InterSystems®
Creative data technology

From the Desk of Julie Smith:

Who would have predicted two years ago that healthcare would be the daily topic of global headlines for over a year? With the COVID pandemic now familiar – though no less devastating – we have all become accustomed to symptom questionnaires, testing positivity rates and vaccine distribution pathways. What makes this possible is healthcare IT: the days of paper screeners, manual data entry and siloed workflows are faded memories.


Julie Smith,
MSHI, RN-BC, CEN

And the ones most often interacting with that technology? Nurses. According to the **State of the World's Nursing 2020** report compiled by the World Health Organization, International Council of Nurses and Nursing Now, nursing is the largest occupational group in the health sector, accounting for approximately 59% of health professionals. Whether at the bedside of critical care patients, meeting the needs of those in disaster areas or watching over children in schools, nurses can be found sprinkled across the healthcare ecosystem, leveraging technology tools to support members of our communities. From birth to death, we are witnesses to life unfolding. It is no wonder that nurses have rated first for most ethical and honest profession in **Gallup's 2021 poll** for the nineteenth year in a row.
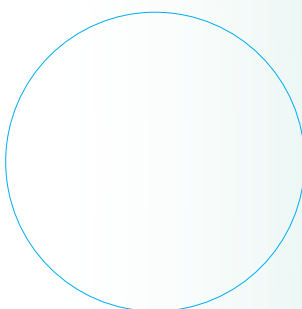
As COVID vaccine rates rise, nurses continue to stand at the forefront of care. What started as a sprint for many now feels like an ultra-marathon with glimmers of hope at long last beginning to emerge. Here at InterSystems, HealthShare has engaged with you, our customers, throughout this global phenomenon to facilitate success.

One of those initiatives has involved ensuring nurses have the data they need at their fingertips – giving them access to an individual's entire longitudinal record in ways that make sense, fit into their workflows and are easy to use. Working with clinicians across the world to better understand needs, we have taken strides to improve usability, access and breadth with easier navigation tools, intuitive screens and expanded data.
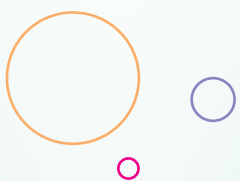
Placing tools in hands to better deliver care is what HealthShare is about. In this issue of HealthShare Connections, we offer details on key advances being brought to you in our HealthShare 2021.1 release and spotlight how we continue to strive towards excellence with Meredith Staszak's work in Personal Community, our patient portal solution. We also take a look at some of the work you have been doing: highlighting an implementation at Baystate Health and an Artificial Intelligence and Machine Learning in Healthcare summit we hosted in Germany.

To my colleagues around the world, thank you for what you do.

How Did Baystate Health Uncover the Magic in Serving Its Community?

At Baystate Health in western Massachusetts, they have a phrase for when innovation works behind the scenes to help patients: "Things are auto-magically happening."

In the best cases, auto-magic powers a patient portal that's built not just to deliver lab results, but also to foster engagement among patients and clinicians. Predictive analytics lean on auto-magic to identify who's at risk because of certain social determinants of health. It can even determine whether an individual is likely to miss an appointment with Baystate, an integrated delivery network with 1,000 beds across three community hospitals.

"The magic, if you will, needs to occur both on the front end for our patients, our customers, as well as on the back end for our providers," Ken Riley, director of patient and population health technologies for Baystate Health, said during the **InterSystems Virtual Leadership Conference**. "Innovation can simply be the notion that I hit a button, and I'm able to walk into the practice and get things done."

Technologies like the patient portal and predictive analytics are meant to serve patient communities, whose satisfaction in turn serves Baystate Health—all without the challenge of hiring a data scientist. Here's how.

Redesigned in partnership with community members and built on InterSystems HealthShare Personal Community, the patient portal strives to deliver a unique experience. Patients may message clinicians, request pharmacy prescriptions, and learn about health conditions like, say, COVID-19.

During development, patients said they wanted to be at the center of their care. So, Riley and the team at Baystate Health are building a system in which patients may tag specific data, allowing for real-time redaction of 42 CFR 2 information. They're also creating a care plan manager to allow for the transaction and signoff of care plans between ACO partners via an orders/results feed.

Additionally, the Baystate team built a patient portal with a UI designed "by patients, for patients" to increase engagement and promote patient-centric interactions. As a use case example, if a Medicaid accountable care organization and the regional health information exchange requested patient consent to care within 48 hours, Baystate would be able to push the information to the patient portal, providing more understanding than possible in a phone call or clinic visit. Bringing all three of these initiatives together such that the patient can approve or disapprove their care plan via the patient portal is the end result of a four-year vision.

The results? Over the past year, nearly 80 percent of patients—or 80,000 people—have engaged with the portal.

Predictive analytics, meanwhile, are beginning to empower all sides of Baystate Health's clinicians.
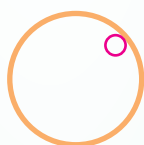
"We can create predictive models that truly enable us to provide the experience that we've been talking about for a long time," Riley said. "Things that the Amazons and Googles of the world have already achieved, but health systems are on the cusp of achieving."

Social determinants of health data helps them understand all factors that affect a patient, which lays the foundation for increased access and stronger outcomes. Data collected from patient technologies tells the organization who's likely to use a blood pressure cuff monitor, so patients with hypertension can reap the most value from a limited resource.

But the kicker is that all of this innovation occurs without an in-house data scientist, thanks to Baystate Health's technology partnerships. It's yet another example of auto-magic in action.

Learn more about how healthcare organizations can unify [Social Determinants data to provide integrated clinical care](#).

InterSystems Hosts German Summit on AI+ML in Healthcare

Reliable data provides the foundation for decision-making that results in major benefits

This was the key message from decision makers, users, and developers at the German AI + ML Summit organized by InterSystems earlier this year: clean, healthy data and interoperability provide the foundation for the creation of new applications in healthcare as well as across further industries. Interoperable data platforms and integrated tools act as enablers, with data privacy and ethical questions playing important roles. Key topics discussed at the Summit included making data available from clinical practice for research, decentralization and GDPR compatibility, and clinical use cases for AI at SMITH (Smart Medical Information Technology for Healthcare) Consortium.

Dr. Danny Ammon

"To bridge the fields of IT and Medicine – this is one of the key challenges in the context of achieving progress in healthcare, with the support of technologies", underlined Dr. Danny Ammon when speaking about patient data and its use for AI applications. Dr. Ammon is a member of the Board of HL7 Germany and Caretaker of Quality, Research, and Public Health of IHE Germany. He also serves as Head of the Interoperability Working Group at SMITH and is the Head of the Data Integration Center at Jena University Hospital.

Volker Hofmann

Speakers discussed the importance of AI applications in healthcare to promote effective decision-making. "The volume of data in healthcare is growing 60 percent faster

Andreas Kumbroch

than in other industries. Humans can only consider around 7 data points for every decision; therefore, we also need AI algorithms in order to support decision making processes in the delivery of care as well as in research. The SMITH use cases are perfect examples for the rapid delivery on requirements from clinical practice," underlined Volker Hofmann, Manager of Healthcare at InterSystems. "We consider ourselves fortunate to be working jointly with our implementation partner, März Internetwork Services AG, in this challenging ecosystem."

At the core of the SMITH reference architecture is InterSystems HealthShare. HealthShare provides a foundation which allows for the integration of data curators, metadata, identification, and authentication as well as patient consent. As an implementation partner, März is in the process of configuring and expanding existing HealthShare functions in order to reach the specific goals set by SMITH consortium data integration centers. Researchers will be able to access data in those centers via smart service platforms to suggest research projects and proofs-of-concept and evaluate whether defined sites should be part of a trial depending on their number of patients with respective conditions.

SMITH is one of four consortia funded by the German Medical Informatics Initiative (MII) to create an alliance of universities, university hospitals, research institutions and IT companies. SMITH's goals are to establish Data Integration Centers at each SMITH partner hospital and to implement use cases which demonstrate the usefulness of the approach such as HELP, a decision support system for blood stream infections or ASIC which focusses on patients in ICUs who have severe respiratory conditions. All German university hospitals are part of this nationwide medical informatics initiative.

"This information-based bridging from bedside to bench and back to enable innovation is a task which can only be mastered through the commitment to cross-sector communication by everybody involved," stated Andreas Kumbroch, Software Development Board Member at März. He continued, noting that "the initiative builds on firm commitments, creating sustainability for innovation – phased according to specific milestones."

To learn more about HealthShare, visit InterSystems.com/HealthShare

HealthShare Training Materials

InterSystems Learning Services team has recently created new training content – click below to learn more.

- **Meeting Data-Sharing Requirements with the HealthShare CMS Solution Pack** (4m)

- **Personal Community Fundamentals** (1h 30m)

- **Clinical Viewer Overview** (5m)

- **FHIR Support in Unified Care Record** (3m)

- **Getting Started with Care Community** (4m)

- **Provider Directory Overview** (3m)

- **Learn Provider Directory Resource Guide**

InterSystems has also released a new **HealthShare Unified Care Record Technical Specialist** certification exam! Check out the linked page to learn more.

Now Available - HealthShare 2021.1

Customers can take advantage of the latest release of HealthShare, which delivers a balance of new features, technical updates, and back-end upgrades across its suite of healthcare solutions. Here are a few highlights of what is new in HealthShare 2021.1.

Expansions & Enhancements

- We've continued to build out capabilities in the **HealthShare CMS Solution Pack**, a packaged solution for meeting the CMS Rule 9115-F. Payer users can now see enrollment and post-adjudicated professional claims and professional claims, and there are also enhancements to support medical and pharmacy claims.

- **HealthShare Clinical Viewer** users will be able to see new medical claims charts and reports, as well as an Explanation of Benefits report, helpful when members call with questions.

- **HealthShare Care Community** delivers key new functionalities which make it easy to create and update patient care plans. Users can quickly copy care plan templates. New, out-of-the box notifications for care teams based on care plan status updates and admission, discharge, and transfer events are now available. Users can make certain questions become required, and "if/then" conditional logic makes editing care plans easier to manage. Finally, users can now assign tasks in a patient's care plan, based on FHIR® messages.

More FHIR Connections

- One key development related to FHIR support is the ability to perform a multi patient query in the operational data store. HealthShare Provider Directory can now ingest CMS' NPPES monthly Endpoint file, adding to the completeness and accuracy of search results.

- **HealthShare Health Connect** will offer an optional, add-on FHIR Repository and Server in support of FHIR application development and services. Health Connect 2021.1 is currently in a preview release, with full release expected in June.

Usability Improvements

- Customers can now customize the content and style of the HealthShare Single Sign On (SSO) login application, and 2-factor authentication via SMS offers increased security.

- The Navigation Application & Clinical Viewer offer enhancements and new features, including making it easier for customers to directly access third-party applications.

- **HealthShare Provider Directory** now provides phonetic search by name, to help users more quickly and easily find an individual provider. Online documentation for Provider Directory now includes full details of our data model, to aid system integrators and implementation partners.

While the above is a summary of what's new, you can find more detailed information on the HealthShare 2021.1 product release documentation **here** and information on HealthShare 2021.1 software kits **here** (customer username and password required for access).
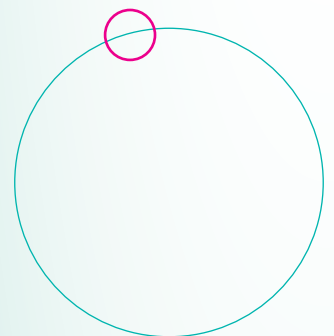
Meet the Staff: Meredith Staszak

As a Product Manager for InterSystems HealthShare, Meredith Staszak helps set the vision and strategy for HealthShare Personal Community, the patient engagement platform from InterSystems built to facilitate and streamline coordinated, engaged communication between patients or their proxies and care organizations. Engaging customers and collaborating with internal teams, she builds and roadmaps the product plans and requirements for each new release. Additionally, Meredith works with the product development team to realize these planned features, making them tangible user-friendly applications for healthcare organizations.

Meredith Staszak,
Product Manager,
InterSystems
HealthShare

Can you highlight the importance of having input from customers for what you do?

Personal Community is unique in that it has a broad, international customer base. Staying in touch with and understanding what patient engagement means across different regions is imperative to moving our product forward. Working closely with our customers and our implementation teams allows us to not only improve and enhance the product as a whole, but also to understand how the platform is being leveraged to solve specific needs. All in all, listening to the voice of the customer is the most important aspect of our work with the Personal Community global user base.

In your own words, what sets Personal Community apart from other patient engagement platforms?

I think the strength of Personal Community comes in its ability to support business problems that go beyond what a typical patient portal can do. In addition to core product capabilities, Personal Community has a robust platform that allows an organization to create or embed additional functionality that can be tailored to their region, organization, or use cases. This flexibility allowed quite a few of our customers to quickly react to the pandemic and provide patients with additional services that ranged from incorporating telehealth and virtual visits to full vaccination registration and appointment scheduling systems.

Can you share any previews of what features we can look forward to in the next HealthShare release?

The team is really excited to be focusing on delivering the next generation of Personal Community. We are working closely with our user experience team to optimize the patient experience throughout the application, taking into account patient feedback, the evolution of patient engagement as a whole, and how people interact with technology in general. Together this will help us deliver an updated, streamlined application for our patients.

You've been at InterSystems for over 12 years now. What do you like most about the company?

There are so many things I love about InterSystems. If I had to choose one, I'd say that it's our focus on the customer as the #1 priority. Other companies might offer "band-aid" resolutions in the interest of saving time, but we take the time to understand a customer's issues and focus on helping them solve their business problems regardless of what we have going on.

My experience has also been unique in that I started just before HealthShare became part of our product suite, so I've had the fascinating opportunity to see how we've approached, grown, and adapted in the healthcare space: in many ways I've been able to grow alongside HealthShare at the company.

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