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Author(s): Rita Patrizia Aquino, Sergio Barile, Antonio Grasso, Marialuisa Saviano
Healthcare represents a key issue for management in every country. A fundamental problem affects almost every healthcare system: the trade-off between the need to deliver effective healthcare services and the need to control expenses and to ensure the overall sustainability of the system. This problem is a clear expression of management complexity in healthcare systems. With the purpose of searching opportunities for reconciling standardization and differentiation in healthcare management, this work aims to explore possibilities offered by technology by investigating the criticalities and potentialities of the use of 3D printing in producing personalized medications. By adopting an organizational and managerial perspective, our exploratory study focuses on the context in which basic needs and opportunities of personalization in dosage forms mainly emerge: the stage of drug prescription and delivery processes that involve doctors, patients, and pharmacists. Obstacles, risks, and advantages of personalized medicine (PM) are discussed highlighting opportunities offered by the introduction of 3D printing technologies and conditions of success in terms of both effectiveness and cost of healthcare. Key findings lead to a possible model of synthesis in which the potential revolutionary role of drug 3D printing in pharmaceutical compounding and/or manufacturing is highlighted. A 3D printing empowered compounding pharmacy is an innovation we envision to progress toward smarter and more sustainable healthcare.

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