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Short Communication

Barcode system – A boon for evidence based laboratory medicine [EBLM]

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ABSTRACT

Diagnostic pathology is intensely imerging in last 3 decade. Rapid development of technology and brisk gathering of basic knowledge has changed the whole practice of Pathology and laboratory medicine. The evidence-based laboratory medicine (EBLM) is one of the most essential fields to provide the backbone for the evidence-based medicine (EBM). Bar Coding System is one of the most useful tool for day to day laboratory work in the era of digitalization. Bar codes are being used more and more extensively in the laboratory for a variety of functions. By using barcode system we can overcome potential threat of duplicative testing, misdiagnosis, or delayed or unnecessary treatment.

Evidence-based medicine (EBM) has emerged as a distinctive discipline in the past 25 years. It is the integration of best research evidence with clinical expertise and patient values.[1] The evidence-based laboratory medicine (EBLM) is one of the most essential fields to provide the backbone for the evidence-based medicine (EBM). It is a crucial part of modern laboratory medicine practice. In recent years, pathology, and more specifically diagnostic pathology, has undergone extreme change due to the brisk gathering of basic knowledge and due to the rapid development of technologies that increase the possibilities of tissue and cell analysis. Evidence-based laboratory medicine or EBLM mainly focuses on the evaluation and use of laboratory tests with an overall aim of getting better patient outcomes.[2] Clinical laboratory data are most objective among various diagnostic information and they should provide most useful evidence for medical decision making. There are many necessary steps to grow evidence-based recommendations that impact laboratory medicine decision making and the very first is patient and sample identification [PSID]. Patient specimen identification errors are contribute to adverse patient events and wasted resources. Patient Specimen and Test Identification errors will leads to quality problem, adverse patient outcomes and wasted resources, diagnostic and treatment delays, diagnostic and treatment errors, additional testing, increased costs associated with testing, morbidity and mortality of patients. We can avoid all these by performing few important steps to prevent patient specimen and test identification errors. With the help of PSID we can overcome this problem.

Bar Coding System is one of the most useful tool for PSID. Electronic bar coding on patient and specimen used to establish positive identification of specimen belong to patients. Many studies recommend the use of a bar coding process to consistently link patients and their specimen through the entire testing process to reduce or eliminate Patient Specimen Identification errors. This is based on the strength of evidence for this practice and consistency of observed effects. An adequate volume of evidence is available and includes consistent evidence

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of substantial healthcare and safety changes from well-designed, well conducted studies. By using barcode system we can overcome potential threat of duplicative testing, misdiagnosis, or delayed or unnecessary treatment.

Bar codes are being used more and more extensively in the laboratory for a variety of functions, including order entry, patient identification, specimen identification, preparation of load lists, efficient real-time bidirectional interfacing of instrumentation, on-line result verification, maintenance of specimen integrity, specimen tracking, data entry, including interpretive phrases, and identification of slide materials.[3] Bar codes have become ubiquitous in many settings in which highly accurate identification, error-free data entry, and fast throughput are required. Based on the consistency of study results, we can say that bar coding is a practice with a high level of applicability across settings and patient groups around the world.

Conflict of Interest

The authors declare no relevant conflicts of interest.

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