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Electronic Physical Activity Record (EPAR): Key for Data Driven Physical Activity Healthcare Services

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Abstract : Medical experts highly recommend to include physical activity in everyone's daily routine irrespective of gender or age as it helps to improve various medical issues or curb potential issues. Simultaneously, experts are also diligently trying to provide various healthcare services (interventions, plans, exercise routines, etc.) for promoting healthy living and increasing physical activity in one's ever increasing hectic schedules. With the introduction of wearables, individuals are able to keep track, analyze, and visualize their daily physical activities. However, there seems to be no common agreed standard for representing, gathering, aggregating and analyzing an individual's physical activity data from disparate multiple sources (exercise pans, multiple wearables, etc.). This issue makes it highly impractical to develop any data-driven physical activity applications and healthcare programs. Further, the inability to integrate the physical activity data into an individual's Electronic Health Record to provide a wholistic image of that individual's health is still eluding the experts. This article has identified three primary reasons for this potential issue. First, there is no agreed standard, both structure and semantic, for representing and sharing physical activity data across disparate systems. Second, various organizations (e.g., LA fitness, Gold's Gym, etc.) and research backed interventions and programs still primarily rely on paper or unstructured format (such as text or notes) to keep track of the data generated from physical activities. Finally, most of the wearable devices operate in silos. This article identifies the underlying problem, explores the idea of reusing existing standards, and identifies the essential modules required to move forward.

Keywords : electronic physical activity record, physical activity in EHR EIM, tracking physical activity data, physical activity data standards
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