs or entry level or equivalent	0	
	A-levels or equivalent	0	
	Apprenticeship or Vocational Qualification	0	
	Foundation Degree or Higher National Diploma (HND)	1	1%
	Bachelor's Degree (e.g. BA, BSc)	10	5%
	Master's Degree (e.g. MA, MSc, MEng)	130	69%
	Doctoral Degree (e.g. PhD, DPhil)	47	25%
Sector	Health/NHS - Primary or Community Care	4	2%
	Health/NHS - Secondary/Tertiary Care (e.g. NHS Trusts)	20	11%
	Health/NHS - Regional body (ICS)	3	2%
	Health/NHS - National body (e.g. NHSE, PHW, PHScot, DHNI)	25	13%
	Government Agency (e.g. UKHSA, OHID)	30	16%
	Local authority	66	35%
	Other public sector	5	3%
	Private sector	0	
	Voluntary / Third Sector	3	2%
	Academia	23	12%
	Other	9	5%
Professional registration	UKPHR	101	54%
	GMC	87	46%