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# Digital Transformation in Healthcare's VUCA World: Ethical Complexities and Moral Dilemmas of Healthcare Professionals

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# CHANGING ENVIRONMENT



Demographic changes



Economical changes



Lifestyle changes



Technological changes

# VUCA world

The world is changing rapidly, leading to significant dynamic, unpredictable environments where global rapid changes intersect connected factors, and unclear information shapes decision making and strategic planning. Global trends and extreme crises, create a complex and turbulent ecosystem that health care systems must adapt to and thrive. In healthcare, VUCA highlights the need for leaders to develop adaptable and resilient strategies to manage rapid advancements, multifaceted challenges, and shifting patient and system needs.



## Volatility

The rate at which things change and the speed of change



## Uncertainty

The lack of predictability and the degree to which the outcome of a situation is unknown



## Complexity

The number of variables involved in a situation, the interconnections between them, and the difficulty of understanding them



## Ambiguity

The lack of clarity and multiple interpretations of a situation

# HEALTHCARE CHANGING:

## BUSINESS ORIENTED

- ☐ Competitive market
- ☐ Organizational significant change
- ☐ Adopt and implement strategic management
- ☐ Digital Transformation



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# THE OUTBREAK OF COVID-19 : DIGITAL TRANSFORMATION

- ❑ These technological changes have accelerated changes within the hospitals
- ❑ Accelerated collaborations with start-up and high-tech companies to meet changing needs
- ❑ Remote medical care, telemedicine, and digital services
- ❑ The current crisis has intensified the digital transformation and business activity of the public hospitals, which may lead to a partial solution of their economic and organizational crisis



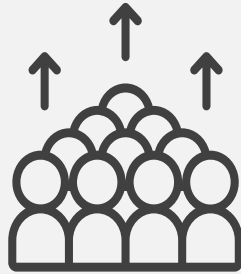
# Digital Transformation in Healthcare's VUCA World: Ethical Complexities and Moral Dilemmas of Healthcare Professionals



## RESEARCH AIMS

- ☐ To examine the personal experiences and ethical dilemmas faced by healthcare professionals as they adapt to digital transformation in public hospitals within a VUCA environment.
- ☐ To assess how the pressures of digital transformation and associated ethical conflicts contribute to stress, moral distress, and the potential for burnout among healthcare workers.

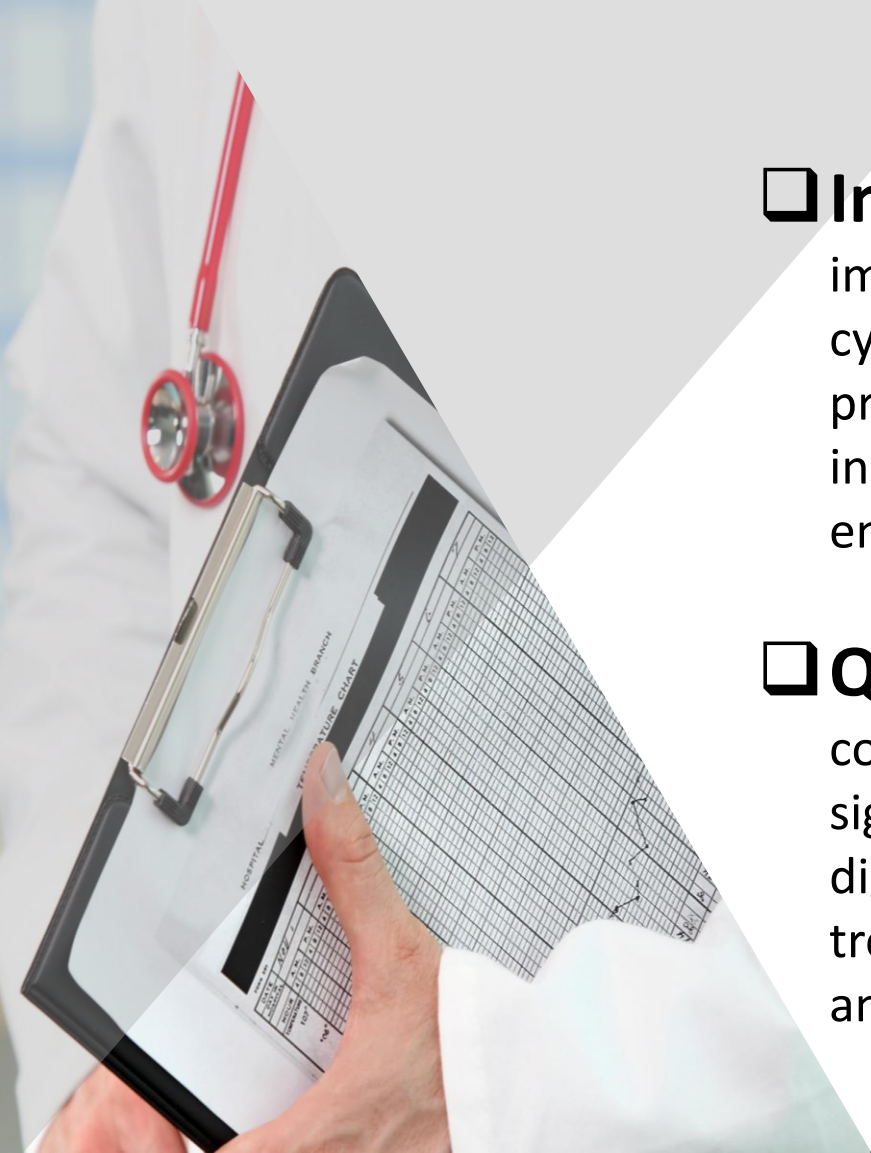
# METHODOLOGY



## Participants & Data Analysis

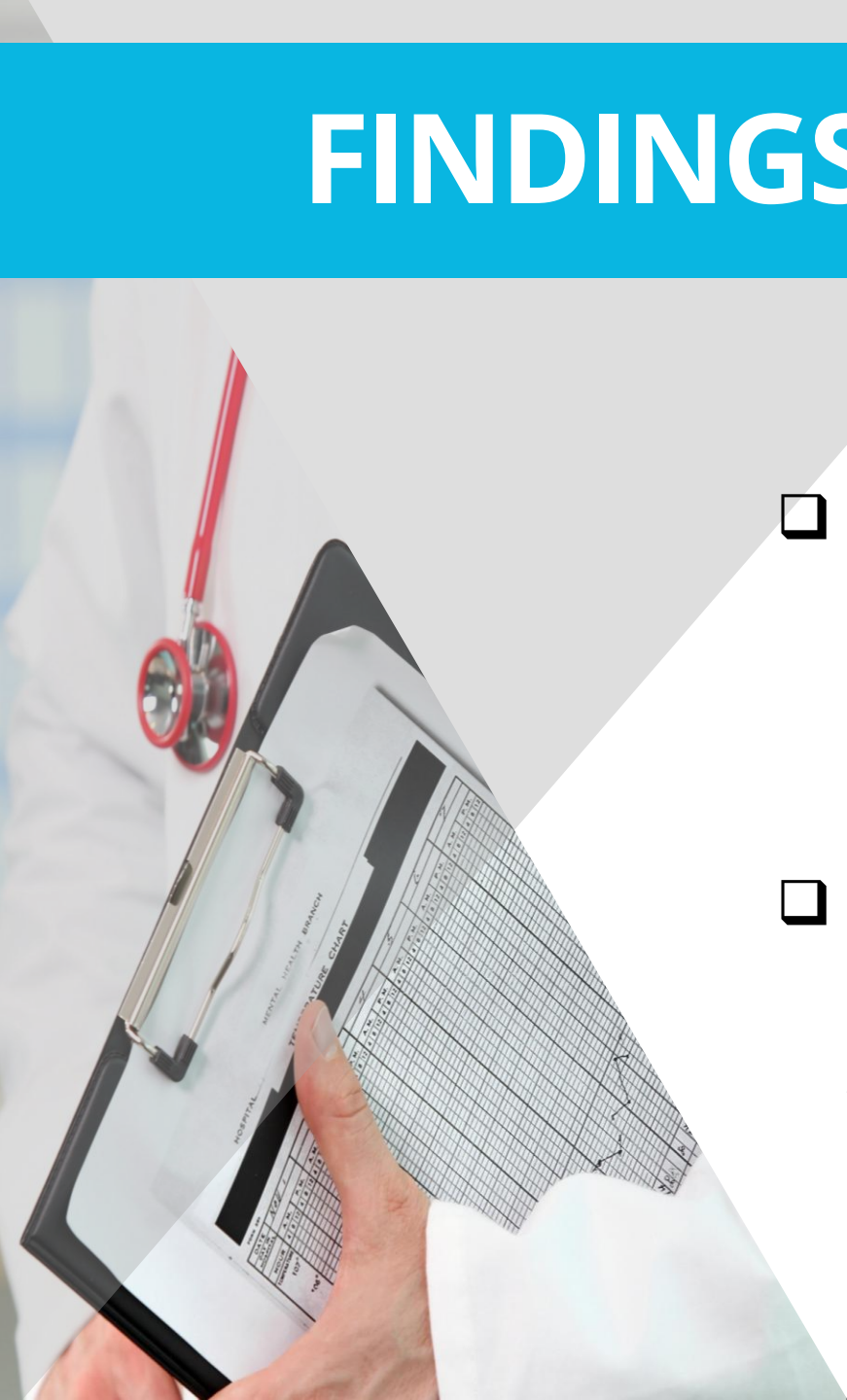
- ❑ Six of the large hospitals in Israel
- ❑ Based on their size, location, number of beds, and ownership- diverse hospitals
- ❑ Large cities in Israel Tel Aviv, Haifa, Jerusalem, and Petah Tiqwa
- ❑ 35 semi-structured in-depth interviews with key figures in the health system and hospital managers at various levels
- ❑ The data collected from the interviews were analyzed thematically

# FINDINGS- SUMMARY

- 
- A hand in a white lab coat holds a clipboard with a medical chart. A red stethoscope is visible in the background.
- ❑ **Innovation Paradox** - While digital advancements are essential for improving healthcare efficiency, they often exacerbate concerns around cybersecurity, data privacy, and increased administrative burdens. Healthcare professionals find themselves balancing the benefits of technological innovation with the growing complexity of safeguarding patient data and ensuring operational security.
  - ❑ **Quality and Treatment Conflicts** - The tension between computerized, efficiency-driven processes and patient-centered care presents significant challenges. As healthcare professionals strive to manage both digital tools and patient needs, issues surrounding time management and treatment quality arise, often compromising the depth of patient interaction and care delivery.



# FINDINGS- SUMMARY

- 
- A hand in a white lab coat holds a clipboard with a medical chart. A red stethoscope is visible in the background.
- ❑ **Information and Knowledge Conflicts** The overwhelming influx of data generated by digital tools creates difficulties in decision-making and mentoring within healthcare teams. Healthcare workers frequently struggle to sift through vast amounts of information, leading to potential errors in judgment and increased stress levels.
  - ❑ **Personal Needs and Values** - blurred work-life boundaries and a growing sense of defensive medicine have led to personal conflicts for many practitioners. Many professionals report a sense of moral distress as they grapple with these pressures, leading to burnout and diminished well-being..

Theme	Sub-theme	Macro-holistic level	Mezzo-organizational level	Micro-individual level
<i>Innovation paradox</i>	<i>Advantages and disadvantages of technology and innovations</i>	√	√	√
	<i>Cybersecurity</i>	√	√	√
	<i>Efficacy of using resources</i>	√	√	
<i>Quality and treatment conflict: keeping the benefits of the patient</i>	<i>Computerised conflict</i>		√	√
	<i>Time conflict</i>		√	√
	<i>Paternalism and co-creation, patient self-governance</i>		√	√
	<i>Responsibility and accountability</i>		√	√
	<i>Face-to-face vs. virtual</i>		√	√
<i>Information and knowledge conflict</i>	<i>Mentoring and training</i>		√	√
	<i>Overflow of information</i>		√	√
<i>Personal needs and values</i>	<i>Boundaries and Personal price</i>			√
	<i>Personal values</i>			√
	<i>Defensive medicine</i>			√

# DISCUSSION:

## Digital Transformation In Healthcare's VUCA World: Ethical Complexities And Moral Dilemmas Of Healthcare Professionals



In a VUCA world, the complexities of digital transformation amplify the ethical and moral dilemmas faced by healthcare professionals.



While digital transformation is crucial for modernizing healthcare and adapting to changing environments, it often leads to significant ethical conflicts.

These conflicts can create barriers to effective change, increase stress, and contribute to moral distress among healthcare workers.

# DISCUSSION:

## Digital Transformation In Healthcare's VUCA World: Ethical Complexities And Moral Dilemmas Of Healthcare Professionals



The study underscores the need for healthcare organizations to proactively address these challenges by implementing robust support systems. Such systems are essential for preventing moral injury, reducing stress, and maintaining both the quality of patient care and the mental well-being of healthcare professionals.



Effective management of these ethical dilemmas is critical to ensuring that healthcare workers can navigate the pressures of digital transformation while continuing to provide high-quality care in this volatile and complex environment.



# Navigating moral and ethical dilemmas in digital transformation processes within healthcare organizations

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## Abstract

**Objective:** Healthcare systems around the world face a turbulent and unstable global and local ecosystem that changes daily and impacts the healthcare organization and its workforce. This challenging environment, coupled with economic pressures, is forcing healthcare systems to change and adopt strategic and technological processes to adapt to change at all levels of the system (macro-holistic multi-systemic, mezzo-organizational, and micro-personal).

**Methods:** In this study, through 32 in-depth, semi-structured interviews with healthcare professionals working in public general hospitals in central Israel, we examined, mapped, and highlighted the conflicts and moral dilemmas they have faced in recent years, alongside the processes of strategic, technological, and digital changes that the healthcare system has undergone.

**Results:** The findings from both a categorical-deductive approach and an inductive approach analysis reveals four main themes: *innovation paradox*, *quality and treatment conflict*, *information and knowledge conflict*, and *personal needs and values*. The themes and sub-themes are sorted across the three levels of the healthcare system.

**Conclusions:** These findings represent a wide range of conflicts and moral dilemmas that arise from the implementation of strategic change and digital transformation, adding to the already numerous ethical issues and moral dilemmas in healthcare and bioethics that are associated with three levels of the system. These challenges and moral conflicts can be barriers to implementing the necessary changes, as well as challenging individuals' internal values, potentially leading to burnout and moral distress. Given the importance of this issue and the intensification of change processes over the next few years, it is up to the management and key stakeholders to implement these processes in a way that addresses the conflicts and challenges that health professionals face. Minimizing the level of challenges and moral distress in the health sector will be to the benefit of the system, its workers, and the patients it serves.

## Keywords

Moral and ethical dilemmas, healthcare organizations, digital transformation in healthcare

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## Introduction

Over the past few decades, healthcare systems and their organization around the world have been faced with extensive and complex challenges. These are driven by many different global factors. Demographic, technological, political changes that affect the wider ecosystem in which these organizations operate are among the most important reasons for these healthcare-specific challenges. At the same time, the demand for healthcare is increasing. This is due to demographic

changes (e.g. longer life expectancy accompanied by chronic diseases) and growing consumption as a result of

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## Empirical Paper



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# Strategic technological processes in hospitals: Conflicts and personal experiences of healthcare teams

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## Abstract

**Background:** Global health systems operate amid dynamic factors, including demographic shifts, economic variations, political changes, technological progress, and societal trends that lead to VUCA reality (Volatility, Uncertainty, Complexity, and Ambiguity). To address these challenges, healthcare organizations are increasingly turning to Strategic Technological Processes and digital transformation.

**Research objective:** Against this background, the current study examined the personal experiences, conflicts, difficulties, and moral dilemmas attendant upon accommodating this digital transformation of healthcare professionals.

**Participants:** The study involved 27 healthcare professionals working in Israeli hospitals, whose experiences and perspectives were central to understanding the impact of digital transformation in healthcare settings.

**Research design:** The study methodology rested on in-depth interviews, which were analyzed through the prism of the Listening Guide analytical technique.

**Ethical considerations:** The research obtained pre-approval from the Ethics Committee at the researcher's institution.

**Findings:** The study revealed that the healthcare professionals are indeed facing ethical conflicts and personal challenges related to digitalization (such as providing the best quality of care, being the best caregiver, and acting for the betterment of the hospital). It also identified dilemmas resulting from conflicts between the needs and demands of the health system and the healthcare professionals' values and resources.

**Discussion:** The study findings highlight the impact of ethical and moral challenges accompanying strategic organizational and digital transformation changes implemented by healthcare organizations worldwide. These challenges arise as healthcare institutions adapt to the demands of the 21st century, potentially leading to

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A cluster of colorful geometric shapes (triangles and polygons) in shades of pink, blue, and green, located above the "THANK YOU" text.

# THANK YOU

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