


# Chapter 11


## Beyond Systems: Rethinking Integrated Healthcare With Team-Based Approaches, AI, and Dynamic Capabilities

**Antonio Pesqueira**

 <https://orcid.org/0000-0003-1530-6451>

*ISCTE-IUL, Portugal*

**Dora Almeida**

 <https://orcid.org/0009-0009-1891-2861>

*Dynamic Capabilities Operational Progressive Institute, Switzerland*

**Noah Barr**

 <https://orcid.org/0009-0008-1777-2599>

*DCOPI, Switzerland*

### ABSTRACT

*The rapid advancement of Artificial Intelligence (AI) and the increasing complexity of healthcare systems necessitate a shift from system-centric models to dynamic, team-based approaches for integrated healthcare. This chapter introduces a conceptual and theoretical framework that merges AI capabilities, team-based healthcare models, and dynamic capabilities to create sustainable, patient-centered healthcare systems. It explores the role of AI in enhancing collaboration, decision-making, and operational efficiency while addressing the challenges of siloed healthcare practices.*

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## INTRODUCTION

The complexities of modern healthcare systems demand a shift from traditional, siloed structures to more integrated, dynamic approaches capable of addressing multifaceted challenges. Rapid advancements in technology, particularly in Artificial Intelligence (AI), present transformative opportunities for healthcare delivery. However, the full potential of these technologies remains untapped due to entrenched systemic inefficiencies, lack of coordination among healthcare providers, and the absence of frameworks that promote adaptability and sustainability. This chapter proposes reimagining healthcare systems by integrating team-based approaches, AI, and dynamic capabilities to foster a patient-centered, sustainable future (Ball, 2021).

Team-based approaches promote shared accountability, diverse expertise, and improved communication—all critical for addressing the increasing complexity of patient needs. By fostering a culture of collaboration, these models help eliminate silos, reduce redundancies, and enhance the overall efficiency of healthcare delivery. These models inherently align with the integration of AI, which can catalyze enhancing coordination, operational efficiency, and decision-making. AI-driven decision support tools can provide clinicians with evidence-based recommendations, reducing diagnostic errors and improving treatment outcomes (Dillard-Wright, Shields-Haas, 2021). Additionally, AI can optimize resource allocation, ensuring that healthcare organizations make the most efficient use of their limited resources. However, integrating AI into healthcare systems is not without challenges, including ethical concerns, data privacy, and the need for interoperability. The ethical considerations surrounding algorithmic biases, transparency, and accountability must be addressed to ensure equitable access to AI-driven solutions. Despite these hurdles, AI has the potential to bridge gaps in healthcare delivery by facilitating seamless communication, reducing cognitive overload, and empowering healthcare teams with data-driven insights. Dynamic capabilities enable healthcare organizations to anticipate emerging trends, mobilize resources effectively, and reconfigure structures to remain adaptable in a rapidly evolving environment. Sensing involves identifying opportunities and threats in the healthcare landscape, such as advancements in AI technologies or shifts in patient demographics. Seizing entails capitalizing on these opportunities by adopting innovative tools and processes, such as AI-powered platforms for care coordination. Transforming refers to the ability to realign organizational structures and workflows to integrate new technologies and practices seamlessly. These capabilities are essential for leveraging AI to its fullest potential while ensuring that healthcare systems remain resilient and responsive to external and internal challenges. By embedding dynamic capabilities into their operational strategies, healthcare organizations can foster a culture of continuous improvement and innovation (Ebrahimi & Bridgelall, 2021).

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