

The Valley Hospital Uses MEDITECH's Surveillance Solution to Monitor and Manage COVID-19 Patients

Ridgewood, New Jersey, a bedroom community of New York City and home to The Valley Hospital, found itself on the outskirts of the pandemic's epicenter last spring. At the end of March, New Jersey had the second highest number of COVID-19 cases in the country, and many of Valley's units were dedicated to caring for these patients. By April, coronavirus patients made up 75 percent of Valley's census.

Valley uses Quality and Surveillance, MEDITECH's predictive analytics solution, to monitor its patients' COVID-19 status. The hospital is one of the first and most prolific users of Surveillance, which has helped its care teams to respond to changing patient conditions, manage care, and increase compliance with quality metrics.

How Surveillance works

Surveillance uses evidence-based rules to analyze data in real time, identifying patients who meet specific criteria. Actionable surveillance boards automatically populate with qualifying patients, and fit smoothly into clinicians' workflows. Status boards and trackers throughout MEDITECH's EHR are updated with qualified patients. Alerts are broadcast to staff via mobile devices, expediting interventions and reducing communication delays.

Valley's primary Surveillance specialist, Chris Neumann, noted that the hospital is currently using 170 surveillance profiles.

Neumann said, "The solution can be used for anything, but we specifically modified it to manage our patients who test positive or negative for COVID-19, or are waiting for test results."

Positive, negative, and pending result profiles

In the early stages of the pandemic, Valley's IT staff built a status board to track ventilator patients who were COVID positive.

"Clinicians wanted to be able to determine how many patients had COVID-19, so the patients could be managed with the proper isolation protocols," said Valley AVP and CAO Mike Burke. "With the number of cases skyrocketing in New York and New Jersey, we were concerned about having enough PPE and ventilators. Identifying COVID positive patients helped us to conserve dwindling supplies for the right patients."

According to Burke and Neumann, this status board evolved during the pandemic to identify patients with a positive, negative, or pending lab result. Using color-coded indicators, the staff can quickly see their patients' status.

These indicators are attached to various nursing status boards and trackers throughout Valley's EHR. The letter P, highlighted in red, displays for positive results, while the letter N, highlighted in green, displays for negative results. If test results are not yet available, a PR, highlighted in blue, displays on the board. For example, if a SARS-COV2 test is ordered, the pending result profile indicates on the status board that the order has been entered but the results are not yet available in the EHR.



The Valley Hospital at a glance . . .

Located 26 miles from New York City, The Valley Hospital (Ridgewood, NJ) serves approximately 440,000 people in the Bergen County area.




About Valley:

- Part of Valley Health System, which also includes Valley Medical Group and Valley Home Care.
- Recent awards include:
 - The Pinnacle of Excellence Award® in Patient Experience by Press Ganey.
 - Magnet® designation for nursing excellence.
 - CHIME Most Wired Level 9 designation.
 - One of the world's best hospitals by Newsweek for a second consecutive year in its World's Best Hospitals 2020 list.
- The hospital is dedicated to community service, providing health-care education, support groups, classes, and screenings to those in need.



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(781) 821-3000
www.meditech.com
info@meditech.com

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As the pandemic continued, Valley refined the positive profile, which, in addition to tracking positive results, includes patients who have been identified by Infection Control as COVID-19 positive from outside results and required isolation.

Special indicators

“We needed to come up with a way to alert clinicians about the COVID-positive test result from previous visits or other testing facilities,” explained Neumann. “Initially, we used registration queries to identify patients, but that type of query drops off the status board after the patient is discharged. So we used special indicators instead, because they’re attached to the patient’s medical record and carry over to subsequent visits.”

Valley set up two special indicators for COVID-19, confirmed and suspected. Designed to stay with the patient long term, these actionable indicators alert clinicians to “at risk” patients. Valley also uses special indicators for patients who have been tested at other organizations, using the “suspected” indicator to alert staff of potentially positive patients to begin isolation protocols. Then, if deemed positive by Infection Control, the indicator is changed to “confirmed.”

Public status boards and watchlists

Because public status boards establish a house-wide view, Valley finds them ideal for tracking COVID-19 patients. When a test is ordered for a patient who may have the coronavirus, the order qualifies the patient for the hospital’s public board. This gives the staff relevant information up front rather than checking each patient on the unit individually, saving time and clicks for the clinicians.

For Infection Control staff, Valley uses a watchlist that aggregates multiple surveillance profiles, including the three COVID-19 profiles. The watchlist displays the date and time the patient qualified for each profile, but organizations can choose to display the time since the patient qualified. Infection Control

staff, nurse managers, and others can then drill down to view additional information on the profile criteria screen, which indicates the patient criteria that triggered the profile.

Recommendations for building profiles

Like most hospitals in the earliest-hit communities, Valley’s response at the beginning of the pandemic was reactionary as the organization grappled with responding to the novel disease. But now that Valley has built several iterations of COVID profiles, Neumann is in a position to offer others some valuable advice.

“In hindsight, it’s so important to ask the right questions before building your profiles,” he said. “What exactly are you tracking, equipment? Available beds? What patients are occupying those beds? We didn’t ask these questions in the beginning.”

Neumann noted that, as the situation changes, what you’re looking to track may also change. Other data items can be used as well. The patient’s portal of entry — a skilled nursing facility, for example — could be used as a criterion due to its high-risk population. Other criteria to track patients include assessment responses, vital signs, and interventions.

Next steps

Valley continues to expand and refine its use of Surveillance to monitor COVID-19 patients. These efforts include a COVID-19 Test Surveillance Profile, which Neumann is working on with the Infection Control team.

“Because Surveillance profiles look at only the current visit, what about patients tested at another location, previously tested, or not tested but in isolation?” he said. “This profile will give clinicians a more complete picture of our patients’ status, and help them to keep everyone safer.

“The great thing about Surveillance is, it’ll help Valley to adapt to whatever the future brings.”

Surveillance Resources

For more information on Surveillance and COVID-19, please see **Leveraging MEDITECH’s EHR During the COVID-19 Pandemic**.

MEDITECH customers, learn how to use Surveillance to monitor patients’ COVID-19 status with our **COVID-19 Surveillance Best Practice and Profile Build Topics guidance**.

<https://ehr.meditech.com/leveraging-meditechs-ehr-during-the-covid-19-pandemic>

<https://customer.meditech.com/en/d/prwqm/pages/qrmeifecovid19surveillance.htm>



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