

# Chapter 19

## How to Educate Health Organizations to Apply Lean Methodology

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### ABSTRACT

*Lean thinking is one of the most recent leadership and transformation ideologies adapted from industry that should be assessed critically in the context of healthcare organizations. Lean management system started in the Toyota Motor Company System around 1950. Because of low efficiency at the Toyota Motor Company System, they developed a method to improve production by eliminating waste. With the adoption of lean principles, practices, and tools, it is possible to achieve competitive advantage in healthcare organizations, and with the application of these practices and tools orientated towards lean principles, they obtained a high-quality system that offers an improvement in the patient management in terms of effectiveness, efficiency, and quality. In this chapter, the authors approach the lean management healthcare methodology as a guide for different healthcare organizations with a focus on radiology departments.*

### INTRODUCTION

The Toyota Production System or Lean methodology, originally designed to streamline manufacturing, is increasingly being applied to Health Organizations. The strategy was embraced by the manufacturing sector, and in more recent years has been successfully applied to improving the provision of healthcare services. The Lean philosophy focuses around the concepts of “value” and “waste”. It is considered a philosophy of work based on the participation of people that defines ways to improve and optimize a production process by focusing, identifying, and eliminating all unnecessary processes and/or activi-

DOI: 10.4018/978-1-7998-9578-7.ch019

# Handbook of Research on Improving Allied Health Professions Education: Advancing Clinical Training and Interdisciplinary Translational Research

Rui Pedro Pereira Almeida  
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A volume in the Advances in Medical Education,  
Research, and Ethics (AMERE) Book Series



Published in the United States of America by

IGI Global

Medical Information Science Reference (an imprint of IGI Global)

701 E. Chocolate Avenue

Hershey PA, USA 17033

Tel: 717-533-8845

Fax: 717-533-8661

E-mail: [cust@igi-global.com](mailto:cust@igi-global.com)

Web site: <http://www.igi-global.com>

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Library of Congress Cataloging-in-Publication Data

Names: Almeida, Rui, 1987- editor.

Title: Handbook of research on improving allied health professions education : advancing clinical training and interdisciplinary translational research / Rui Almeida, editor.

Description: Hershey, PA : Medical Information Science Reference, [2022] |

Includes bibliographical references and index. | Some chapters in Spanish. | Summary: "This book discusses a range of important topics related to Allied Health Professions Education providing answers to specific problems that arise in the teaching of allied health professions, and transferring knowledge to contribute to translational science through the adoption of best practices in patient care and improving the patient outcomes"-- Provided by publisher.

Identifiers: LCCN 2021054455 (print) | LCCN 2021054456 (ebook) | ISBN 9781799895787 (hardcover) | ISBN 9781799895794 (ebook)

Subjects: MESH: Allied Health Personnel--education | Evidence-Based Practice--education | Translational Medical Research--education | Education, Continuing | Europe

Classification: LCC R697.A4 (print) | LCC R697.A4 (ebook) | NLM W 18 | DDC 610.73/7069071--dc23/eng/20220106

LC record available at <https://lcn.loc.gov/2021054455>

LC ebook record available at <https://lcn.loc.gov/2021054456>

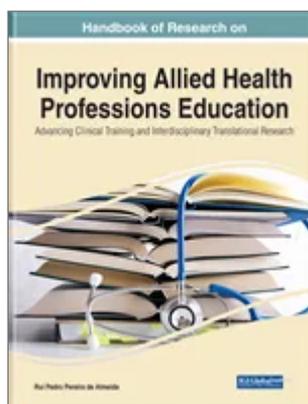
This book is published in the IGI Global book series Advances in Medical Education, Research, and Ethics (AMERE) (ISSN: 2475-6601; eISSN: 2475-661X)

British Cataloguing in Publication Data

A Cataloguing in Publication record for this book is available from the British Library.

All work contributed to this book is new, previously-unpublished material. The views expressed in this book are those of the authors, but not necessarily of the publisher.

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# Handbook of Research on Improving Allied Health Professions Education: Advancing Clinical Training and Interdisciplinary Translational Research

Rui Pedro Pereira Almeida (University of Algarve, Portugal)

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Pages: 409

ISBN13: 9781799895787 ISBN10: 1799895785 EISBN13: 9781799895794

DOI: 10.4018/978-1-7998-9578-7

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Due to the current paradigm shift from traditional teaching to a mixed model with the inclusion of e-learning strategies, reforms in clinical education models are necessary and must carefully consider the socio-professional changes needed to support such efforts. Further study of the implementation of clinical and virtual reality education simulators in education, the irreplaceable role of teaching in the design of advanced roles for health professionals, and the role of education in the continuing professional development are all necessary for the future of successful allied health professional education.

The **Handbook of Research on Improving Allied Health Professions Education: Advancing Clinical Training and Interdisciplinary Translational Research** discusses a range of important topics related to medical and health professions education and clarifies purposes, processes, and future priorities in introducing changes in the educational system. Covering topics such as new technologies and patient safety, this major reference work is ideal for researchers, practitioners, academicians, industry professionals, instructors, and students.

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In the academic context, the main activity of ethics committees is evidently to regulate and monitor any investigation carried out within the institution, if the object of study is a person or biological material. However, it is...

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The purpose of this chapter is to discuss healthcare workers' (HCW) working conditions under the COVID-19 pandemic, including their challenges and needs. Through a brief systematic review, PubMed, and Science Direct, the authors...

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In a globalized and increasingly competitive age, marked by complex healthcare systems and constant changes in the patterns, work demands, and the fast pace of technological innovations, it is important that health facilities and...

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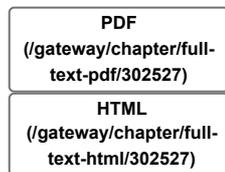
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Medical imaging and radiotherapy professionals develop a crucial role at healthcare institutions in providing diagnostic images or deliver radiation treatment. As characteristic in the healthcare field, this work is performed in a...

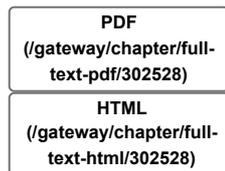


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The physiotherapy profession and education have evolved aligned with over a century of worldwide historic moments, sociodemographic challenges, and advances in science and technology. The goal of this chapter is to describe future...

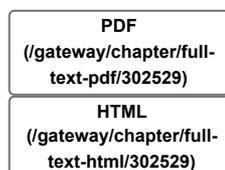


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Speech and language therapists are health professionals working with people with communication and swallowing-related problems. The scope of practice includes competences that go far beyond clinical and technical abilities. As in...

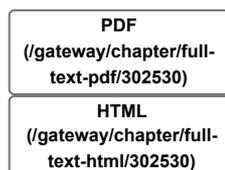


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The study and manufacturing of prostheses and orthotics have been developed over the years based on the need to enable people with disabilities. The International Society for Prosthetics and Orthotics has stimulated technology...

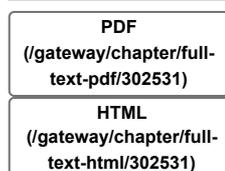


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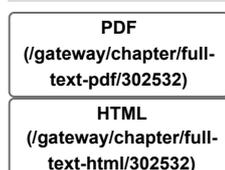
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Osteopathy is a science that is aimed at primary and preventive healthcare and takes a global approach to the individual, emphasizing the relationship between structure and function. It is a primary contact healthcare profession, and...



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