



# EMS, Fire & Hospital Interoperability During the Age of COVID-19

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## FEATURING

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Rio Rico Medical and Fire District, AZ • Mill Creek Volunteer Fire Department, NC  
MEDIVIEW ePCR and BEACON Prehospital HIE from Beyond Lucid Technologies  
Emergency Reporting Fire and EMS Records Management Software

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## The Arizona Case - Rio Rico Medical & Fire District

Adam Amezaga, Chief of the Rio Rico Medical and Fire District in southern Arizona (RRMFD), knew that implementing new technology at their department would require effort. It can be a daunting task for any leader in the fire service to make the right decision on what software to choose, train the team on the new system, and learn to utilize the data effectively to make operational improvements or share information with constituents. **Additionally, RRMFD was one of the first agencies in the state of Arizona to engage in Community Paramedicine. As a regional leader in Mobile Medicine—from both emergent prehospital care to longitudinal care and readmission avoidance—the district needed to ensure its technology could adapt to a changing scope of practice.**

In mid-2019, RRMFD adopted MEDIVIEW™ ePCR and BEACON Prehospital Health Information Exchange from Beyond Lucid Technologies, and integrated it with Fire Records Management Software from Emergency Reporting® that they had used since 2009.



Since then, the crew at RRMFD has reduced time spent on reporting, while continuing to lead the data-driven evolution of the fire and emergency medical fields: RRMFD is now one of the first in the state to have successfully tracked and reported on COVID-19 data in its community. Contact tracing / crew exposures tracking, integrated into the Mobile Medicine workflow, is an essential tool as Arizona's infection rates continue their abrupt rise but epidemiologists across the state (and the country) have extremely little prehospital data to incorporate into their models.

The COVID-19 pandemic emergency in the United States compelled additional data tracking, and RRMFD's ability to meet that demand proved that Chief Amezaga, Dep. Chief Richard Johnson, Fire Marshal George Cluff, and Capt. Jeremy Carrillo had successfully streamlined data capture and sharing between crews and hospitals, and between EMS and Fire reporting systems. The coronavirus hit Arizona hard: citing data from John Hopkins, CNBC reported that "the number of cases have climbed by nearly 300% between May 1 and June 11." On June 1, Pima County's Emergency Operations Center for COVID-19 Response contacted Beyond Lucid Technologies, seeking details about "tracking COVID-positive cases and exposure in first responders." The company replied with screenshots of records that RRMFD had already shared—automatically via the MEDIVIEW BEACON Prehospital Health Information Exchange—with Banner Health Tucson, a Level 1 Trauma Center, identifying patients that were positive for COVID-19, so both sides of the handoff could prepare.

See figure below.

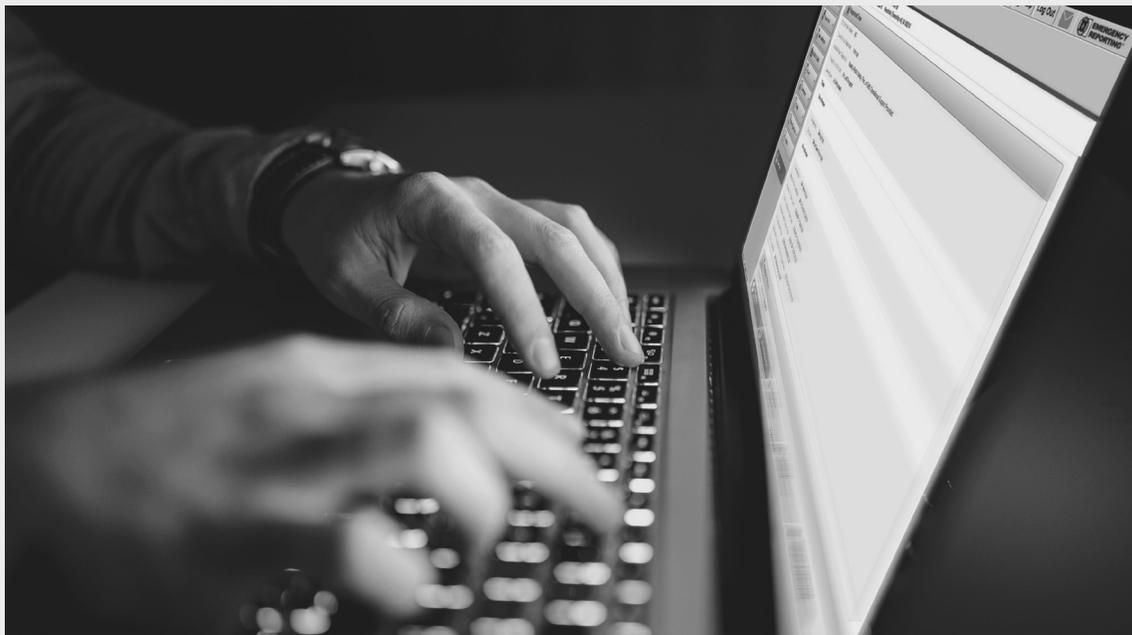
The screenshot displays the MEDIVIEW BEACON interface. At the top, it shows 'Admin | Banner University... (Change) | Edit User Settings | Welcome, Jon. | Logout'. Below this is a navigation bar with 'Records' and 'Pre-Hospital Record Search'. A sidebar on the left contains a 'Home' button and a 'COVID-19 PMHx' section with a 'SHOW' button. Underneath, there are 'COVID-19 Impressions' and 'COVID-19 Signs/Sympt' sections, each with a 'SHOW' button and a list of checkboxes for various symptoms and exposures. At the bottom of the sidebar are 'Clear', 'Search', and 'Save Data to Excel' buttons. The main area displays a table of 55 records, with the first few rows visible. The table has columns for Agency, PCR#, Incident#, Incident Date, Depart Scene, Transport Mode, Impression, Arrival Time, and Wall Time (min). Below the table are buttons for 'Load Record', 'Print Records', and 'Confirm COVID-19 Diagnosis'.

Agency	PCR#	Incident#	Incident Date	Depart Scene	Transport Mode	Impression	Arrival Time	Wall Time (min)
Rio Rico Fire	2396	2020-1141	06/09/2020 08:54	06/09/2020 09:50	Non-Emergent	COVID-19 with pneumonia	06/09/2020 10:57	
Rio Rico Fire	2397	2020-1139	06/09/2020 08:31	06/09/2020 09:48	Non-Emergent	COVID-19 with respiratory infection	06/09/2020 11:00	15.07
Rio Rico Fire	2308	2020-1028	05/29/2020 12:20	05/29/2020 14:17	Non-Emergent	Exposed to confirmed COVID-19 infected person	05/29/2020 15:15	7.28
Rio Rico Fire	2398	2020-1142	06/09/2020 12:15	06/09/2020 13:32	Non-Emergent	Exposed to confirmed COVID-19 infected person	06/09/2020 14:23	11.8
Rio Rico Fire	2402	2020-1152	06/09/2020 22:58	06/09/2020 23:15	Non-Emergent	Exposed to confirmed COVID-19 infected person	06/10/2020 00:42	24.68
Rio Rico Fire	2405	2020-1152	06/09/2020 22:58	06/09/2020 23:15	Non-Emergent	Covid-19 Positive	06/10/2020 00:42	26.08
Rio Rico Fire	2468	2020-1236	06/19/2020 05:59	06/19/2020 06:45	Non-Emergent	COVID-19 with pneumonia	06/19/2020 07:53	4.33
Rio Rico Fire	2491	2020-1262	06/22/2020 06:45	06/22/2020 07:30	Emergent (Immediate Response)	Exposed to confirmed COVID-19 infected person	06/22/2020 08:30	5
Rio Rico Fire	2492	2020-1263	06/22/2020 09:45	06/22/2020 10:56	Non-Emergent	Exposed to confirmed COVID-19 infected person	06/22/2020 11:52	16.83

Real-time data interoperability with hospitals helped RRMFD facilitate high-quality charting as well as the ability for personnel to rapidly share their clinical insights across the care continuum. The automation that impacted the crew daily ended the process of double-charting EMS responses, thanks to the "data bridge" between RRMFD's Fire Records Management System (RMS), powered by Emergency Reporting®, and the MEDIVIEW™ ePCR and BEACON Prehospital Health Information Exchange from Beyond Lucid Technologies.

This integration enabled mobile medicine-related calls to be efficiently documented in the ePCR, and then flow right to the RMS for validation and subsequent state and national NFIRS reporting. **Integrating ePCR, Fire RMS, and prehospital health information exchange (HIE) with COVID-19 contact tracing improved quality and efficiency, while providing proof that a connected Mobile Medical ecosystem can embrace efficiency and portability even mid-crisis. Emergency Reporting® and Beyond Lucid Technologies collaborated with a laser-focus on eliminating traditional friction points like data hoarding, the use of proprietary methods, and onerous contracts with excessive costs.** According to Fire Marshal George Cluff, the result has been that charting time was slashed by 50%, to about 15 minutes. “You can tell the difference from where we were a year ago to where we are now. I’ve seen a complete 180,” he said.

Cluff was clear about his longtime appreciation for Emergency Reporting. “I like [Emergency Reporting], I really do. As long as I get internet, I can do my reports. I can do inspections. All the forms are easy to create, and I can get signatures. This is the first program that we started with back in 2009, and we’ve been using it ever since,” he said.



When asked if the extra work involved in optimizing their technology stack was worth it, Cluff replied: “Yes, because I know you can start these ePCRs without having internet, and when we had power issues [in the field] we could actually start a PCR and that’s good. That way you can save that information.” As for his advice to other would-be trailblazers, he says, “You have to have patience. I think we’ve actually made this program more user-friendly than anything else that I’ve seen.”

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## The North Carolina Case - Mill Creek Volunteer Fire Department



**Emergency Reporting and Beyond Lucid Technologies set out to repeat the achievements of the Rio Rico Medical & Fire District at other forward-thinking departments in the U.S.**

The Mill Creek Volunteer Fire Department in Newport, North Carolina, loves proving that size is irrelevant when it comes to technical achievement. Mill Creek VFD became the second service in the country to prove the powerful efficiency of a bridge between Emergency Reporting's Fire Records Management System and the MEDIVIEW ePCR and BEACON Prehospital Health Information Exchange from Beyond Lucid Technologies.

But Mill Creek VFD did not rest on its efficiency: they brought in a new billing firm—Clint Baysden's Evolve Ambulance Billing Solutions—adding automation across their ecosystem's moving parts, from EMS charting and fire reporting to billing and state submission.

The results have been tangible, allowing the department to look backwards and potentially even bill for runs that in the past might have gone uncompensated. In a joint statement, MCVFD Assistant Chief Doug Ford and EMS Captain Tiffany Taylor said interfacing Emergency Reporting's RMS and Beyond Lucid Technologies' MEDIVIEW ePCR platform "made it easier to finish reports."

Mill Creek VFD has been using Emergency Reporting for their Fire records management and NFIRS reporting since 2013. The Fire package from Emergency Reporting includes much more than just incident reporting, like truck checks, occupancy data, training and event tracking, easy-to-access reports and analytics dashboards, and CAD integration. All of that, partnered with Beyond Lucid Technologies' MEDIVIEW ePCR platform integration, has allowed the department to effectively manage all of their data easily and efficiently. According to Ford and Taylor, "[We] love the fact that it is sharing the data, making it easier in the long run. It makes it so easy for our non-computer savvy people."

## About Beyond Lucid Technologies

Beyond Lucid Technologies, Inc. (BLT), is a health-and-safety IT firm that develops software packed with innovations to make fire, ground and air EMS, non-emergency medical transport and community paramedicine / mobile integrated health more cost-effective — with special focus on using technology to fight the scourge of addiction and keep crews healthy and safe. We are dedicated to proving that #BetterIsPossible in Mobile Medical technology, and measure our own success by delivering clinical, operational and financial efficiencies for our partner-clients. Our “prehospital pipes” connect the dots for partner-clients in 27 U.S. states, as of Summer 2020, with nearly 200 hospitals already linked to the MEDVIEW™ BEACON Prehospital Health Information Exchange. BLT has been called “Silicon Valley’s Emergency Medical Technology Experts.” Winner of the 2019 Frost & Sullivan Technology Leadership Award for EMS Communications Platform, runner-up for the 2018 East Bay Innovation Award (IT & Comms category), and winner of trade recognition from EMS World and the Journal of Emergency Medical Services (JEMS).

## About Emergency Reporting

Emergency Reporting (ER) is the largest cloud-based Fire records management solution (RMS) in the world. Integrated with EMS for easy, one-report filing of NFIRS and NEMSIS data, ER provides industry-leading solutions that allow Fire & EMS departments to run their entire operations efficiently and effectively, enhancing both firefighter and citizen safety. The company provides the easiest-to-use, most powerful system on the market and migrates over 50 agencies per month from their old RMS to ER’s. **Today, more than 750,000 agency personnel at over 7,000 Fire/Rescue and EMS agencies of all sizes – including more than 170 DoD/military installations worldwide and large entities with self-contained Fire & EMS services like NASA, nuclear power plants, hospitals, and oil refineries – are supported by Emergency Reporting.**



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