Green Button Go™

# COVID-19 Testing: Making an Error-Prone Process Reliable

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The coronavirus pandemic has driven much-needed innovation, particularly in diagnostic testing. For businesses, schools and other facilities to reopen safely, COVID-19 testing has become routine practice. As a result, labs are working overtime to conduct polymerase chain reaction (PCR) diagnostic testing to meet this increased demand.

Unfortunately, processing these diagnostics is inherently manual. For example, lab staff, rather than machines, handle each patient sample. But despite these limitations, lab automation software can ensure thorough data integrity throughout the PCR diagnostic workflow.

Data integrity is critical to diagnostic testing. When the data link between samples and the patients breaks, it means individuals or groups of people could receive false results.

False positives can generate fear and debilitating economic hardships, as recipients may forego work for an unnecessary quarantine. False negatives can discourage people from seeking medical care and enable community spread.

In addition to putting patients at risk, bad results slow test processing, as labs must circle back to resolve these issues. To improve data integrity in COVID-19 diagnostic workflows, Biosero's Green Button Go™ Software can improve data integrity by controlling error-prone segments and tracking critical events, such as moving samples between barcoded plates.

## Automation Software Prevents Inaccurate Inputs

A patient's data must always remain closely tied to their sample. This may seem like a no-brainer, but too often, ineffective data integrity safeguards thwart accurate results.

Human error is a significant contributor.

- Rushed lab technicians may forget to scan the barcode associated with a patient sample during accessioning.
- When manually inputting data, they may enter incorrect information or fail to upload it.
- Technicians may even forget to scan an entire batch of plates.
- Manual uploads of worklists may fail.

To remedy this, Biosero designed a custom screen within the Green Button Go software that only allows lab workers to move forward when they have correctly completed each essential step. For example, they can't press the "GO" button to start a run until they scan the barcode. The software guarantees that each step in the process is followed. It captures all data from each plate and links it to that specific run before the method can advance.

As the lab technician scans a barcode, the software populates multiple fields in the database with patient information. If the software finds crucial information is missing, it stops the process until the error is corrected.

Once the run is completed, a dialog box tells the technician the run has finished and confirms the data has been saved and transferred for analysis. Only then can they start a new run.

## Ensuring Sample Integrity

Green Button Go software maintains the link between patient samples and the data PCR diagnostics produce by confirming lab technicians enter all necessary information correctly before proceeding. It also tracks critical events in the workflow where data integrity or sample location are often lost. Even the most inexperienced lab workers can effectively complete their runs and return accurate results.

In addition to enhancing data robustness and integrity, Green Button Go Automation Scheduling Software reduces the need to manually retrieve and rerun archived patient samples, helping lower running costs and manage workloads. Most importantly, patients and clinicians can have high confidence they are receiving accurate results, minimizing the need for retesting.

**To schedule a demonstration of Green Button Go software call (858) 880-7376 or email info@biosero.com**

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