BOPA AI Hackathon Participant Handbook

Welcome

Thank you for joining the first BOPA AI Hackathon. This event brings together cancer pharmacy professionals from across healthcare, technology, and innovation to explore how artificial intelligence can help solve real problems in cancer pharmacy practice. The hackathon is designed to be practical, collaborative, and welcoming to people who have never taken part in a hackathon before.

Over the event, you will work in a team to explore a challenge, develop ideas, and shape a solution that utilises AI that could improve cancer pharmacy services, patient care, or the way work is done. You do not need to be a data scientist or an AI expert to contribute meaningfully. Your clinical insight, service knowledge, and problem-solving pharmacy skills are exactly what the event needs.

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Opening Session

Date: 20/05/2026
Time: 1200-1400
Venue: Remote via Zoom

Closing Session

Date: 27/05/2026
Time: 1300-1400
Venue: Remote via Zoom

What is a hackathon?

A hackathon is a time-limited, team-based event where people come together to solve problems or develop ideas. In this event, the goal is not to create a finished product in a few hours or days, but to make progress on a real challenge, test ideas quickly, and produce something useful enough to build on afterwards.

If you have never attended a hackathon before, think of it as a structured team sprint. You will spend time understanding the problem, discussing ideas, choosing a direction, and then creating a simple solution or prototype that you can explain to others. For this event, clinical relevance, safety, and feasibility matter more than technical polish.

Why this event matters

Cancer pharmacy is working in a period of increasing pressure, complexity, and opportunity. AI may help support better workflows, reduce administrative burden, improve access to information, and enable more consistent decision-making, but it must be used responsibly and in ways that fit clinical practice.

This hackathon is intended to surface practical problems from pharmacy practice and turn them into ideas that could be tested, improved, or developed further. The most valuable contributions will come from participants who understand where the real pain points are in day-to-day cancer pharmacy work.

Who should attend

This event is for cancer pharmacy professionals who want to explore how AI can support cancer pharmacy. It is especially suitable for people who are curious, practical, and interested in improving services, even if they have little or no previous experience with AI or hackathons.

You do not need coding or AI experience to take part, although technical expertise is welcome where available.

What to expect

The event will begin with a welcome and an overview of the challenges. Teams will then be allocated and begin working through the problem together, with support from facilitators. Depending on the theme you're working on, you may be developing a concept, workflow, prompt, prototype, storyboard, business case, or presentation that shows how your idea would work in practice.

You can expect a collaborative environment with time for discussion, idea development, and presentation. The event is designed so that different skills are useful at every stage, including clinical thinking, service design, communication, and technical input.

Challenge themes

The hackathon challenges will focus on real problems in cancer pharmacy where AI may offer support. Each challenge will be designed around a real world need. Teams should aim to identify a problem within the theme first, then develop a solution that is clinically sensible, safe, and realistic enough to move forward.

For the inaugural BOPA AI Hackathon, the following themes have been set:

- Protocol drafting
- Clinical Trial Setup drafting
- Utilising LLMs for Pharmacy Research

Challenge Brief 1 — AI Support for Cancer Pharmacy Protocol Drafting

The challenge: Protocol drafting is time-consuming and resource-intensive for cancer pharmacy teams balancing clinical workload with the need for accurate, governance aligned documentation.

Your task: Design an AI supported approach to help teams draft protocols more efficiently. This should support the human drafter, not replace clinical judgement. Focus on one aspect: structuring documents, summarising guidance, suggesting missing sections, or converting rough drafts into clearer templates.

What a good solution might do: Generate first drafts from a brief prompt; suggest standard structures; highlight sections needing clinical review; cross-check against source documents; improve clarity and reduce repeated editing.

Key considerations: Must be safe and realistic for clinical use. Clearly state what the AI is and isn't doing, where human review is essential, and address version control, governance, and local approval.

Expected outputs: Workflow diagram; prototype prompt or tool concept; sample protocol outline; explanation of clinical review process; risk and safeguards summary.

Success criteria: Clinical relevance; realistic process improvement; strong safety and governance thinking; ease of use; time savings without quality loss.

Example prompt: "Help me draft a cancer pharmacy protocol for [topic]. Create a standard structure, identify sections needing clinical input, and summarise what I should check before finalising."

Challenge Brief 2 — AI Support for Clinical Trial Setup Documents

The challenge: Trial setup in cancer services is slowed by documentation burden, repeated drafting, and adapting sponsor documents for local use. Pharmacy input is critical across feasibility, supply, labelling, and training.

Your task: Design an AI-supported approach for early drafting of trial setup materials. Focus areas may include pharmacy setup checklists, trial summaries, local process notes, communication templates, pharmacy manual drafts, or gap-finding prompts.

What a good solution might do: Convert a synopsis into a pharmacy setup checklist; summarise key study requirements; draft initial pharmacy instructions; identify questions to ask before activation; reduce rework through standardised early-stage drafting.

Key considerations: Must not substitute for local feasibility assessment, technical review, or pharmacy sign-off. Must reflect the multi-stage trial setup process and support safe handling, accountability, storage, labelling, and training requirements.

Expected outputs: Draft workflow from synopsis to setup document; sample checklist or template; description of AI scope and limits; list of questions the tool should ask; risk and governance summary.

Success criteria: Practical value for real trial work; alignment with pharmacy and trial governance; clear safety and accountability thinking; ease of use; potential to reduce delays and admin burden.

Example prompt: "Using this trial synopsis, create a pharmacy setup checklist and draft a summary of key actions the pharmacy team must complete before site initiation."

Example Freely Available Investigator Brochures

- https://www.ctc.ucl.ac.uk/TrialDocuments/Uploaded/UKALL14%20-%20Protocol%20-%20v5.0%2020.07.12%20plus%20errata%2004.02.14_12042017_0.pdf
- https://www.ctc.ucl.ac.uk/TrialDocuments/Uploaded/UKALL14%20Drug%20Supply%20Guidelines%20(v1%2024-08-09)%20v2.1-%2025feb14_19042017_0.pdf
- https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwil-OLKrrGUAxXjTEEAHSH0Hz0QFnoECB8QAQ&url=https%3A%2F%2Fwww.principletrial.org%2Ffiles%2Ftrial-documents%2Ffaviib_v3-0003.pdf&usg=AOvVaw0FcngYRqYz1pH-uCdbJIkK&opi=89978449
- https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwi34ZGer7GUAxUNW0EAHTvwHhoQFnoECB0QAQ&url=https%3A%2F%2Fwww.clinicaltrialsregister.eu%2Fctr-search%2Frest%2Fdownload%2Fresult%2Fattachment%2F2008-005843-40%2F1%2F11609&usg=AOvVaw04SM2Tuh9xrUq9cMBs-5fn&opi=89978449

Challenge Brief 3 — Using LLMs to Support Pharmacy Research

The challenge: Research teams spend significant time on early-stage tasks such as literature screening, summarising findings, shaping questions, and drafting documents. LLMs could help, but carry risks of inaccuracy, bias, and overconfidence if unchecked.

Your task: Design a responsible workflow for using LLMs in pharmacy research which could be one specific task or a broader process. Options include, but aren't limited to, refining research questions, summarising papers, drafting literature review outlines, organising themes, supporting plain-language summaries, or helping prepare funding application drafts.

What a good solution might do: Save time on early-stage tasks; help organise and structure information; improve consistency in note-taking and summarising; support drafting while keeping the researcher accountable; include verification steps; make limitations visible.

Key considerations: Must not replace critical appraisal, study interpretation, or authorship responsibility. Address hallucinations, bias, confidentiality, citation checking, and when not to trust outputs. Reference safe input handling, governance, training, and escalation.

Expected outputs: Research task workflow; sample prompt set or library; verification checklist; risk-mitigation plan; use case showing where LLM helps and where humans remain essential.

Success criteria: Clearly defined research use case; responsible and transparent AI use; human review built in; productivity gains without quality loss; relevance to pharmacy research practice.

Example prompt: "Summarise these abstracts into key themes for a pharmacy research scoping review, then list the claims that would need manual verification before use in a final report."

How teams will work

Teams will be formed to bring together a mix of perspectives. Sign up forms will collect levels of AI experience. This will be used to ensure each team has an even skill mix. This reflects the collaborative approach used in other healthcare AI hackathons.

Teams are encouraged to connect with each other throughout the hackathon week using any communication channel that works best for them (ie. WhatsApp, email or Teams). We encourage you to make contact early in the week, as this can help your team hit the ground running by allowing you to introduce yourselves, divide any preparatory thinking and agree on a working approach.

Within your team, people may naturally take different roles. These might include:

- Clinical lead.
- Problem owner or challenge translator.
- Technical contributor.
- Note-taker.
- Presenter.
- Facilitator.

If you are new to hackathons, you can still make a major contribution by describing the workflow, identifying risks, clarifying what would and would not work in practice, or helping the team keep the solution grounded in reality.

Before the event

Please spend a little time preparing in advance. This will help you get the most out of the event and help your team move more quickly once the hackathon begins.

Before the opening session:

- Read the challenge descriptions carefully.
- Think about problems in your own practice that you would like to solve.
- Consider what an ideal AI-supported solution would need to do.
- Reflect on any safety, governance, or implementation concerns.
- Complete the pre-event questionnaire.

If you have relevant examples from your service, bring them with you in general terms. Responsible AI and information governance are central to this event. No patient data or commercially sensitive information is to be used at any point during this hackathon.

You do not need to arrive with a polished proposal. The point of the event is to build ideas together.

During the event

Make the most of the time available by staying focussed, collaborative and willing to adapt.

During the hackathon:

- Spend time as a team defining and agreeing on the problem before jumping to solutions
- Assign roles early so everyone knows how they are contributing, even if these shift as the session progresses
- Keep your solution grounded in real clinical practice and challenge assumptions that sound plausible but may not hold up in a real-world oncology setting
- Document your thinking as you go rather than leaving it to the end, including ideas you rejected and why
- Ask for mentor support early if you are stuck
- Test your idea against a realistic failure scenario before you present it
- Manage your time actively and be prepared to simplify your solution if it becomes too complex to present clearly
- Keep responsible AI principles visible throughout *(please see Responsible AI section)*

Support during the event

Help will be available throughout the hackathon. BOPA AI CAG Members will support teams with clinical thinking, technical questions, and practical problem-solving. If you are unsure how to start, what direction to take, or how to turn an idea into a workable concept, ask for help early.

The event team will also be available to help with logistics, accessibility needs, and any issues that arise throughout the duration of the hackathon. If you need adjustments to help you participate fully, please tell the organisers in advance or message the team.

Final Pitch

At the end of the hack, you and your team will deliver a presentation or “pitch” on your idea.

Here is a guideline on how to plan your pitch:

- **Introduction**: Briefly introduce yourself and your team.
- **Problem**: Clearly describe the problem you are addressing. Who does this problem affect, and what is the real-world impact on them at the moment?
- **Solution**: Explain the technical aspects of your idea. Provide enough detail to demonstrate your oncology pharmacy expertise and decision-making process, without overwhelming your audience with excessive information.
- **Impact/Demo**: Support your idea with a live demo (if possible) or use visualisation tools to mockup the design, functionality, and key features. Describe the impact of your solution and how does it benefit the end users?
- **Closing**: Summarise the main points of your pitch and end with a strong closing statement.

Judging and outcomes

Final judging will focus on the quality and potential of the idea rather than on perfection. Common criteria include:

- Clinical relevance.
- Safety.
- Innovation.
- Feasibility.
- Scalability.
- User value.
- Potential for real-world impact.
- Clarity of presentation.
- Responsible AI use.
- Hallucination risk mitigation.

The strongest solutions will show that the team has understood the problem well and thought carefully about how the idea would fit into cancer pharmacy practice.

Judging rubric:

Criterion	Considerations	Score
Clinical Foundations		
Clinical Relevance	• Is there a clearly defined problem grounded in real oncology pharmacy practice? • Does the solution address a genuine clinical need rather than a perceived one? • Would a practising cancer pharmacy professional recognise this as a meaningful problem worth solving?	/5
Safety	• Has the team identified patient safety risks associated with their solution? • Are appropriate safeguards built in, including human oversight of AI outputs? • Does the solution avoid creating new risks such as dose errors, missed interactions, or over-reliance on AI? • Has the team considered what happens when the solution fails or produces an incorrect output?	/10
AI Quality		
Responsible AI Use	• Does the solution demonstrate awareness of bias, fairness, and equity across patient groups? • Is the AI's role clearly defined and appropriately bounded? • Does the team acknowledge the limitations and ethical considerations of their approach? • Is there transparency about what the AI can and cannot do?	/5
Hallucination Risk Mitigation	• Has the team identified scenarios where the AI may produce incorrect or fabricated outputs? • Are there mechanisms to detect, flag, or correct erroneous AI outputs? • Does the solution require human verification of AI-generated content before it is acted upon? • Is the team aware of how hallucination risk is heightened in clinical contexts such as chemotherapy dosing?	/5
Innovation and Impact		
Innovation	• Does the solution offer a novel approach or meaningfully improve on existing methods? • Is the use of AI justified and additive rather than	/5

	substituting a simpler non-AI solution? • Does the idea show creative thinking within the constraints of clinical practice?	
End User Value	• Is there a clear and tangible benefit to the end user (pharmacist, patient, research Sponsor etc.)? • Does the solution reduce burden, improve safety, or enhance quality of care? • Has the team considered the end user's workflow and context, including time pressures and system constraints?	/5
Potential for Real-World Impact	• Could this idea plausibly improve outcomes, efficiency, or safety at a service level? • Does the team articulate the broader impact beyond the immediate use case? • Is there a sense of urgency or significance to the problem being solved?	/5
Implementation		
Feasibility	• Is the solution realistic within NHS oncology pharmacy infrastructure? • Has the team considered integration with existing systems, governance requirements, and resource constraints? • Is there a credible pathway from prototype to implementation?	/5
Scalability	• Could the solution be adopted beyond a single centre or trust? • Is the underlying approach generalisable to other oncology pharmacy settings? • Has the team considered what would need to be true for national or regional adoption?	/5
Presentation		
Clarity of Presentation	• Is the problem and proposed solution communicated clearly and concisely? • Can the team explain what their solution does not do as clearly as what it does? • Are visual aids or demonstrations used effectively where appropriate? • Does the team respond confidently and accurately to questions from judges?	/5
Total		/55

Responsible AI and safety

This event is guided by responsible AI principles. AI should support clinical work, not replace professional judgement. Any idea developed during the hackathon must take account of patient safety, data protection, bias, explainability, and the realities of clinical implementation.

Please remember:

- Do not use patient-identifiable information.
- Do not use commercially sensitive information.
- Think carefully about risks, limitations, and unintended consequences.
- Assume AI outputs need human review.
- Be transparent about what your idea can and cannot do.
- Raise safety concerns early.

The Responsible AI guidance for healthcare stresses ethics, accountability, and quality assurance, and NHS-style practical resources emphasise oversight, patient data protection, fairness, and documented review processes.

Code of conduct

We want this to be a respectful, inclusive, and productive event. Everyone is expected to:

- Treat others with courtesy and professionalism.
- Listen actively and value different viewpoints.
- Share ideas fairly and credit contributions appropriately.
- Avoid discriminatory, disruptive, or unsafe behaviour.
- Respect confidentiality and information governance rules.

If you experience or witness a concern, speak to an organiser or facilitator straight away.

Closing message

Thank you for being part of this BOPA hackathon. Your knowledge of cancer pharmacy practice is essential to making AI useful, safe, and relevant in the real world. We hope the event is enjoyable, practical, and inspiring, and that you leave with new ideas, useful connections, and confidence in what AI can contribute to pharmacy services.

Frequently asked questions

Do I need a paid AI account?
No. There are no requirements for access to specific AI models. This event is about finding realistic AI solutions so please use any AI models you would have access to in an NHS environment (eg. Microsoft Copilot via NHSmail, Claude, ChatGPT). No reimbursements will be made for credits purchased for use in this event.

Do I need hackathon experience?
No. This event is designed to be accessible to first-time participants.

Do I need coding skills?
No. Clinical and service insight are just as important as technical expertise.

What if I do not work in AI or digital?
The event needs people who understand cancer pharmacy practice.

Where can I learn how to use AI?
See the resources section at the end of this document.

Will we build a finished product?
The goal is to create a strong concept, prototype, or plan that can be developed further, though a finished solution would be a great outcome.

What happens after the event?
The outcomes and findings from each team will be shared with BOPA members. A post event survey will be disseminated to participants in order to evaluate the event and enable learnings for how to make the next hackathon event even better.

Who owns the outcomes/solutions/findings?
Hackathon outputs remain the property of the individuals and/or organisations that created them unless otherwise agreed in writing. BOPA and the organisers do not claim ownership of ideas, materials or prototypes created by participants.

By taking part, participants agree that the organisers may record, and share non-confidential event activities and may reference team names, project titles, and summary descriptions of submitted work for event reporting, promotion, and follow-up activity, unless a participant has explicitly requested otherwise in writing.

Resources

There are many resources available to help learn how to use AI, some more helpful than others:

Description	Link
How to AI by Ruben Hassid – practical examples and real-world use cases for using AI effectively	https://ruben.substack.com/
Prompt Engineering Guide – strong resource for learning AI prompting fundamentals, techniques, and frameworks	https://www.promptingguide.ai/
AI How to Guide from a Similar AI Healthcare Hackathon	https://docs.google.com/document/d/1NqZ3AzIkUBhPX9REwJ6ZxCOxXKC-aLZ-tSGoyS2pub0/edit?tab=t.0#heading=h.wbxibzerf87a
AI Prompting for Everyone – free DeepLearning.AI course covering core prompting concepts	https://learn.deeplearning.ai/courses/ai-prompting-for-everyone/information
UK Government AI Skills Hub – free AI skills courses and learning resources	https://aiskillshub.org.uk/aiskillsboost/coursecatalogue/
Understanding AI in the NHS – simple, accessible NHS-focused AI guides	https://www.miaa.nhs.uk/services/digital/understanding-ai-in-the-nhs-a-practical-resource-hub/
NHS Digital AI Knowledge Repository – broader NHS AI resources, guidance, and implementation materials	https://digital.nhs.uk/services/ai-knowledge-repository
GPhC Position Statement on the use of AI in pharmacy	https://www.pharmacyregulation.org/about-us/news-and-updates/gphc-publishes-new-position-statement-use-artificial-intelligence-pharmacy
Writing AI prompts for Dummies Book in pdf format	https://www.vailtech.net/sites/default/files/AI_Writing_AI_Prompts_for_Dummies.pdf
Artificial intelligence - how to guide and regulate for health and social care professionals using AI	https://www.professionalstandards.org.uk/publications/artificial-intelligence-how-guide-and-regulate-health-and-social-care-professionals