navify> | Roche

CASE STUDY

Powerful integration capabilities and infrastructure advance performance at UnityPoint Health's new reference laboratory

UnityPoint Health built a new reference laboratory in Des Moines with the aim of reversing the flow of testing from their hospitals to a single state-of-the art facility. Key imperatives for the new laboratory included a laboratory software solution that efficiently manages workflow, provides intuitive ways to evaluate data and drives better decisions to support outstanding patient care.

Facility
Pathology Laboratory
UnityPoint Health – Des Moines
UnityPoint Health System
Des Moines, Iowa

Annual test volume
3.8 million billable CPTs
(2020 All DSM Hospital Laboratories)

Challenges
- Labor shortages
- LIS constraints
- Specimen storage and retrieval

Objectives
- Centralize testing
- Increase volumes
- Utilize staff strategically
- Optimize hardware
- Maximize flexibility
- Improve patient care
- Satisfy customers
- Achieve positive return on investment

Solution
A fully-automated stand-alone reference laboratory using **cobas**® 8100 workflow series with **navify**® Lab Operations to seamlessly integrate testing from four hospitals onto a single software solution platform.

UnityPoint Health System

UnityPoint Health, the nation's 13th largest nonprofit health system and fourth largest non-denominational health system, provides care in nine regions throughout Iowa, western Illinois and southern Wisconsin.

21	Regional hospitals
400+	Community clinics
19	Community Network Hospitals
7.9 M	Total patient visits
3 M+	Hospital visits (outpatient and inpatient)
4.3 M	Clinic visits
500,000+	Emergency visits

The Pathology Laboratory at UnityPoint Health offers full services. It is a clinical reference laboratory providing tertiary and reference laboratory services for clinics and hospitals throughout the state of Iowa.

Laboratory Goals
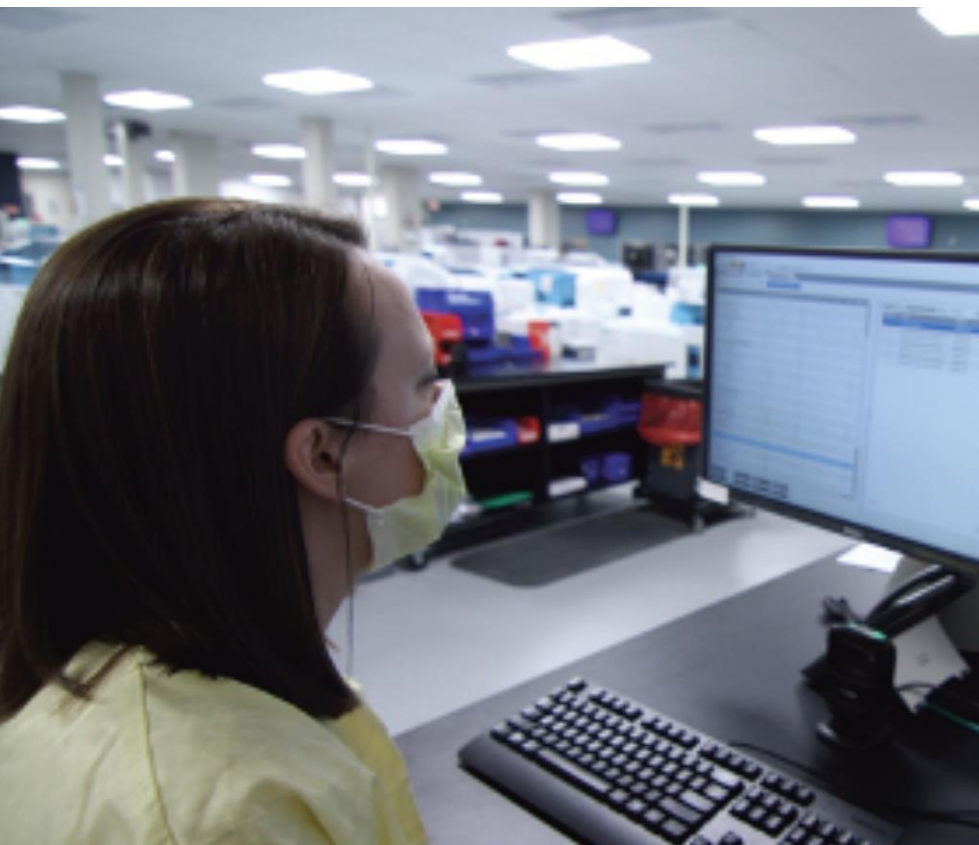UnityPoint Health-des Moines Pathology

Operational Efficiency
- Shift test menu and test volume to pathology laboratory
- Improve specimen tracking, routing and workflow
- Optimize test results
- Increase productivity
- Reduce manual processes
- Standardize decision making

System Requirements
- Automate specimen storage and retrieval
- Integrate/collate data into a clear dashboard
- Manage automated workflow
- Simplify complex tasks
- Control specimen auto-validation

> *"navify Lab Operations (formerly cobas infinity) was the most elegant solution for what we needed."*
>
> – Todd Sangel, Operations Manager, Pathology Laboratory, UnityPoint Health, Des Moines

Key Criteria in the Evaluation Process from an IT Perspective

❝*At the very beginning of this project we sat down to determine the key pillars that would be used in our decision-making.*

First, it had to improve patient care. Second, we had to keep our customers happy. Since we are a reference lab, this was a significant change from what we had focused on previously.

*And third, we wanted a really good return on investment. If a software solution fulfilled all three pillars, then we knew we were on the right path. When we started digging into **navify**® Lab Operations, we realized that the capabilities and infrastructure that **navify**® Lab Operations provided gave us a strong foundation to build on.*❞

– Jim Poppen, Application Analyst Laboratory, UnityPoint Health – Des Moines.

navify® Lab Operations Meets Key Criteria

Improve Patient Care•
- Manages workflow efficiently
- Provides intuitive ways to evaluate information to support good decision making
- Offers easy interface for improved specimen handling
- Frees up staff time to focus on critical patient care

Keep Customers Happy
- Simplifies sample handling
- Delivers quick response time to special requests
- Achieves consistent turnaround times
- Facilitates customized reporting

Return on Investment
- Improves staff utilization
- Increases test capacity
- Optimizes staff training

Why Roche?

For UnityPoint, this was not just the creation of a new 40,000 sq. ft. facility and the transfer of testing from point A to point B. They had to evaluate what tests to transfer and what tests should stay at their largest hospital, Iowa Methodist, a level one trauma center, with an attached children's hospital. There were changes for their other hospitals as well, where they planned to consolidate testing to the new pathology laboratory. To accomplish this massive change, they needed both a quantitative and qualitative solution. The Roche **cobas**® 8100 workflow series with the **navify**® Lab Operations allowed them to seamlessly integrate testing.

❝*We had a very compressed timeline and a significant scope of work. And I don't think we could have done without the support we got from Roche — well, I won't say we couldn't have done it. But it would have been even more painful than it was, and there was nothing more we could have asked for from Roche.*❞

– Todd Sangel, Operations Manager, Pathology Laboratory

navify® ❯
Lab Operations

The Value of navify®
Lab Operations

navify® Lab Operations introduces an adaptive workflow design that determines the most effective route for patient samples. By evaluating and accounting for everything occurring in your laboratory ecosystem—made up of your analyzers, IT, quality control status, and sample volumes—you gain invaluable visibility into the everyday inner workings of your lab.

As the only IT solution developed from the ground up together with system validation in mind, **navify®** Lab Operations allows the laboratory to automate time-intensive tasks from the very start.

navify® Lab Operations was designed to simplify

Workflow Engine

Optimize turnaround time with an intelligent engine that automatically adjusts to the changing laboratory conditions reducing staff intervention and overall complexity

Lean Result Validation

Eliminate the reliance on complex rules by achieving the majority of autoverification with out-of-the-box parameters

Integrated Quality

Built-in quality modules measure trends over time and immediately detect even subtle quality issues

Browser Based

Easy browser-based implementation reduces security concerns and preserves space by eliminate the need for a dedicated workstation

Flexibility to Meet a Wide Range of Customer Needs

The UnityPoint Pathology Laboratory provides reference laboratory services to both UnityPoint facilities and non-UnityPoint facilities, including standalone hospitals and physician offices. **navify**® Lab Operations uniquely provides UnityPoint with the flexibility to meet a wide range of customer needs within a standardized IT environment.

Todd Sangel, Operations Manager Pathology Laboratory explains, "If you take a step back and you look at all these sites, they all want some kind of semi-standard reporting. **navify**® Lab Operations (formerly cobas infinity) allows us to take that uniqueness outside the confines of our LIS, our reporting, and we can put that in **navify**® Lab Operations, but still keep our LIS and our EMR pretty standard; that's one of the biggest things about this application, it does everything, because it allows us to do these things when we don't have another option to such as using Epic or using Sunquest or using Instrument Manager even. That's what we use **navify**® Lab Operations for, that's what it allows us to do, beyond just managing the robotics."

> " *The flexibility of the Roche organization, the Roche applications, and the Roche hardware have allowed us to really innovate.* "
>
> – Jim Poppen, System Manager Laboratory, UnityPoint Health, Des Moines

Results

The addition of the Roche **cobas**® 8100 automated workflow series and the Roche molecular **cobas** 6800 systems allowed UnityPoint to manage the evolving constraints created by the pandemic, not only the shifting volumes of COVID-19 testing, but also the surges in standard testing and fluctuations in staffing.

" *We were able to increase our productivity both at the Pathology Laboratory and for all UnityPoint Health – Des Moines laboratories.* "
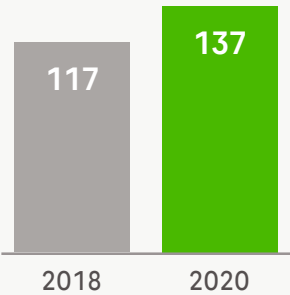
– Todd Sangel, Operations Manager, Pathology Laboratory

Increased Productivity

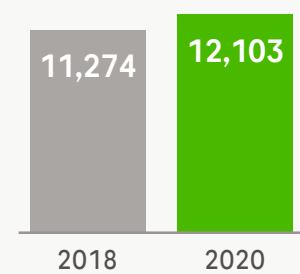### Pathology Laboratory

FTE
(technical, non-technical, leadership)

2018	2020
117	137

Billed CPTs
(Menu is larger and contains more esoteric testing than hospitals)

2018	2020
1.32M	1.66M

CPTs per FTE

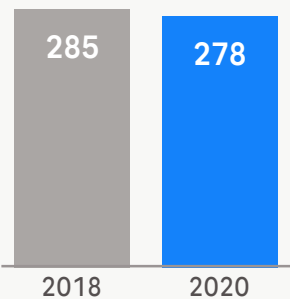| 2018	2020
11,274	12,103
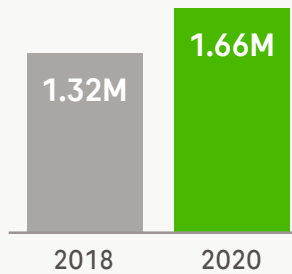
COVID-19 testing resulted in an estimated decrease of at least 200,000 billable CPTs in 2020
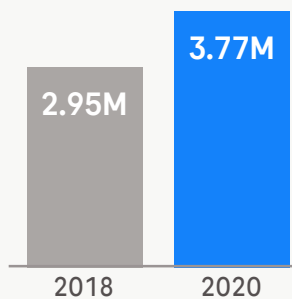
All UnityPoint Health - Des Moines Laboratories
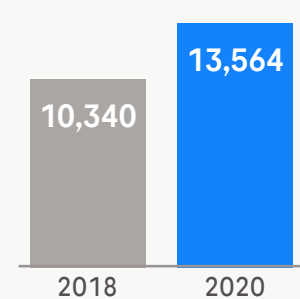
FTE
(technical, non-technical, leadership)

2018	2020
285	278

Billed CPTs
(Menu is larger and contains more esoteric testing than hospitals)

2018	2020
2.95M	3.77M

CPTs per FTE

| 2018	2020
10,340	13,564

Reduced Labor Costs

Core Laboratory (non-microbiology) Technical FTEs

The transition in test volumes from the core laboratory at UnityPoint Health Methodist to the Pathology Laboratory resulted in an overall reduction of 7.84 technical FTEs in non-microbiology. A 1.0 technical FTE cost is approximately $78,000 per year, thus UnityPoint was able to achieve a labor savings of $600K per year.

> *When we started digging into **navify**® Lab Operations (formerly cobas infinity), we realized that the capabilities and infrastructure that **navify**® Lab Operations provided really gave us a strong foundation to build on. We were very excited about it."*
>
> – Jim Poppen, System Manager Laboratory, UnityPoint Health, Des Moines

FTEs

Year	Pathology Laboratory	UnityPoint Health Methodist
2018	12.8	43.3
2020	19.11	29.15
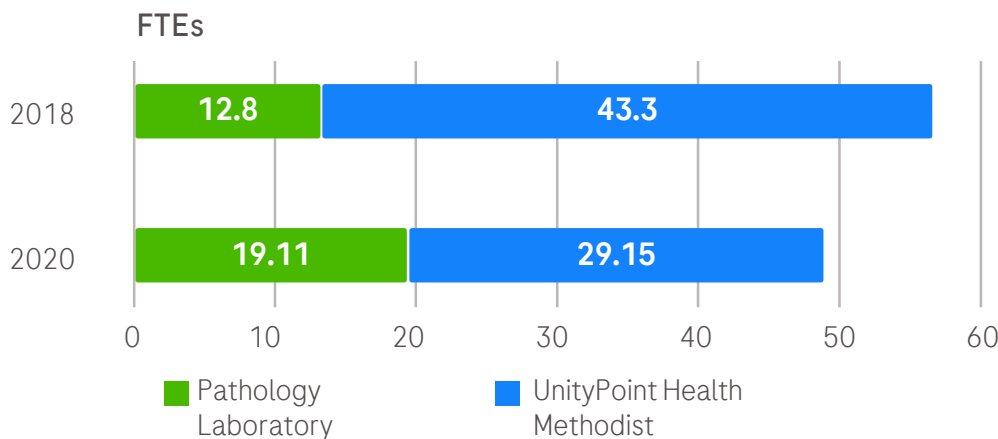
labor savings of **$600K** per year

> *navify® Lab Operations (formerly cobas infinity) has really shined for us. It's much more configurable and there's so much information that is clearly displayed and easily accessible. Our techs are using it more than we ever thought they would."*
>
> – Todd Sangel, (MLS(ASCP)CM, Operations Manager Pathology Laboratory UnityPoint Health - Des Moines

Impact Summary

UnityPoint Health Systems, Pathology Laboratory
Des Moines, Iowa

Expanded Test Menu

Pathology lab menu is larger and contains **more esoteric testing than the hospitals**

Increased Test Volume

25%
increase in Pathology lab test volume

Labor Savings

Reduction of 7.84 technical FTEs in non-microbiology
$600K
savings per year

Labor Reallocation

Increased opportunity to focus on additional key patient care items

Discover how you and Roche can redefine the value of your laboratory together. Contact your Roche Diagnostics representative or visit
diagnostics.roche.com

> "*navify® Lab Operations (formerly cobas infinity), allows the medium to large size labs to fully utilize their automation without impacting IT and achieving the system standardization that everyone's looking for.*"
>
> – Todd Sangel, (MLS(ASCP)CM, Operations Manager Pathology Laboratory, UnityPoint Health, Des Moines

> "*When we now look at our ability to manage the handling of specimens on robotics, on now being able to store and retrieve specimens automatically, it really frees up a lot of time for our both our technical staff and client service staff, allowing us to focus on other key critical patient care items.*"
>
> – Jim Poppen, Application Analyst Laboratory, UnityPoint Health, Des Moines