
Towards Vaccine Lifecycle Management: Integrating Data Modeling and Product Lifecycle Management Approaches

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Résumé

Vaccination stands as a cornerstone in public health, offering a pivotal defense against infectious diseases. In the backdrop of formidable global health crises, notably exemplified by the COVID-19 pandemic, the effective management of vaccines across their lifecycle has emerged as a matter of paramount importance. However, the development of a resilient approach and model adept at seamlessly integrating vaccine lifecycle data and information encounters several challenges. Consequently, this paper undertakes the identification of these barriers and conducts an appraisal of existing models in the literature. This study presents a thorough investigation into the utilization of Data Modeling and Product Lifecycle Management (PLM) approaches to fortify vaccine lifecycle management. Through an exploration of alternative product data models and the delineation of specific evaluation criteria within the context of vaccination lifecycle management, this paper offers valuable insights. It underscores the significance of addressing these challenges comprehensively, particularly in light of unprecedented pandemics like COVID-19.

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