

CASE STUDY

Laying the foundations for excellence in patient safety

Award-winning hospital network Christus Muguerza steps up digital transformation by integrating Micromedex® into the Philips Tasy Electronic Health Record (EHR) to help prevent patient harm.



Business challenge

Clinicians across Christus Muguerza's hospital network issue thousands of prescriptions every day. To reduce the risk of medication errors, a dedicated team of pharmacists reviewed prescriptions by manually checking for potential issues around dosing, interactions, or incompatibilities. In complex cases, the clinical pharmacy validation process could take up to several hours. To drive more efficient workflows, Christus Muguerza looked for an innovative solution that would amplify the reach of the clinical team and maintain its excellent record on patient safety.

Transformation

To empower clinicians, Christus Muguerza integrated Micromedex into its Philips Tasy EHR, with support from Dot.Lib, the distributor for Micromedex in Mexico. Now physicians, clinical pharmacists, nurses, and clinical nutritionists can access the latest clinical evidence on drug interactions, dosages, or intravenous (IV) compatibility directly within their clinical workflow. As a result, clinicians can spend less time searching for information and more time making informed clinical decisions for their patients.

Results



Improved efficiency:

Real-time automated clinical alerts accelerate the medication validation workflow, saving hours of time.



Increased scale:

Up to 160,000 prescriptions now reviewed every month in each hospital.



Enhanced patient safety:

Fast access to reliable, evidence-based information empowers clinicians to spend more time making informed decisions on patient treatment.

Christus Muguerza provides leading healthcare services to patients across Mexico. Committed to medical excellence, Christus Muguerza has achieved accreditation from the Consejo de Salubridad General (CSG) for most of its facilities.

Driving healthcare innovation

To provide world-class healthcare services to more patients, Christus Muguerza launched a digital transformation initiative, starting the process at a hospital in the northeastern city of Saltillo, Mexico, evaluating and re-designing the workflows at the heart of its services.

With doctors prescribing so many different combinations of medications each day, Christus Muguerza decided to apply technology to strengthen its quality and safety measures and help prevent patient harm as a result of medication errors.

At its existing facilities, clinical pharmacy teams would manually check prescriptions to validate them against potential patient safety issues. Looking up potential drug interactions, checking for compatibility issues with drug delivery methods, and reviewing dosing calculations for every medication was time-consuming for pharmacists, especially when doctors had prescribed multiple medications to a patient.

Antonio Dominguez Garza, Corporate Head of Pharmacy Informatics and Hospital Pharmacy at Christus Muguerza, explains: “We were looking for an innovative way to streamline our clinical pharmacy validation process and reinforce our safety measures while also creating a much more agile system for the team.”

Christus Muguerza decided to reinvent the clinical pharmacy validation process. Instead of requiring a team of pharmacists to check prescriptions manually, the organization aimed to put the latest updates on drug dosing, interactions, and incompatibilities in the hands of clinicians at the point of care.



Harnessing cutting-edge technology

To accelerate clinical pharmacy validations, Christus Muguerza integrated Micromedex® into its Philips Tasy electronic health record (EHR) system. By linking these solutions, the organization now provides clinicians with the latest evidence-based information on drug-drug and drug-food interactions, appropriate dosages, and intravenous (IV) compatibility when prescribing, validating, and administering medications.

“Quality standards are important to us, and we selected Micromedex solutions to support clinical decisions because of its award-winning status and its robust editorial process,” says Garza. “We were also looking for a solution that would integrate seamlessly within the Philips Tasy EHR, with evidence of smooth EHR integration at both the national and international level. From a clinical perspective, we recognized that we would gain detailed guidance with Micromedex that is trusted by the international medical community for informed decisions on indicated drug uses, pharmacological or therapeutic alternatives, precautions for medication applications, and antidotes for poisoning. It was also crucial that Micromedex could provide evidence to support alerts on interactions of all types; not just drug-drug interactions, but also drug-food, drug-laboratory, dosage range, and more.”

Pharmacists are not the only clinicians that benefit. By giving doctors, pharmacists, nurses, and clinical nutritionists access to Micromedex solutions directly within their workflow, different clinical roles can see alerts for relevant medication-related issues at every stage of the medication management cycle. These alerts help clinicians to ensure that patients always get the right drugs, in the right dose and via the right route.

“Each clinician has slightly different requirements from our clinical decision support tools,” continues Garza. “With Micromedex, we can tailor the information that we provide to different users. For instance, doctors now receive interaction alerts right at the point of prescribing to prevent delays later on. Our clinical nutritionists receive more targeted information on drug-food interactions, while nurses get guidance on IV compatibility to support safe medication administration.”



Providing efficient, award-winning healthcare

With the latest clinical evidence at their fingertips, clinicians at Christus Muguerza can prescribe, validate, and administer drugs with even greater efficiency.

“Previously, our clinical pharmacy teams could spend hours reviewing one patient’s prescription, depending on the level of complexity,” reflects Garza. “With automated alerts from Micromedex, clinicians can work much faster because the clinical guidance they need is immediately available in their workflow in the EHR. Thanks to this, we can now process up to 160,000 prescriptions each month in each facility where Micromedex has been integrated. That’s a 5,300 percent increase — a scope that is only possible with this kind of digital transformation.”

With less time spent manually checking for medication-related issues, clinicians can focus on analyzing relevant drug interaction information and making informed clinical decisions. In turn, patients can be confident that they are always receiving the safest, high-quality care at Christus Muguerza.

Recognizing the efficiency improvements and patient safety advances achieved at the hospital in Saltillo, Christus Muguerza has since integrated Micromedex across three additional facilities. Looking ahead, the organization plans to extend the benefits of Micromedex to all hospitals in its network. Already an award-winning institution, Christus Muguerza anticipates that the benefits seen from embedding Micromedex into its EHR will help the organization to achieve further international certifications and accreditations.

“Christus Muguerza Alta Especialidad Hospital was the first hospital in Mexico to receive accreditation from the Joint Commission International,” says Garza. “We’re very proud of this achievement, but we want to go even further. Enhancing clinician workflows with best-in-class solutions like Micromedex will help us to gain the international recognition that our clinicians deserve for their excellent work.”



Contributing to life-saving research

Christus Muguerza regularly reports on health events or adverse reactions that clinicians encounter when using medications in new combinations or on different patient populations. To help pharmacists prepare these pharmacovigilance reports more efficiently, Christus Muguerza also decided to integrate Micromedex into Farmabot, its virtual pharmacy assistant.

Garza concludes: “By powering Farmabot with the clinical evidence of Micromedex, we’ve made it much easier for our pharmacists to find all the evidence-based guidance they need to include in their reports. This helps us to keep our peers in the national medical community fully informed of any new adverse reactions soon after we discover these issues. With detailed pharmacovigilance reporting, we can help clinicians worldwide to avoid potential harm and enhance patient safety.”

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Antonio Dominguez Garza,
Corporate Head of Pharmacy Informatics and Hospital Pharmacy
Christus Muguerza



About Christus Muguerza

With 14 hospitals located across seven states, [Christus Muguerza](#) is the leading private health system in the north of Mexico. Recognized internationally as a healthcare pioneer, Christus Muguerza was celebrated as 'the most innovative company in the private sector' in 2022 and has been listed among the 'top 500 most important companies in Mexico' for the last eight years.

About Micromedex

Micromedex by Merative is trusted by healthcare professionals across 70 countries to provide award-winning clinical decision support solutions for drug and disease information and patient education. Micromedex was named Best in KLAS 2023 (clinical decision support: point of care clinical reference), is recognized as a CMS compendium, and is accredited by NICE for its robust editorial process.

Learn more at
www.merative.com/clinical-decision-support

About Merative

Merative is a data, analytics and technology partner for the health industry, including providers, health plans, employers, life sciences companies and governments. With trusted technology and human expertise, Merative works with clients to drive real progress. Merative helps clients orient information and insights around the people they serve to improve decision-making and performance. Merative, formerly IBM Watson Health, became a new standalone company as part of Francisco Partners in 2022.

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