Carlene McMaugh (00:01):

Welcome to the AJP Podcast, a podcast for pharmacists by pharmacists, where we discuss current events, relevant topics, and emerging issues in pharmacy practise. I'm your host, Carlene McMaugh, and together with the AJP, I'm bringing you the opinions, experiences, and expertise of pharmacists across the profession. Each episode offers insightful perspectives on the issues that matter most to us as pharmacists. Please like, rate and subscribe so you never miss an episode, and we hope you enjoy the podcast. So Ella, is it okay if I get you to introduce yourself to the audience for me, please? Yeah,

Ella Shearing (00:40):

Of course. So my name is Ella. I am a full-time hospital pharmacist and I'm working in a hospital here in Sydney, working full-time in cancer care currently, which has been very exciting. So just recently jumped into that about four weeks ago. So it's been a huge step up to what I'm used to. I'm really excited to be here on the AJP podcast today to discuss some of the projects I've been working on to do with AI. And I think it's also pretty relevant to my other secondary job, which I work casually with Locumate AI in the marketing department there. So it's a nice little crossover.

Carlene McMaugh (01:20):

Brilliant. Can I please ask you, how did you first become interested in the intersection of AI and pharmacy?

Ella Shearing (01:27):

Well, I guess for me personally, since I have had that side gig with Locumate, we deal with a lot of technology and AI within that company. So I guess I probably heard Locumate first talking about AI and I didn't really know what it meant. And then obviously we've had ChatGPT pop up recently, so we're in the last few years. And so that sort of piqued my interest, especially since it was AI, artificial intelligence,, is quite a buzzword. And so it's quite a buzzword. And so you get a lot of, I guess, discussion about it just in social groups and in passing. And yeah, I just thought, I wonder how we can integrate this into pharmacy and what it can do for us.

Carlene McMaugh (02:21):

You recently conducted a survey on AI use among hospital pharmacists. What was the most surprising finding from that research?

Ella Shearing (02:30):

Yeah. So earlier this year, I conducted a survey just within my workplace at a tertiary Sydney hospital, and we were able to capture data from a number of pharmacists, so 20 pharmacists, and we got a really good age range between 23 and 69 years old. So it was quite a vast sparse selection there and quite a diverse age range, which was great. But I think in general, people were quite receptive of AI and were open to using it for a variety of tasks. And I thought it was good that there were quite a few suggestions for things that AI could be used for as an education and a learning tool. So I found it quite surprising how receptive people were of actually using AI in practise. And I found the vast variety of tasks that people thought that it would be useful to use in.

(03:36):

I found that also surprising. But I also found from our results, it was interesting that there wasn't too much concern for environmental impacts. So for me personally, I am quite well aware that AI tools can consume a lot of energy and aren't necessarily the best on our environment. And I think from our survey, it was clear that not everyone shared that same level of education or that same level of understanding

about the consumption that AI tools can have. I think from what we saw from the survey is that not everyone had that same level of awareness of the environmental impacts that AI tools has.

Carlene McMaugh (04:28):

What was it like to lead a department-wide survey as an early career pharmacist and what challenges did you face and what did you learn?

Ella Shearing (04:37):

Well, the creation was pretty straightforward. And I actually think as an early career pharmacist, it was a pretty straightforward project. So I actually made the quiz itself or the survey itself in Microsoft forms. So that's our ... We have a licence, our hospital has a licence with Microsoft, so that was a secure software that I could use. I developed the actual survey questions based on a paper from the Netherlands. So they did a similar survey, but on community pharmacists. So it was published in earlier this year, in 2025, and I saw that and I thought, "I wonder if we could do that in hospital." So that's basically where the questions came from. And then I added in some extra questions that I thought were more relevant to hospital. And then I had that appraised by some of the senior pharmacists that I work with, including our director, who then gave the all clear for me to then distribute it to our staff members.

(05:48):

So yeah, I think that part of the survey is pretty straightforward. In terms of some of the challenges, actually getting people to complete the survey was quite difficult at times, especially because obviously these pharmacists are working as full-time ward pharmacists in the hospital. So time was a huge barrier to actually completing the survey. And I found that in terms of the learnings from that, having good rapport with other staff members or your peers is really important, maintaining those relationships and that helped to ensure that we could get the survey completed, but also having visibility in terms of completion of the survey. So I announced it within our weekly meeting and posted the survey on Teams. So having a good visibility of the survey, I found made it the completion rate a lot higher.

Carlene McMaugh (06:55):

In your opinion, what are the most promising current applications of AI in a hospital pharmacy setting?

Ella Shearing (07:03):

I think at the moment, AI is definitely more restricted to admin tasks and tasks that can be automated. So for example, having a second pair of eyes over emails or helping with reviewing policies, potentially helping with things like research or anything that you need a great deal of writing for, and it's good to have a second pair of eyes as an editor, essentially. I think in terms of the limitations in hospital, it's not really at the point where we could use it for clinical decision making. And I'm happy to talk on more of that later, some more of the limitations, but it's pretty good for idea generation. So recently I've been involved in helping to put together medication safety week for our hospital. So it's been really great to help generate ideas for our medication awareness tool. So any sort of games and things for the store, it's excellent for any idea generation for presentation names.

(08:17):

If you're looking for a catchy presentation name, I actually work with a pharmacist who helps with education in the Pacific. And so she was putting together a presentation on urosepsis to a audience of healthcare professionals in the Pacific Islands, and she actually used AI tools to help refine that presentation to make it more specific for that particular area. So I guess there's lots of different applications, but I think in terms of the most promising at the moment, it would be restricted to admin

tasks or documentation or things that we take a lot of our time are very important, but do take a lot of time.

Carlene McMaugh (09:12):

Does that mean that there's potential in the not so distant future for it to change from more administrative tasks? What do you see as the next stages?

Ella Shearing (09:25):

I feel with the next stages, there's a lot of considerations to take in place in order for AI to move out of just an admin tool and into a more of a clinical space. Obviously some of those barriers are, we have privacy and confidentiality, we're dealing with very sensitive health information. So having a secure system is very important to prevent any breaches in that confidentiality for patients. I guess with AI as well, there's a lot of inherent bias, so we would need to find ways around removing that or mitigating that risk when it comes to developing a clinical software. There's also a high cost associated with developing a clinical AI specific tool. And so there's a few things at the moment that would, I guess, take a bit of time in order for it to get to that next level.

Carlene McMaugh (10:32):

You've mentioned the divide between early adopters and those who are hesitant about change. What do you think are the main reasons for this hesitation?

Ella Shearing (10:41):

Yeah. So there was quite a bit of hesitation from, I guess, particularly pharmacists who are maybe a little bit older, and I think the hesitation is due to very valid concerns of the pharmacist. So concerns for patient privacy, confidentiality. There was mention of lack of transparency around the software, who's actually running it, and why the software's being produced. We also have concerns around reliability, misinformation, and like I mentioned before, bias as well. I think it does come down to education gap, making education that's specific and practical, but then there's also this hesitation because of a real concern to do with having access ... There's a real concern with these open access AI tools, not being secure enough to hold patient data, not being screened or monitored for misinformation. And so we do have this gap of reliable ... We do have this gap of having a purpose built, reliable, and secure enterprise backed system, but then we also need to be able to bridge the gap with education for pharmacists that they're actually able to use the system as well.

Carlene McMaugh (12:08):

What are some of the biggest limitations or concerns pharmacists have about using AI tools right now, particularly regarding, you've mentioned a little bit of safety, security and accuracy?

Ella Shearing (12:20):

Yeah. So I guess I've kind of touched on the limitations, but definitely clinical decision making skills. At this point, I don't think AI is going to be taking our jobs anytime soon when it comes to clinical decision making, which I guess is a good thing, but there are a lot of different things to consider when treating a patient and just because there is a textbook way to treat a condition or a disease doesn't mean that is the best way to treat that particular patient. So I think at the moment, AI still has a long way to go when it comes to clinical decision making.

Carlene McMaugh (13:05):

So how can AI help pharmacists make more informed decisions and improve patient safety, for example, by protecting or detecting potential drug interactions or medication risks?

Ella Shearing (13:16):

Yeah, so that's a good point. So I definitely do think AI tools do have a strong role at the moment for administration and streamlining existing processes. In terms of detecting potential drug interactions, we already have a lot of great softwares in place like MIMS and Lexicomp interaction checkers that are fairly easy and simple to use. In terms of AI itself, it's a lot more expensive than those other softwares that we have. And AI definitely does take up a lot more energy and has more of an environmental strain than our existing systems like MIMS and Lexicom. So I would say that at the moment, those existing softwares are sufficient and also very easy to use for detecting things like drug interaction. So I'm not sure if that's a good avenue to go down at the moment, but I think it would be similar with things like medication risk, risks.

(14:25):

We already have access to the AMH and product information, product information sheets. If we want to look for more information about specific drugs, I think in the future there ... I think that in the future, we might see AI integrated into our EMR systems or our electronic medical record systems that could be quite useful. And I think there's actually something in the works at the moment with Epic, but then again, in terms of the drug-drug interactions, we already have pop-up warnings for drug interactions in most dispensing softwares and people tend to click through them anyway. So you do run the risk of if we do integrate AI into systems, you have even more pop-up warnings, and this can obviously exacerbate the alarm fatigue that we already see with a lot of our pharmacists. So I think in terms of informed decision making and patient safety, we do have a lot of really great existing tools that don't require AI, and I think that we should lean on those first and leave the AI tools for more administrative roles, and then maybe work towards that clinical work with AI later down the track.

Carlene McMaugh (16:00):

You've also stated that checking the future of pharmacy isn't just about adopting new tools, it's about listening to those who expected to use them. What does this listening look like in practise and why is it so crucial?

Ella Shearing (16:13):

Thank you. I feel like that's a really good question. Hospitals are very big institutions and they don't just require doctors and nurses and pharmacists and healthcare professionals, but they also require a whole team of executive staff in order to help run the place and make sure that there's clinical decisions on behalf of the hospital being made and there's decisions being made on behalf of the people who are working within it. So I think to help ... Yeah, and they're very important decisions about correct funding, resourcing, but often the people that are making the decisions are not the ones on the ground working day-to-day in the thick of it. So I think that with listening, it's about being on the ground with the frontline workers who are expected to use the technology and taking on their opinion based off of their wisdom and day-to-day experience to ensure that that technology is actually getting used effectively.

(17:12):

In terms of AI, it's not cheap technology to run. And we're talking about taxpayer-funded institutions, public hospitals. We don't want to be spending unnecessary amounts of money on technology or systems that are not providing any benefit to the people who are actually using them. So just because we can adopt AI tools now doesn't mean that we should, unless it's going to be of benefit to the people who are using it. So I think in a practical sense, this looks like surveys, so similar to the one that I conducted, just to see how people are currently using AI or to see what people want to use AI for, but also having people on the

board with, or the people on the board who are making decisions with direct experience within clinical areas and direct experience in using these technologies and how they're intended to use, or how they're intended to be used.

(18:12):

So either by having people with that direct clinical experience or having a spokesperson or a representative, they can help provide any on the ground feedback and experience ... They can provide on the ground experience and direct feedback for any new systems that are being put in place. I think also facilitating any sort of new process needs, facilitation of education, and also to help empower the people that are using it. I think providing time and resources in order to effectively integrate this into a pharmacist practise is crucial in order for it to actually be utilised in the best way.

Carlene McMaugh (19:00):

What do you see as the next major development for AI in pharmacy? For example, what could an enterprise backed purpose built healthcare AI model look like?

Ella Shearing (19:10):

So we currently have a similar AI tool in my local health district that's been developed. It's similar to, I guess, your ChatGPT, but it's more for EMR or electronic medical record queries. So at the moment, it's still very basic because the IT team are very restricted in the information that they are allowed to provide the system. And so there's no clinical information, but it's mainly directive information. So for example, you could ask the AI system, how do I place a pharmacy consult order or how do I create a patient list for this particular ward? And it will feed back to you that information in the same way that ChatGPT does. So just essentially just a text box or just a streamline of text. It won't answer any questions like, "Will this drug interact with this drug? Is this appropriate for this patient?" So yeah, it's not a clinical tool and the creativity of the AI tool has been restricted and it's only fed certain data sets.

(20:25):

So anything outside of what the information that it's been fed, it will just come back with a, "I don't know. " In terms of an enterprise backed purpose built AI healthcare model, like I mentioned before, I think Epic is on track to incorporate AI into their EMR system. What this will look like, I'm not sure, but I have seen in the hospital clinical notes that have been taken with an AI recording, and I believe that that will soon get integrated within our ward rounding notes, and so that will help save up a lot of time because documentation is very important, but it does take up a significant amount of time. For me personally, I'd love to see AI generated prednisone wedding charts and medication charts for patients to take home, obviously with a second check by a pharmacist, but that would save up a lot of admin time for people in the dispensary.

(21:26):

Automatic correspondences for any sort of Webster pack changes and that sort of community liaison role as well with community pharmacies when there is a Webster pack change in hospital, that would also free up a lot of time. But I think, as I sort of mentioned before, I see there's less of a use for things like drug interaction checkers since we already have these integrated drug interaction checkers and warning codes. So I feel that it will be more about documentation and also just providing basic administration information.

Carlene McMaugh (22:08):

What kind of education and training do pharmacists need to build their AI literacy and confidence?

Ella Shearing (22:15):

So there's a few courses that are available online already. There's a free course I did by Microsoft. It's called Introduction to AI, and it goes through an introduction to AI concepts and there's some videos and a quiz you do at the end. So it's a pretty good course for people who want to start looking into AI and getting to use it more within their practise. I think education could be implemented on a district wide basis and the of specific online modules would be great for empowerment of pharmacists, but also being able to have practical training sessions where people can ask questions and actually use the software and get a good feel of it before they can step out into the real world and start to use it in their practise. But I think the best way to build confidence is by doing. So having this more practical approach with the tutorial style can be a lot more beneficial than just having the online modules itself.

Carlene McMaugh (23:23):

How can pharmacists and other healthcare professionals work with IT teams and leadership to ensure safe and ethical integration of AI into their workflows?

Ella Shearing (23:33):

Yeah, that's a great question. I would say working within a good team that is diverse and very receptive to feedback is very important in order to get this to work. I work within an amazing team at the hospital that I'm in, and I want to also just give a special shout out to Jackie Hann, who I work with in my local health district, and he's done some amazing work towards integrating this new technology into our healthcare setting and ensuring that our district can help stay ahead of the curve. So he actually started off as a pharmacist and has since transitioned into IT and that's been incredibly useful for us because it means that he has this healthcare background and he understands the needs of the pharmacist a lot better than someone who's just come from an IT background. So I think in general, having people with a healthcare background in IT makes it a lot easier for us pharmacists who need to go to them for help, but it also means they have a better understanding of the ethical considerations, as well as the context of how the technology is actually being used in the workplace.

(24:53):

So I would say this more dual trained approach where you have people who are both in the IT team, but also have a background in healthcare or also still currently work in healthcare, makes it a lot easier to integrate this kind of technology into practise.

(25:12):

In addition to that, policy and guideline creation, we love a policy here in public health, and I do too. It just makes it a lot easier to know where the standard is. So having more specific policies and practical guidelines for healthcare professionals would ensure that we are upholding our ethical and safety considerations and would just make it a lot more easier for pharmacists or more helpful for pharmacists when we're integrating these AI tools into our own practise. And then, yeah, as mentioned before, when integrating this new technology into the workplace, policymakers should be listening to the people who are expected to use it. So having a spokesperson or someone with a background in healthcare or frontline work would be crucial in ensuring the smooth, safe, and successful integration of AI tools into the workplace.

Carlene McMaugh (26:06):

So maybe I might ask, have you heard about some applications of AI in pharmacy where you didn't think it was so appropriate?

Ella Shearing (26:14):

Oh, that's a good question. Look, I think from my experience and from hearing the experience of other people, people tend to be quite conservative with the use of AI. So I actually haven't heard of any situations where people are using it, where I would deem it to be inappropriate. Again, most people are just using it for administration tasks or purposes. I haven't really heard of a situation where I would think it would be inappropriate, but I think if people were putting in any private, if people were putting in any patient identifiers into the system or any very patient -specific information, ob,viously when it comes to these AI tools, it's an open system and we don't know where that information is necessarily getting stored. And so again, it comes back to some of the initial hesitations that a lot of pharmacists had about patient privacy and confidentiality, but yeah, that's a good question.

Carlene McMaugh (27:29):

And maybe are there any applications of AI and pharmacy that people haven't thought about yet that you think they can be utilising it now and really maximising the opportunity?

Ella Shearing (27:42):

Oh, that's also a good one. I think using it for emails is very useful if you have to write a lengthy email, obviously excluding any identifiers that would identify a patient. So it's good to have a second pair of eyes. Again, like I mentioned earlier, it's been very helpful for idea generation. So if you're stuck brainstorming, what should I do for this particular continuing education presentation or what should I do for this medication safety week store? It's excellent at giving you different ideas that you might not have thought about. Not all of them are great, but they're often good to use. They're often a good jumping off space and then you can use those ideas generated by AI to actually come up with your own ideas. And it helps kind of get rid of that initial brain fog or brain block that you get when you have a big task that often requires a lot of creative power.

Carlene McMaugh (28:50):

Is there anything that you'd like to share that I haven't asked you today?

Ella Shearing (28:55):

I think we've covered most of it. Yeah.

Carlene McMaugh (28:58):

All right.

(28:58):

Thank

(29:00):

You for tuning in to this episode of the AJP Podcast by Pharmacist for Pharmacists. We hope you found the conversation valuable and relevant to your everyday practise. If you enjoyed the episode, please like, subscribe and share it with your colleagues. Be sure to follow us on X, formally Twitter, to stay up to date and join the conversation by leaving a comment on the AJP website. Your feedback helps shape future episodes and your support keeps us connected as a profession. Until next time, take care and keep making a difference in healthcare.