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Quality improvement project: Post-implementation evaluation of an electronic requesting system for diagnostic tests in George Eliot Hospital

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Statement of the Problem: In George Eliot hospital, pathology and radiology requests were traditionally made via paper. Paper forms can be lost, filled in and signed incorrectly and thus be rejected, leading to delays in obtaining valuable test results in time, compromising patient safety and creating delays in workflow. Thus, a transition from paper requesting to an electronic requesting system for diagnostic tests was deemed necessary.

Methodology & Theoretical Orientation: The electronic requesting system was initially launched in the acute medical unit of George Eliot hospital. This allowed time for the clinicians to be trained to use the new system and make sure that the organization would be ready to embrace the changes, while a continuous post- implementation evaluation would be conducted to identify unintended consequences and prevent e-iatrogenesis. The post implementation evaluation of the electronic requesting system was conducted using the Plan- Do- Study- Act cycle model for quality improvement, including validated questionnaires and time motion studies.

Findings: Specific protocols were needed to be established for add on test requests, test groups and cancellations by pathology, as well as for vetting and prioritizing requests by radiology. The standard operating procedures for both departments were updated to include specific protocols for the aforementioned processes. The project team was only funded for the implementation phase and therefore there was a lack of human resources to drive the post implementation phase of the project.

Conclusion & Significance: Overall, the implementation of an electronic requesting system for diagnostic tests in George Eliot Hospital was deemed to be safe for the patients and was embraced by enthusiasm by the clinicians. Generally, the post-implementation phase is neglected in the initial planning of NHS projects and this has to be taken into account if success from a user perspective is to be achieved.

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1. D Stablein, E Welebob, E Johnson, J Metzger, R Burgess and D C Classen (2003) Understanding hospital readiness for computerized physician order entry. Joint Comm. J. Qual. Saf. 29(7):336-344.
2. R A Snyder and W L Fields (2006) Measuring hospital readiness for information technology (IT) innovation: a multisite study of the organizational information technology innovation readiness scale. J. Nurs. Meas. 14(1):45-55.
3. Linda W Peute, Jos Aarts, Piet J M Bakker and Monique W M Jaspers (2010) Anatomy of a failure: A sociotechnical evaluation of a laboratory physician order entry system implementation. International journal of medical informatics, 79(4):e58-e70.
4. Cresswell K M, Bates D W and Sheikh A (2013) Ten key considerations for the successful implementation and adoption of large-scale health information technology. J Am Med Inform Assoc 20(e1):e9-e13.
5. Lorraine Catwell, Aziz Sheikh Evaluating eHealth interventions: the need for continuous systemic evaluation. PLoS Medicine 6(8):e1000126

Biography

Agathoklis Efthymiadis is a junior doctor working in Acute Medicine at George Eliot Hospital with interest in developing his knowledge and skills in IT. He is the Junior Doctor Representative of the Clinical Informatics Group at George Eliot Hospital.

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