

ESCCA 2018

Industrial partner presentation by BD

The difference of transformation

The ESCCA industrial partner symposium by BD featured a presentation by two speakers from the Barts Health NHS Foundation Trust, Royal London Hospital, UK.

The two speakers presented how the new BD pre-analytical solution (BD FACSDuet™) delivered value in their challenging settings.

The BD FACSDuet™ pre-analytical automation platform, when physically integrated with the BD FACSLyric™ flow cytometer, the BD FACSuite™ software and the BD FACSLink™ middleware to allow connection with the Laboratory Information System (LIS), delivers a complete flow cytometry lab automation solution.

The BD FACSDuet™ represents the state-of-the-art in automated, pre-analytical flow-cytometry systems. Delivering automation, standardisation and flexibility, the BD FACSDuet™ reduces hands-on time and error-prone workflow steps, providing efficiency and cost/staff benefits.



Mr. Chris Scott, Royal London Hospital, UK

Mr. Chris Scott, the lead biomedical scientist at the Department of Immunology, Barts Health NHS Trust at the Royal London Hospital, UK, spoke about how the BD FACSDuet™ pre-analytical system delivered a substantial improvement in the efficiency of his laboratory. Mr. Scott's laboratory mainly supports the immunodeficiency service at his institution, and the work is mostly low-complexity flow cytometry.



Challenges

- Need for performing high complexity flow-cytometry assays, in areas like memory and naïve B-cells, neutrophil function testing and lymphocyte proliferation test using CFSE
- Environment and laboratory space
- Recruitment of flow cytometry experienced staff
- Manual transcription of laboratory data, with the consequent risk of generating errors
- Need for guaranteeing full patient and reagent traceability (ISO 15189)

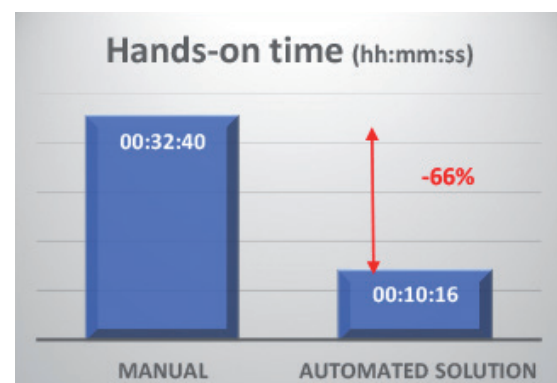
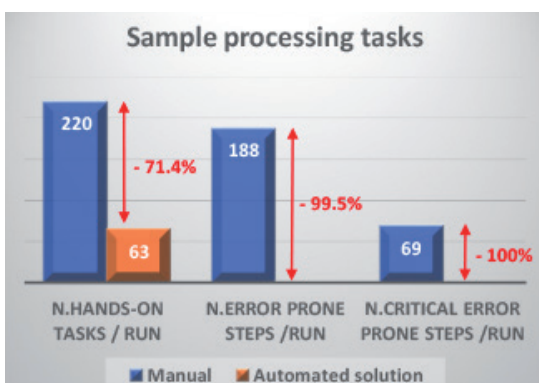
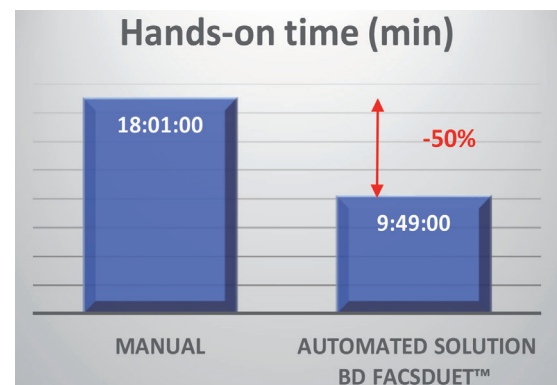
Laboratory reconfiguration and increase capacity following laboratories' consolidation

Data

Mr. Scott's laboratory was a beta-test site for the BD's pre-analytical system. The workflow using the new automated solution was compared with the existing laboratory workflow (using another automated solution) and with a manual approach. The processes were evaluated by following a Lean Six-Sigma approach supported by Lori Apoll, a BD Six Sigma and Lean blackbelt associate. Total process time, total hands-on time and reduction in error-prone and critical error-prone steps (affecting the patient outcome) were measured.

The data showed:

- 50% reduction in process hands-on time (batch of 10 specimens)
- 66% reduction in process hands-on time (batch of 20 specimens)
- 71% reduction in the number of hands-on tasks/workflow run
- 99% reduction in error-prone steps/workflow run and complete elimination (100% reduction) of critical error-prone steps.



Moreover, with an average workload of 50 TBNK samples / day, the laboratory would benefit from a time-saving of 25 days per year of staff time, creating the needed capacity to process more specimens.

The BD pre-analytical system also supports hematology laboratories

Dr. Timothy Farren, Royal London Hospital, UK

Dr. Tim Farren, Head of the Department of Immunophenotyping - Barts Health NHS Trust at Royal London Hospital, UK, showed how the BD pre-analytical solution drives process standardisation and consistency.



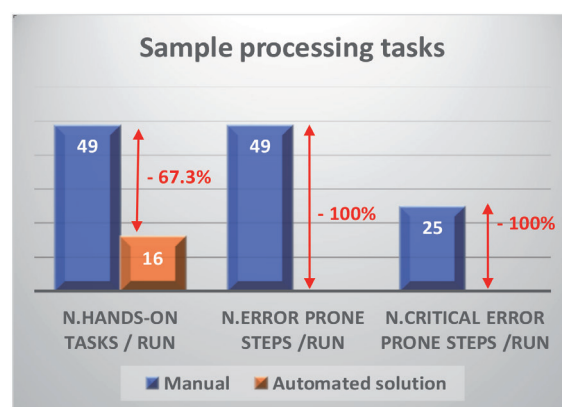
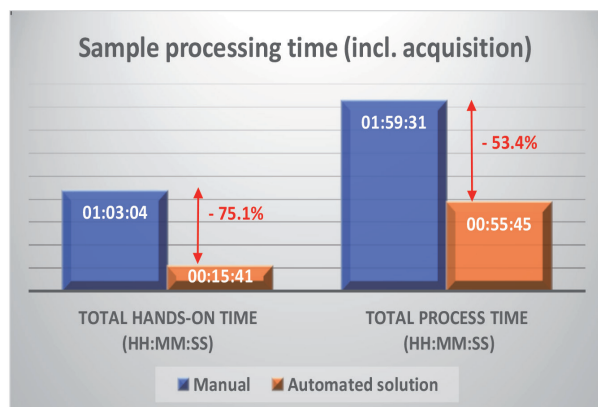
Challenges

- Workflow inconsistency and lack of standardisation
- Extended manual processing with the risk of generating errors
- Need for guaranteeing full patient and reagent traceability

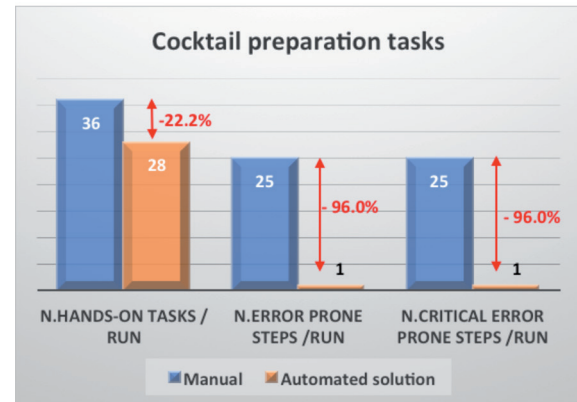
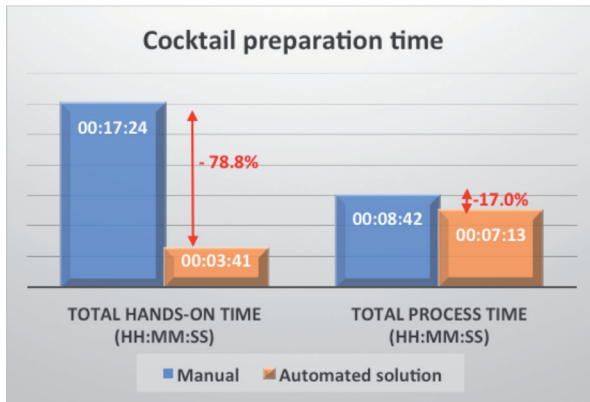
Data

The data were collected at the Hematopathology Oncology Diagnostic Service at Cambridge University Hospital – NHS trust . The workflow using the new automated solution was compared with the existing laboratory manual approach. The processes were evaluated by following the Lean Six-Sigma approach supported by Lori Apoll, a BD Six Sigma and Lean blackbelt associate. Total process time, total hands-on time and reduction in error-prone and critical error-prone steps (affecting the patient outcome) were measured both on sample processing and antibody cocktail preparation.

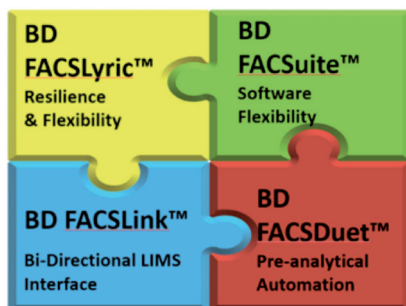
- The data showed that the automation delivered improved traceability by increasing the number of traceability points from 18 to 27. With regard to sample processing time, observations showed:
 - 75% reduction in total-hands on time
 - 53% reduction in total process time
 - 67% reduction in the number of hands-on tasks/run
 - 100% reduction in the number of error-prone and critical error-prone steps/run



- In antibody cocktail preparation, observations showed:
 - 79% reduction in hands-on time: 2 operators' time
 - 17% reduction in total process time
 - 22% reduction in the number of hands-on tasks/run
 - 96% reduction in the number of error-prone and critical error-prone steps/run



The new automated BD solution delivers process standardisation by minimizing workflow error-prone steps, increasing workflow consistency and laboratory efficiency.



This is what your diagnostic lab needs today!

CE marked in compliance with the European In Vitro Diagnostic Medical Device Directive 98/79/EC.

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