Visit Checklist Krai: A digital healthcare management of risk stratification and disease monitoring database for patients with non-communicable diseases

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ABSTRACT

Summary: Visit Checklist (VC) Krai is a comprehensive offline database initiated in Health Clinic Bandar Kuala Krai since 2020 that encompasses individuals receiving outpatient care, including those with non-communicable disease (NCDs). It functions as a highly useful tool for categorizing the risk levels associated with NCDs, monitoring and tracking adherence to medication refills, clinic follow-ups and blood taking appointments. VC Krai incorporates a wide range of patient information, including demographic data, anthropometric measurements (such as weight, height, BMI, & waist circumference), as well as clinical parameters like random blood glucose and total cholesterol levels. Based on this data, individuals are stratified according to their risk profiling. For those individuals with established chronic diseases, their data management in VC Krai expands to include additional parameters such as HbA1c, lipid profile, renal profile, urine protein, estimated glomerular filtration rate (eGFR) and Framingham risk score (FRS). Furthermore, VC Krai monitors these individuals' adherence to clinic follow-ups, medication refills, and hospital appointments to ensure comprehensive disease management. This database offers numerous advantages. Healthcare providers can easily access up-to-date patient information, enabling effective monitoring and decision-making. The database helps identify and track patients who miss appointments or don't adhere to medication refills, ensuring timely interventions. It also offers valuable insights for developing targeted community programs and evaluating their impact. With the ability to monitor patients' health data over time, the database enables adjustments to treatment plans, resulting in improved outcomes. As many other systems, digitalization of the database presents several challenges that need to be addressed. This database requires trained personnel with expertise in data management, privacy regulations, and system administration to ensure accurate data entry and maintenance. It also needs a reliable backup system to mitigate the risk of data loss during device malfunctions or technical issues. Adequate facilities are also necessary for smooth database functioning. Furthermore, the offline nature of the database may require extensive data clean-up efforts to address issues like data overlap and ensure data integrity. Interoperability issues in offline databases also pose challenges for efficient data sharing mechanisms that make it harder for comprehensive disease management in different healthcare settings or regions. Overcoming these challenges requires careful planning, resource allocation, and ongoing maintenance to ensure a successful digitalization process. VC Krai undoubtedly represents a step forward in the digitization of health records, particularly for outpatient attendees in primary care. While it does face challenges, its benefits in improving patient care and management are undeniable. By recognizing the value of VC Krai and actively working together to address the challenges, the potential for improved healthcare outcomes and more efficient health record management can be realized.