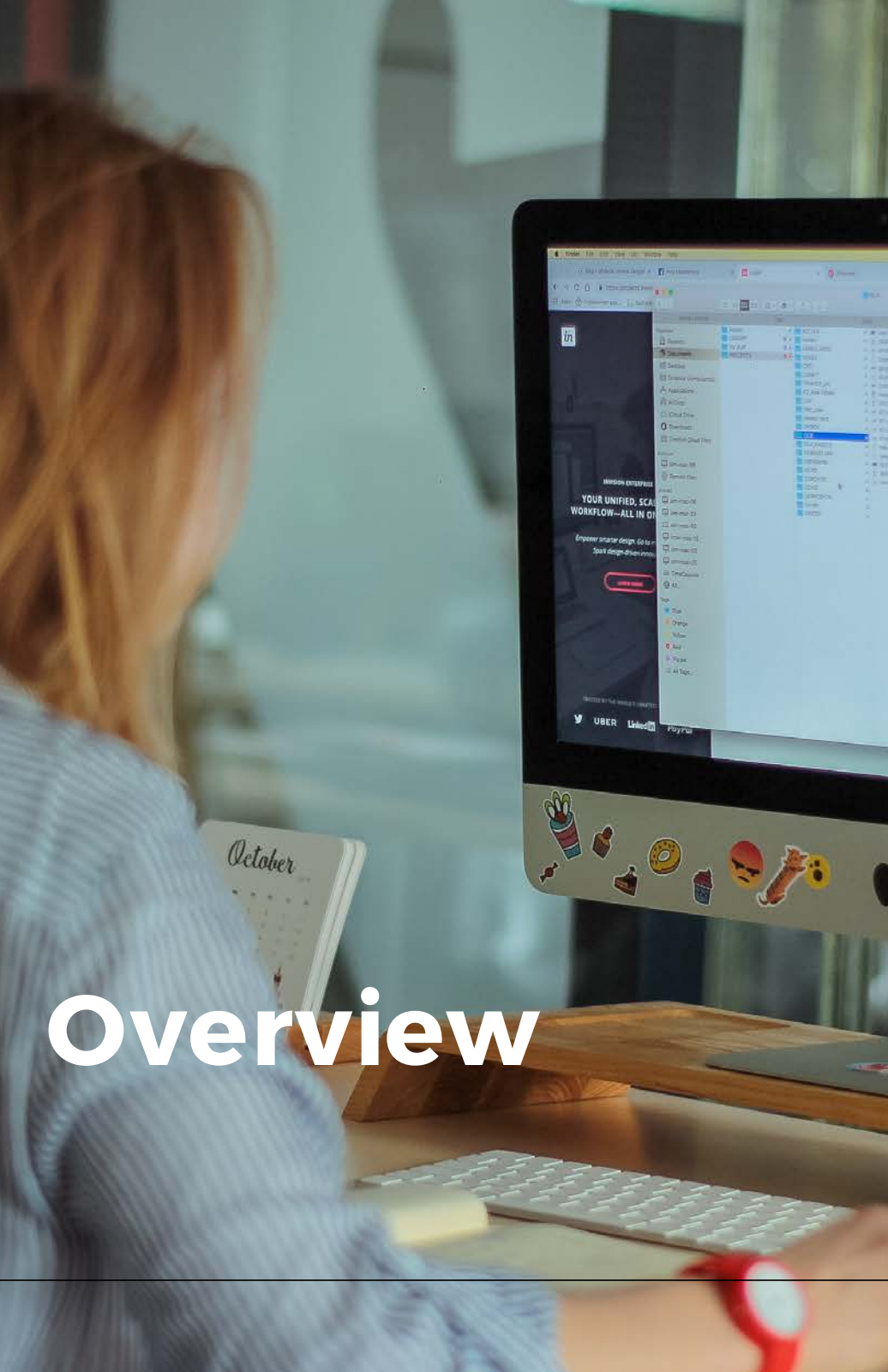




Case Study: UNC Health Care

With the help of Eggplant, UNC Health Care has seen fast ROI. From a resources perspective, Eggplant has also helped UNC Health Care reduce the testing time previously needed from multiple members of the IT and operational teams.





Overview

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UNC Health Care (unhealthcare.org) is an integrated healthcare system based in Chapel Hill, North Carolina. The organization comprises UNC Medical Center, UNC Faculty Physicians, UNC School of Medicine, UNC Rex Healthcare, Chatham Hospital, Johnston Health, Pardee Hospital, Caldwell Memorial, Nash UNC Health Care, Wayne UNC Health Care, UNC Lenoir Health Care, UNC Rockingham Health Care, Onslow Memorial Hospital, UNC Physicians Network, UNC Health Alliance and UNC Senior Alliance.

With 31,000 employees and about 3,000 medical staff, UNC Health Care aims to bring high-quality, patient-centric care to all of North Carolina.

The organization relies on its more than 700 IT employees to stay on the cutting edge of technology and effectively update and manage its Epic Electronic Health Record. Having such a large IT shop is invaluable, given the very competitive market in which it operates.

“Aside from basketball competition, we’re pretty much surrounded by six other large healthcare systems that we directly compete with for patients,” explains Wayne Hadley, director for IT planning and project management at UNC Health Care. One key way UNC Health Care differentiates itself is by staying current with Epic. “We’ve rolled out more modules within Epic than nearly any other hospital our size, nationwide,” says Dave Hester, testing coordinator at UNC Health Care. “So, we have a tighter integration point between our core business and some of our ancillary products.”

Primary care and public health are solid growth areas for UNC Health Care — thanks to partnerships with and acquisitions of primary care practices. And recently, the organization rolled out its Epic Home Health and Hospice module to help improve home-based care for patients and more-effectively bring patient data together from different sources. With the health system's expansion, though, comes some integration and testing pains.

As part of UNC Health Care's onboarding process for several dermatology practices, Hester needed to transfer a multitude of highly sensitive, full-body scans — an extremely time-consuming endeavour. Testing UNC Health Care's Beaker (lab module) also proved difficult.

Integrating partner systems and new modules can be challenging, especially considering that Hester is UNC Health Care's QA team of one. "I have to borrow testers from our application teams, and that's tricky because some of those teams are less available than others," he explains. In Hester's case, those resource constraints stand in the way of testing faster to quickly bring on new hospitals and physician practices — a big reason why he and Hadley looked to automation.

One Tester, Limited resources

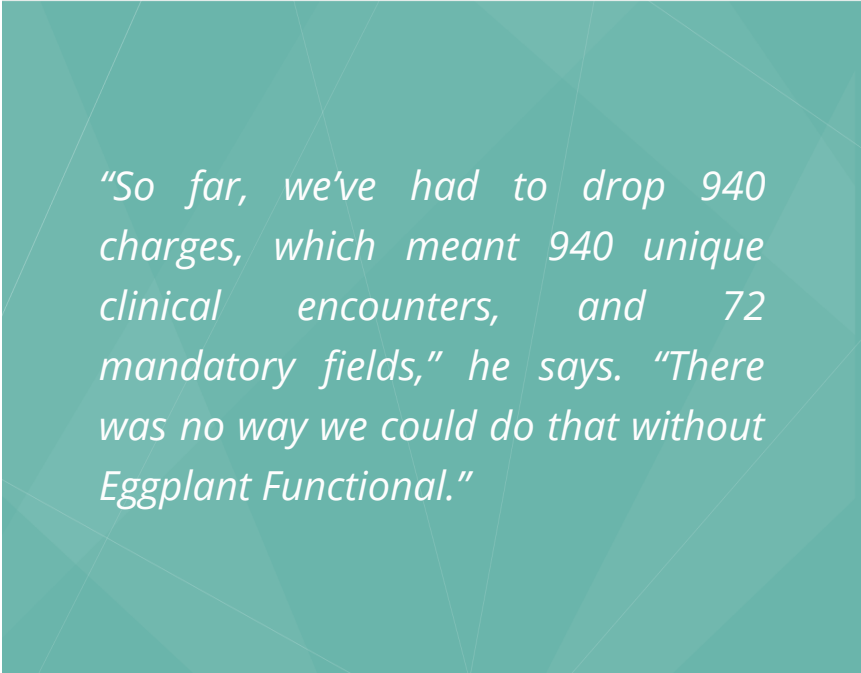
Solving Epic Puzzles, Faster

According to Hester, one of the biggest struggles with automating Epic is the fact that the software is like a closed, sealed black box. “Which means you’ll have very little access to APIs or Webhook, and the expectation is that to have a successful product, it has to interact with the software the same way that an end user would,” he notes. Another piece of the Epic puzzle is the Grand Central module that healthcare staff uses to manage patient hospital stays, including admissions, discharges, and transfers. Every time Hester performs integrated testing on Grand Central, the team responsible for creating test patients, bears a disproportionate portion of the work.

At the time UNC Health Care started looking for a test automation solution, Hester says the Epic community was split between using SmartBear and Eggplant. So, Hester did a thorough comparison test. “We needed a screen-scraper solution, and from the get-go, Eggplant Functional supported remote desktop

protocol connections in addition to VNC connections, whereas SmartBear only supported VNC connections,” he explains. “Plus, Eggplant Functional just ran faster.”

Currently, Hester is using Eggplant Functional in several capacities. First, constant automated regression testing within Epic (without borrowing testers) to ensure that nothing breaks after an upgrade. “If something gets pushed up to our test environment that would potentially put our production system at risk, we have the scripts that have caught those issues in the past and can address them with the application teams,” he says. Second, securely moving those sensitive dermatology images off encrypted hard drives to UNC Health Care’s vendor-neutral archive. “By using Eggplant Functional, we can move those images faster,” explains Hester. Third, ensuring that anytime a new product is rolled out for UNC Health Care’s HomeHealth and Hospice project, the appropriate charge is allocated to the right patient, for the appropriate cost, and balanced against the correct general ledger number.



“So far, we’ve had to drop 940 charges, which meant 940 unique clinical encounters, and 72 mandatory fields,” he says. “There was no way we could do that without Eggplant Functional.”

Serious ROI, Empowered People, Better Testing

So far, UNC Health Care has seen fast ROI. In just five days of automated testing with Eggplant on the HomeHealth and Hospice project, Hester accomplished what was originally estimated to take 180 full-time-employee hours. Scanning and uploading the dermatology images with Eggplant not only greatly accelerates the process but protects patient privacy by limiting the number of users who can access those images.

From a resources perspective, Eggplant has helped UNC Health Care reduce the testing time previously needed from multiple members of the IT and operational teams. By automating test patient creation, Hester has taken that burden completely off the Grand Central team, which can now focus on other important tasks. In less than a week, Hester completed the Beaker project testing phase using Eggplant to automate coding and charge testing.

The fact that Eggplant is intuitive to learn has been particularly advantageous for all the non-technical people involved in UNC Health Care's EMR testing activities. "When you're doing a big EMR project, you tend to recruit people who have lots of hands-on experience with the workflow," notes Hester.

"Eggplant's ease of use means that I can get analysts to help me. If we were using a product that required more coding than Eggplant, I would literally be doing everything." Hester adds that in some cases, analysts now feel comfortable using Eggplant on their own.

Just as important, automating with Eggplant helps Hester more consistently get high-quality, realistic test patients into the system. "Previously, we had to get data into the system as quickly as possible, so we would dump a lot of patients into the system that had no insurance and no signed documents," Hester explains. "Now that we can automate that piece, we can do it faster and the quality of each individual test patient is that much better, which means we're more likely to catch issues with the code for any upgrade."





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About Eggplant and UNC Health Care

About Eggplant

We empower organizations to create amazing digital experiences.

At Eggplant we help businesses to test, monitor and analyze their end-to-end customer experience and continuously improve their business outcomes.

Companies worldwide use Eggplant to surpass competitors, boost productivity, and delight customers. How? By dramatically enhancing the quality, responsiveness, and performance of their software applications across different interfaces, platforms, browsers, and devices — including mobile, IoT, and desktop — in agile, DevOps, and innovative application and data environments.

We are a global company serving more than 650 enterprise customers in over 30 countries. Eggplant has offices in London, Boulder Colorado, Philadelphia, Berlin Germany, with additional development centers and regional offices around the world.

Sectors include automotive, defence and aerospace, financial services, healthcare, media and entertainment, and retail. Eggplant is backed by The Carlyle Group (NASDAQ: CG).

Learn more at eggplant.io.

About UNC Health Care

UNC Health Care is a not-for-profit integrated health care system owned by the state of North Carolina and based in Chapel Hill. Originally established Nov. 1, 1998, by N.C.G.S. 116-37, UNC Health Care currently comprises UNC Hospitals and its provider network, the clinical programs of the UNC School of Medicine, and eleven affiliate hospitals and hospital systems across the state. Learn more at unchealthcare.org.