Episode 52: The Power of informatics in Clinical Decision-Making

Josh Casey: Hi, I'm Josh Casey. Welcome to *QuidelOrtho Science Bytes*, your trusted source for diagnostic insights and innovations. In the fast-paced world of clinical diagnostics, informatics is more than organizing data. It's an essential tool that advances how labs operate, make decisions, and stay ahead of quality and capacity challenges. In today's conversation, we'll explore how informatics platforms are helping labs streamline workflows, improve data visibility and support smarter, faster diagnostic decisions with real-time performance analytics. And as October marks Cybersecurity Awareness Month, we'll also touch on how informatics contributes to a more secure and accountable lab environment without slowing down the science. Joining us is George Wierschem, Senior Global Product Manager for informatics at QuidelOrtho. George is a trained medical technologist with more than 30 years of laboratory experience. Over the first half of his career, George worked in a number of community-based hospitals progressing from bench technologist into leadership positions. In 2010, George entered the in vitro diagnostics industry, where he's been able to leverage his strong laboratory experience in consulting, product development and product management roles. Currently, George is helping to support legacy QuidelOrtho informatics platforms while also developing several innovative next-generation solutions. George holds an MBA with a healthcare administration specialization and is certified in Lean Six Sigma and change management. Welcome George. Thank you for joining us.

George Wierschem: Thank you for having me today. I'm excited to be here and talk about informatics.

Josh Casey: Great. Let's start with the essentials. How would you describe the role of informatics in today's clinical lab environment?

George Wierschem: informatics is really the engine behind today's clinical labs. It's what connects the dots between the instruments, data systems and the decisions clinicians make. Instead of just crunching numbers, it helps turn raw test results into meaningful insights that drive patient care. It also keeps labs running smoothly, automating routine tasks, managing data securely, making sure everything stays compliant. Honestly, it's gone from being a helpful tool to an absolute necessity. Without it, labs would struggle to keep up with the demand for faster and more accurate diagnostics.

Josh Casey: Great! Just to build on that a bit, how has the role of informatics evolved in clinical labs over the past few years?

George Wierschem: It's changing a lot. The pace of technology continues to grow faster. Same with the demands for informatics in the lab. A few years ago, informatics was mostly about storing data and generating reports. Now it's become powerful, advanced analytics, remote access and seamless integration with hospital systems. Cloud platforms are replacing older setups. AI and machine learning are helping spot patterns and mobile-friendly tools are making it easier to access results on the go. Cybersecurity is also becoming a big focus. And during the pandemic, the ability to work remotely wasn't just convenient, it was critical. informatics made that possible.

Josh Casey: Okay, interesting. So, thinking about different testing environments, how does the core lab leverage informatics versus point-of-care testing? Are the benefits the same?

George Wierschem: That's a great question. In some ways, the environments are very similar with their needs for connectivity and integration in order to provide information for clinical decisions quickly to the physician. But when testing is performed in point-of-care environments, such as physician offices, clinics, emergency rooms, there are different and unique challenges. First, when there are multiple points of care testing locations under one group, they typically want to have centralized management of the testing, and since this testing is being performed by non-certified lab personnel and may be performed in a less physically secure environment, there's a need to ensure the instruments are performing as expected and only trained staff are running the testing. This can all be managed with informatics solutions from one remote location. With point-of-care testing, it's typical to take the instrument printout and provide directly to the physician without an informatics solution automating the result management, it often leads to results not becoming part of the medical record, which can impact patient care, safety and revenues for the medical facility.

Josh Casey: Got it. So what are some of the most impactful ways informatics improves lab efficiency and decision-making?

George Wierschem: There are quite a lot of ways it does that. To start, autoverification is probably the primary one. It speeds up the review process by automatically clearing normal results and flagging anything unusual. Then there's dashboards, which give lab managers a quick snapshot of everything. And reruns, dilutions, reflex rules can occur automatically, saving time, reducing errors quality control tools, and that goes beyond the traditional Levey Jennings. It also includes things like moving average and Six Sigma to catch issues earlier. Standardized results interpretation help ensure consistency across the board. informatics also helps lab spot workflow bottlenecks and visualize complex data in ways that make clinical patterns easier to see. All of this frees up laboratory professionals to focus on the cases that really need their expertise to focus on.

Josh Casey: That's great context for my next question. How does centralized data access through these platforms help reduce errors or delays?

George Wierschem: Now centralized data is really a game changer. There are some obvious benefits to having single unified system for managing data coming from multiple sources, such as data integrity, security, standardization. These all help support the primary mission of all the laboratories to view over the right tasks, the right results at the right time to the right patient. Beyond those obvious benefits, centralized data opens a whole new opportunity for informatics. Solutions can be more easily developed on cross-sectional data using modern technologies with the ability to manage extremely large data sets. This enables quick development of informatics tools that can deliver more value with the results that can help support patient care.

Josh Casey: Great. In what ways can informatics support lab teams in maintaining data integrity and traceability?

George Wierschem: I'd say accountability and transparency. informatics systems log every action, who accessed what, when and what they did. Role-based access ensures only the right person can see or change sensitive data. Electronic signatures document who verified results, and version controls keep track of any edits. Automated checks, catching inconsistencies, and specimen tracking follow samples from collection to reporting. These features don't just help with compliance; they build trust in the data and the process.

Josh Casey: I mentioned at the start of the show that October is Cybersecurity Awareness Month. With that in mind, can you please tell us how informatics help reinforce good data practices without adding friction to lab workflows?

George Wierschem: Yes, the best systems make security feel seamless. Things like single sign-on mean users don't have to juggle passwords, and intuitive interfaces guide them toward secure behavior without slowing them down. Compliance logs are generated automatically, and background checks run quietly to catch issues before they become problems. It's about embedding good practices into everyday workflows so that security becomes second nature and not a hurdle.

Josh Casey: So related, finally, I'm wondering what advice would you give to labs looking to better leverage informatics for both operational and security benefits? How do they get started?

George Wierschem: Let's start by understanding your current workflow, what's working, what's not. Then look for systems that play well with what you already have. Make sure the people who will be using the system have a say in choosing it. Roll out things in phases to avoid disruption and invest in training so that your team can really make the most of it. Set clear rules around data access and security, and choose platforms that can grow with you. Cloud-based solutions are great for flexibility and security, and most importantly, build a culture where everyone sees data protection as part of their job. That's the mindset that makes all the difference.

Josh Casey: So as clinical labs continue to face growing demands for speed, accuracy and security, informatics is proving to be a powerful ally, transforming data into decisions and complexity into clarity. From streamlining workflows to reinforcing cybersecurity, informatics platforms are helping labs stay agile, accountable and ready for what's ahead. Our thanks again to George Wierschem for sharing his insights and helping us better understand how informatics is shaping the future of diagnostics.

George Wierschem: Thank you for having me today.

Josh Casey: That's all the time we have for today. We hope everyone found the conversation helpful and informative. Please be sure to review the sections and links within the podcast description. You can always go back and listen again if you'd like more details. And thank you all so much for tuning in. Please subscribe if you haven't already to join us each month for the podcast brought to you by QuidelOrtho Corporation, where we are advancing the power of diagnostics for a healthier future for all.

Until next time, take care, everyone.