

Review Digital Health Care Perspectives, Applications, Cases

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Digital Health Care: Perspectives, Applications, and Cases

Phillip Olla and Joseph Tan

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291 pages

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INTRODUCTION

Dr. Olla and Dr. Tan are clearly in the same realm of content as the Tan book reviewed above: the electronic world of 21st century health care. In their Preface they acknowledge they are working in the field of informatics. They also acknowledge in the preface the audience is not the same as for the *Adaptive HMIS*; it is undergraduates. As a result, from a learner's perspective, the Tan' HMIS book should be the second in the series of these two volumes. The learners would be able to more easily work through the Tan book in a productive way using this educative approach. Potential faculty users of either of these two books would be well served by using *Digital Health Care* for undergraduate health care administration as a companion text to a primary health care administration course text.

The description of the book in the Forward shows the book to be comprehensive and offering broad insights to "key concepts". The text lives up to that characterization in this reviewer's opinion.

STRENGTHS

The authors are true to their word in the preface about how they have organized the chapters. The structure of the chapter texts is in a sequence moving from the principles of configuring a digital information system, including most appropriately, a chapter on an actual database construction along with a diagram of an integrated information warehouse from an existing hospital. This chapter is a lynch pin for the other 3 in the opening section of the book.

The term informatics is introduced in the first chapter and the next 3 chapters illustrate how that term is used practically. Part 2 is arranged in such a way as to be a useful adjunct to the opening section. Part 3 moves to the technology considerations of using informatics and the digitization of health. The final section, Part 4, looks to the future of what is on the horizon for digital information and its technologies. These sections fit together logically and sequentially making the text readily usable as a core text for undergraduates or as a complement to the instructor's own course material.

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As with the Tan book reviewed above, the Olla and Tan book contains cases. These cases can be treated as self-efficacy building exercises or, at a minimum, used to bring about deeper thinking requiring effort to link case material to chapter material in the text.

LOOKING TO THE FUTURE

Digital Health Care also represents the beginning elements of a clinical decision support system (CDSS) which the literature shows improves the process of care and patient outcomes from such care. A CDSS provides both evidence based information for clinicians and algorithmic diagnostic tools along with treatment recommendations for patients. While CDSS is not in the scope of the existing text, it could become one in future editions. Moreover, it is once again, as in the case of *Adaptive* HMIS, important for readers, learners, and instructors to recognize the background of HMIS and databases; the elements of any sound HMIS plus a resultant CDSS. Both of these texts must be directed at use of these digital tools by instructors in informatics and HMIS courses.

It would be worthwhile to consider a case study rubric for the cases in both texts. A guide, of sorts, to direct the use of the case to ward off diffuse and discontinuous written analysis or spoken discussion in class. This “tightening up” of the use of case studies would yield a path to the kind of computational thinking required for applications of both texts. Computational thinking creates the ability to problem solve through pattern recognition, creativity applied to the problem solution, and data analysis.

As the users of the text think through these issues and related ones, they should keep in mind that the texts are foundational; they form the platform for understanding the digital world of health and that world is changing more rapidly than ever. Nonetheless, as readers think through the chapters, they are more likely to be able to navigate new databases which form the heart of any digital approach to HMIS. Databases that will have to be larger and can capture data almost as soon as it arises. Such is the kind of data being generated by handheld and individual digital devices to track steps, pulse, calories, and, increasingly, more individual information. Some handheld devices even at present can be used to examine patient records, symptoms, and be used to access a database in real time while with the patient. The principles laid out in both books and the application of computational thinking which can develop from them will better equip them to harness the new tools.