

Editorial Preface

Special Issue on the Transition to ISO 15189 : 2012 for Cytopathology Laboratories

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There is a substantial body of research, describing shortfalls in the current provision of healthcare. Key issues emerging from this literature are significant variations in the quality of healthcare and risk of iatrogenic harm. On the other hand, there has been considerable progress in information technology effectuating a high capacity to exploit technological developments in relation to aspects of healthcare provision. Moreover, glimpses of future healthcare establish a wider use of nanotechnology, individualized drugs, cell-based computing and microchip-enhanced brains.

Notwithstanding the previously mentioned prospects, there has not been a systematic research and evaluation of the empirical literature on e-health applications and their impact on the quality and safety of healthcare delivery. Relevant theoretical, technical, developmental and policy literature has not been synthesized with a view to producing a definitive overview of the interaction.

The International Journal of Reliable and Quality E-Healthcare (IJRQEH) exploits a novel framework for revealing, understanding, modeling and implementing appropriate reliability and quality interventions leading to quality assurance and improvement. It addresses a variety of issues that relate to the quality and reliability assurance of e-healthcare, patient safety, patient empowerment, education on quality, e-medicine, and e-healthcare evaluation. It aims to leading-edge international research and best practice with a view to providing an interdisciplinary forum for the international debate on theoretical and practical aspects of quality, patient safety, and e-health interaction.

As a result, it supports students understand the effect of new technologies on health systems, helps healthcare professionals better understand their patients, acts as an assistant for patients to derive more benefits from their health care, and encourages e-health systems designers and managers to ground everyday practice on quality principles. Its target audience includes students, healthcare professionals, academics, researchers, managers, policymakers, and non-profit organizations.

This special issue provides an overview of the transition to ISO 15189 2012 for Cytopathology Laboratories. Specifically, the first article presents the authors' experience in the implementation of a QMS in cytopathology laboratories and highlights the general and management parameters that should be taken into consideration when moving from ISO 15189:2007 to the latest ISO 15189:2012. The second article emphasizes the most crucial technical parameters that should be considered when advancing from ISO 15189:2007 to the most recent ISO 15189:2012. Furthermore, helpful advice and pointers that could accommodate relative transition are included. Finally, potential issues related to the laboratory's implementation of ISO 15189:2012 and a mobile technology application for better personnel management are also depicted. The third article presents the authors' experience on the implementation of a risk analysis and control system covering all the necessary parameters and issues that should be addressed. Also, a possible structure for a risk analysis is presented with useful guidance

associated with cytological laboratories conducting morphological and molecular examinations. Finally, a mobile health solution is proposed that, if properly designed, could further optimize and harmonize risk management strategies globally. The fourth article argues that the design of a unified system of Quality Control and Assurance procedures that will guarantee excellent performance and results is essential. The authors present their experience in the implementation of such a system and describe in detail strategies for efficient quality management. Useful recommendations for the design of such a system are provided. Finally, a mobile health application that could potentially enhance the complete quality control and assurance system is also presented.

In conclusion, the issue confirms the journal's impact, which could be summarized as follows:

- probing into the interaction of quality and e-health
- providing essential information to assess e-health systems and services
- offering information about reliability modeling in e-health networks
- inquiring state of the art methods in quality, patient safety, patient empowerment and education in e-health
- describing reliable e-healthcare processes and policies

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