ClinAlly

CLINICAL DECISION SUPPORT SYSTEM

DEVELOPED IN COLLABORATION WITH

All India Institute of Medical Sciences (AIIMS), New Delhi

Centre for Chronic Disease Control (CCDC)

Centre for Chronic Disease Control

WHO Collaborating Centre for Surveillance, Capacity building and Translational Research in Cardio-Metabolic Diseases

Background

Cardiovascular diseases, diabetes, and chronic obstructive pulmonary disorders are major causes of death and disability worldwide, particularly in India. Numerous studies conducted in India have revealed inadequate adherence to clinical management protocols, low rates of screening and diagnosis, and excessive use of unnecessary medications, resulting in poor quality of care. Bridging these critical gaps in quality dimensions, clinical decision support systems (CDSS) play a vital role in facilitating evidence-based management for patients. Additionally, there is an increasing demand from insurance companies, government regulators, and citizens for enhanced accountability and quality of care.

To address this demand, researchers from the All India Institute of Medical Sciences (AIIMS), New Delhi, and the Centre for Chronic Disease Control (CCDC) have developed a CDSS based on digital health technology. This CDSS, known as "CARDIOMETCARE-m," has been copyrighted in India under copyright No: L-61376/2015. It incorporates the most recent clinical management guidelines, validated by clinical experts, and has been tested across different levels of care.

During the mPower Heart Project (2012 – 2014), the CDSS was piloted in the Solan district of Himachal Pradesh. It was implemented in five Government Community Health Centres and the District Hospital. The results showed significant reductions in blood pressure and fasting glucose levels among patients with hypertension and diabetes. The findings of this project were published in the Journal of the American Heart Association (1). Subsequent research evaluations of the CDSS, with an expanded list and scope of disease conditions, have demonstrated similar improvements in clinical outcomes and quality of care (1–5).

Following these positive outcomes, AIIMS and CCDC have entered into a Collaborative Research Agreement with Cardiometcare Plus Health Solutions Private Limited (ClinAllyTM) to further develop the CDSS (CARDIOMETCARE-m) and commercially offer the services in a B2C or B2B model.

Adoption and Advocacy

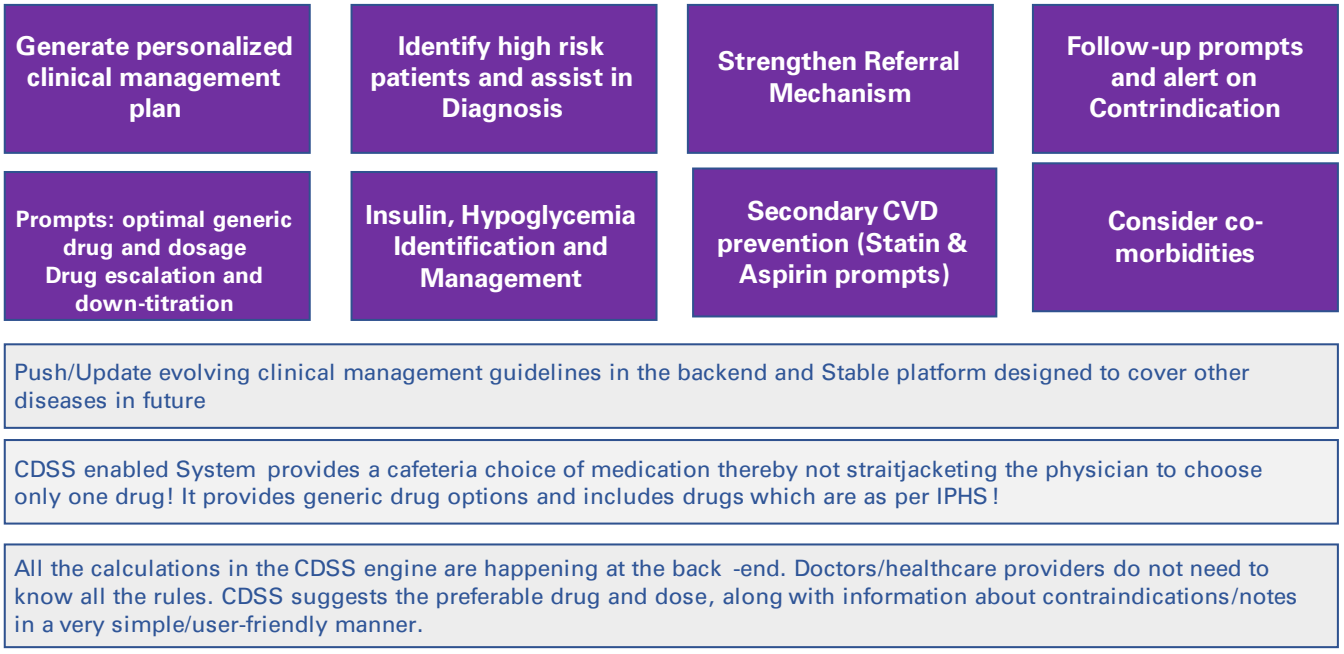
- The Ministry of Health & Family Welfare, Government of India recently launched “Operational Guidelines: National Programme for Prevention and Control of Non-Communicable Diseases (2023-2030)." These new guidelines advocate the importance of CDSS and recommend its utilization in healthcare facilities.
- The CDSS for hypertension and diabetes has been integrated into the National Program for Non-communicable Diseases (6).
- The state governments of Tripura and Mizoram have adopted CDSS for statewide implementation. It has been implemented in 56 government hospitals benefiting more than 200,000 patients (7).
- The World Health Organization (WHO) Southeast Asia Regional Office (SEARO) and the Republic of Maldives have adopted our CDSS for the development of the mPEN App. This app is based on guidelines and recommendations from the WHO's Prevention of Essential NCDs (PEN) package.
- Our CDSS project was featured as an impactful case study in the World Heart Federation (WHF) Roadmap for Digital Health in Cardiology, launched at the ESC Congress 2022 in Barcelona, Spain (8).
- Our CDSS was selected by the National Health Systems Resource Centre (NHSRC) for presentation at the Fourth National Summit on Good, Replicable Practices & Innovations in Public Health Care Systems in India. The summit took place in Indore in July 2017.
- The Indian Council of Medical Research (ICMR) recognized our CDSS as an innovation showpiece in the "Exhibition on Innovations in Medical Sciences and Biotechnology" held at the Rashtrapati Bhavan in March 2015.

About Clinical Decision Support System (CDSS)

The CDSS offers evidence-based care that is tailored to individual patient clinical profiles. It achieves this by utilizing complex clinical management algorithms to generate personalized and customized management plans. These plans include optimal drug recommendations, dosage information, and warnings regarding contraindications, among other relevant details. The CDSS functionality can be seamlessly integrated into digital health platforms such as Electronic Health Records (EHR), Hospital Management Information Systems (HMIS), and Telemedicine Platforms. This integration enables the CDSS to support continuum of care, which is especially critical for individuals with chronic conditions.

One key advantage of the CDSS is that all calculations are performed in the backend, relieving doctors and healthcare providers from the burden of memorizing all the rules. Instead, the CDSS presents the preferred drug, dosage, and relevant information about contraindications or notes in a user-friendly manner. This simplifies the implementation of CDSS recommendations in clinical practice, making it easily understandable and accessible for healthcare professionals.

Features/Functionalities



Impact

- Tailored to drive the digital transformation of hospitals as per ABDM guidelines.
- Facilitate high-end chronic care with existing resources through the use of digital technology.
- Standardization of care across all health facilities.
- Facilitate task-sharing with nurses or care-coordinators in patient care.
- Enhance patient engagement and care support with the involvement of nurses/care-coordinators.
- Better control of chronic conditions and overall improved Quality of Care.
- Reduces workload for medical officers.

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