

WIRELESS LABORATORY INFORMATION MANAGEMENT SYSTEM: APPLICATION IN LABORATORY MEDICINE

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ABSTRACT

The laboratory investigation is an important practice in medicine. To use the computer for management of medical laboratory is proved for usefulness. The implementation of the wireless network technology for this purpose is interesting. The use of wireless laboratory information management system is an actual advanced application in laboratory medicine. Here, the author present short summary on this issue.

KEYWORDS: Network, Wireless, Laboratory Medicine.

INTRODUCTION

The laboratory investigation is an important practice in medicine. To use the computer for management of medical laboratory is proved for usefulness. The implementation of the wireless network technology for this purpose is interesting. The well-known laboratory information management (LIM) system has been used in medicine for many years [1 – 3]. LIM can be helpful in management In all phases of medical laboratory cycle from pre-analysis to post analysis. It is also the answer to the problem on quality control in all phases of the medical laboratory. The connecting between laboratory analyzer in the medical laboratory is basically practice by line local networking. However, it sometimes requires field test of some laboratory investigations. The use of wireless laboratory information management system is an actual advanced application in laboratory medicine. Here, the author present short summary on this issue.

WEB APPLICATION AND WIRELESS LIM

As already noted, the use of networking in LIM is helpful in manipulation of the whole system. As noted by Golazand Hoch strasser on laboratory quality management, *“crucial quality elements are also communication, data management and information sharing. Web applications and other associated computer communication applications such as E-mail and newsgroups, for example, offer to the laboratory environment the best tools to achieve proper communication and data management/sharing [4].”* The implementation of the wireless LIM can be the solution for many point of care testing analyzer, which is used at patient's site such as glucometer, control. For glucometer, as reported by Park et al. that *“Today, many POCT devices can be directly connected to the laboratory information system (LIS) via data management system (DMS) [6].”* Park et al. found that the new system was acceptable [6].

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In real application, the wireless technology can help real time monitor the quality of the test as well as cost control [6]. This technology is already implemented in some reference laboratories. Nevertheless, the basic problem of error can still be seen regardless the accreditation of the medical laboratory [7].

CONCLUSION

Since many laboratory tests are required as a point of care field testing, the implementation of wireless LIM will be an important technology in clinical laboratory. The good system is needed.

CONFLICT OF INTEREST: None

REFERENCES

- [1]. Cucoranu IC. Laboratory Information Systems Management and Operations. Clin Lab Med. 2016 Mar; 36(1):51-6. doi: 10.1016/j.cll.2015.09.006.
- [2]. Cucoranu IC. Laboratory Information Systems Management and Operations. SurgPatholClin. 2015 Jun; 8(2):153-7.
- [3]. Sepulveda JL, Young DS. The ideal laboratory information system. Arch Pathol Lab Med. 2013 Aug; 137(8):1129-40.
- [4]. Golaz O, Hochstrasser D. Web applications for total quality management. ClinChem Lab Med. 1999 May; 37(5):487-93.
- [5]. Park AJ, Kim HR, Lee MK. Networking Experience of Point-of-Care Test Glucometer. Korean J Lab Med. 2006 Aug; 26(4):294-8.
- [6]. Srenger V, Stavljenić-Rukavina A, Cvorišćec D, Brkljacić V, Rogić D, Jurčić L. Development of laboratory information system--quality standards. [Article in Croatian. Acta Med Croatica. 2005; 59(3):233-9.
- [7]. Wiwanitkit V. Types and frequency of preanalytical mistakes in the first Thai ISO 9002:1994 certified clinical laboratory, a 6-month monitoring. BMC ClinPathol. 2001; 1(1):5.