

Development and Implementation of a Simulated Laboratory Information System to Enhance Student Critical Thinking Skills and Laboratory Operations

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The College of Southern Maryland's Medical Laboratory Technology (MLT) students were not experiencing laboratory operations using a Laboratory Information System, LIS, until clinical rotations in the second year of the program. Consequently, first year students lacked foundational skills including troubleshooting, investigating specimen quality assurance issues, and inter-professional communication. A web-based, real-time, free, and trackable solution was developed to equip first year MLT students with the practical knowledge and experience of basic laboratory operations. While ~~the~~ other solutions were initially explored, the MLT program is currently piloting a simulated laboratory information system using Google Docs ~~in~~. Laboratory tests orders, specimen location and status, and patient results are all documented in Excel spreadsheets housed in a digital environment only accessible to those with appropriate permissions. Permissions and original documents are maintained by the MLT Program Coordinator. Laboratory policies and documents are also available in the simulated LIS for access by MLT students, faculty, and other health programs during inter-professional simulations. The initial perception of MLT students and faculty supports an increase in critical thinking skills, inter-professional communication, and laboratory operations. Data collection through online survey will be completed at the end of the first year of implementation. Future applications include utilization of the Google Docs LIS in annual inter-professional simulations and all MLT lab courses starting in spring of 2017.