Podcast Name: *ACM ByteCast*
Episode: Holly Urban - Episode 36

Welcome to the *ACM ByteCast* podcast, a series from the Association for Computing Machinery! The podcast features conversations with researchers, practitioners, and innovators at the intersection of computing research and practice about their experiences, lessons learned, and visions for the future of computing. In this episode, hosts Dr. Sabrina Shay and Dr. Zolaufa Kodura interview guest Holly Urban, a pediatrician and a clinical informaticist. She received her BA from Stanford, her MD from the University of Colorado and her MBA from Regis University. After working as a pediatrician for several years, Holly transitioned to product management roles for Healthcare IT vendors. Most recently, she started a new role as VP of Clinical Product Design at CliniComp.

To begin, Holly introduces herself and shares how when she was a clinician, the hospital had its own tool. They did not get feedback from clinicians when they made the tool and its use was less than 1%. She thought if they had more clinical input, that tool would've been easier to use and was better for patient safety. That's when she first started thinking about how health IT can help improve patient outcomes and how she wanted to be on the design side. She became the ambassador between clinical and technician sides, and she aims to create efficient tools for clinicians to create better care for patients. She became the VP of Clinical Product Design at CliniComp, where they are designing a brand new EHR. She wants to leverage the lessons she's learned and apply them. One challenge is that CliniComp doesn't have a lot of brand recognition in the market, and DOD and VA did a lot of work with them. They have pivoted to a full-fledged EHR from the ground up where they are building new software. The next part is finding someone willing to partner with them on this exciting journey.

Next, Holly discusses an important part to make a career successful is working hand-in-hand with the technical team and resources. She has found that clinicians go straight to the solutions, but don't identify what the problem is. Clinicians and technologists are deeply embedded in each other's work, and this partnership and being able to understand someone else's point of view is key to the work she is now doing. Other common pain points for clinicians are intuitive interfaces. The design isn't functional to the clinician workflow and doesn't translate well to how the clinicians use it. To address those in product design, she has the clinician expertise and works with the technical side to create more functional technology. This discussion happens on a daily basis. CliniComp has an object order database instead of a translation one, which gives them flexibility in the database to do things in a different way. If technology can provide more intuitive uses, this could help with burnout with clinicians but sometimes it requires a whole new user data interface. We want to help clinicians efficiently document and communicate patient decisions, and not billing and insurance, so they can focus on giving better care to patients.

Next, they discuss specific ways to address challenges. All the data is generated by EHR and you need to have data literacy to correctly analyze and apply it. This includes access to the data, a place to store it, normalize it and how to analyze the data (interpret, present it, visualize it) so others can understand. This is common across the industry across all EHR systems and

we use data decisions to create better care for patients. There is a huge potential for AI and machine learning (ML). We need to evaluate the effectiveness of interventions like procedures and medications in a standardized way. If you apply it to vast data sets, you'd have real world evidence and what risk adjusts are needed. AI is a powerful tool, but it's not the end. It doesn't improve patient care, it's a tool to help you do that. There is also an issue of bias in healthcare. The cardiovascular risk score works well for white patients, but not black, so there are worse outcomes for that population. AI models can also have biases, so you need to have the right data to make sure you can represent any issues related to health equity. You need to also have diverse teams because of confirmation bias, which is looking at the evidence that supports your preconceived notions. If we can partner in how we assess and evaluate technologies, that will be the best outcome.

Lastly, Holly shares her advice for those professionals thinking about switching roles. She says volunteering or getting involved goes a long way. This can help you understand if you really like that work, demonstrates to a potential employer that you have that informatics mindset and networking is key. Networking can help you understand that there's a lot of varieties of roles, what the day-to-day responsibilities would be and input in different areas. You may find opportunities where people are looking for someone. Before wrapping up, Holly shares to find conferences and groups to network and get involved in.

Key Takeaways:
0:29 - Introduction to today's episode and guest
2:40 - Holly introduces herself.
5:20 - How Holly switched roles and the challenges.
9:10 - Important part of making a successful career.
11:57 - Common pain points for clinicians.
14:46 - Addressing clinician well-being.
17:50 - Specific ways to address challenges.
20:51 - How AI and ML can be applied.
23:51 - Confirmation bias in healthcare.
30:39 - Advice for those switching roles.
38:07 - Closing remarks.

Links:
Learn more about Holly Urban.
Learn more about CliniComp.
Learn more about the ACM ByteCast podcast at acm.org/bytecast.

Tags:
Holly Urban, CliniComp, healthcare, clinicians, technology, career, AI, ML, ACM ByteCast, confirmation bias, diversity, data, switching roles, patients, health equity, software, EHR, networking, informatics