

Building a New Kind of Patient Testing Experience

A patient portal eases stress, delivers more accurate test results and boosts the impact of an innovative healthcare product

Summary

A diagnostic laboratory created an at-home testing kit that had the potential to revolutionize the patient testing experience. The organization used Liferay to build a patient portal to support the new product, resulting in reduced stress, more accurate test results and a fully integrated solution for patients, doctors and laboratory staff alike.

In Brief

INDUSTRY:

Healthcare

COUNTRY/REGION:

United States

USE CASE:

Employee Portal, Mobile

KEY FEATURES:

Single sign on, 2-factor authentication, interactive visualizations, real-time updates and notifications



The new patient portal has changed the lives of individuals struggling with chronic GI issues.

Challenges

- Laboratory testing kits were often lost or incorrect because there was no single view of the process
- Patients needed to schedule more appointments than necessary to receive their results
- The lab testing process was entirely manual, from test request to results delivery

Results



SINGLE SIGN ON ACCESS

Doctors are able to quickly request tests and deliver results from one site



PATIENT NOTIFICATIONS

Patients receive real-time updates on their test results



DYNAMIC VISUALIZATIONS

The lab is able to dynamically display patient data and results

An Innovative Solution for Diagnostic Testing

This customer is a leader in the development and commercialization of novel pharmaceutical and diagnostic products that enable physicians to provide greater individualized patient care. One significant product the organization developed is a patented Gastrointestinal (GI) Diagnostic Testing Kit. Physicians can request the kit online from the organization's laboratory and have it sent directly to patients who then administer it in their own home. Previously, patients had to go through extensive testing which required them to go to multiple doctors' offices over the course of weeks or even months. Even worse, because these tests were done at different times, the test results or the blood/stool samples would often get lost, adding more unnecessary stress to patients, who then had to repeat these tests.

The new GI Diagnostic Testing Kit solved many of these patient problems by being easy to administer at home and combining multiple tests into one kit. However, they discovered another obstacle to making this testing process a truly innovative experience: the system for requesting and delivering results.

The current process was entirely manual, which was contributing to the lost results and samples. There were many different parties involved in requesting, testing and delivering patient information, and the paper process meant that there were large gaps of time between testing and results delivery. All of this created a high potential for mistakes, and the organization decided that, to turn its product into a true competitive advantage, it needed a digital solution to replace the manual process.

Custom Portal Reduced Patient Stress and Delivered More Accurate Results

After researching consultants and software, the organization decided to partner with Dunn Solutions and use the Liferay platform to deliver a full-featured portal that would serve patients, physicians and laboratory technicians with this process of diagnostic testing.

The new patient portal needed to achieve the following:

- Integrate with the laboratory's patient database in order to retrieve and display data.
- Simple registration for patients and doctors.
- Tracking for the current status of the tests at each point of the process and a way to display it.
- Controls for laboratory technicians and doctors to release results when they were ready.
- Extensive patient information tagging.
- Geolocation to identify drop-off locations for patients.

In addition, the organization wanted the portal environment (both the database and servers) to be fully hosted and managed with Microsoft Azure technology, in order to ease the burden that managing the environment would place on the laboratory staff. This freed the team to focus on doing what it does best: accurate, efficient diagnostic testing.

The organization had a solid vision for how it wanted to use all of these functionalities to create an experience that differentiated them as a business. Once it had the right features and integrations in place, the team started to craft the right system.

Both patients and doctors are able to quickly and easily register themselves on the portal. Patients use codes given to them by their doctors at the beginning of the testing process, and doctors use their unique National Provider Identification (NPI) number for authentication. Once registered, patients and doctors are able to see exactly where the test is at every stage, including the doctor's initial request to deliver the test to the patient, delivery to the patient, delivery to the laboratory, testing by the laboratory and the final results. Because the portal provides patients with the closest drop-off location for their test, the entire process is now significantly easier for them. They receive the test, administer it, drop it off and receive a notification from their doctor as soon as the correct results are available. Because doctors have control over when to release the results, they are also able to ensure that everything is correct and there has been no mix-up with the patient's data. If there does seem to be an error, the system is already integrated with patient data tagging to help doctors and laboratory staff understand whether any mistake has been made. The new portal leverages many out-of-the-box features of Liferay to accomplish all this, including single sign on access, two factor authentication, and customizable workflows and tasks. Dunn Solutions' expert developers also integrated the portal

with many third-party systems, including EMR, accounting systems, and third-party logistics companies such as FedEx.

A Revolutionary Patient Testing Experience

The new patient portal has changed the lives of individuals struggling with chronic GI issues. The easier process of in-home testing, as well as being able to combine multiple tests into one, has reduced patients' stress while producing more effective results. The laboratory's new patient portal streamlines the doctor/patient eco-system. With its ease of registration, access and dynamic results displays, this new portal reduces the number of doctor visits needed previously. Doctors can now order tests, send tests to the lab and release results to the patients directly from the portal.

The organization has been able to expand this solution further with interactive graphs of test results, a native mobile application that allows information to be accessed offline and text messaging capabilities with the platform for faster communication. Overall, it has achieved a unique, customized solution that enhances the effectiveness of its product and delivers a customer experience that fully integrates with the rest of its business.