

Grand Valley State University

**ScholarWorks@GVSU**

---

Health Informatics and Bioinformatics  
Capstone Projects

School of Computing and Information Systems

---

Winter 4-27-2020

## **A Systematic Review on Challenges associated with Computerized Decision Making in Dentistry**

Kalyani Yedla

*Grand Valley State University*

Follow this and additional works at: [https://scholarworks.gvsu.edu/mbi\\_capstone](https://scholarworks.gvsu.edu/mbi_capstone)

---

### **ScholarWorks Citation**

Yedla, Kalyani, "A Systematic Review on Challenges associated with Computerized Decision Making in Dentistry" (2020). *Health Informatics and Bioinformatics Capstone Projects*. 1.

[https://scholarworks.gvsu.edu/mbi\\_capstone/1](https://scholarworks.gvsu.edu/mbi_capstone/1)

This Article is brought to you for free and open access by the School of Computing and Information Systems at ScholarWorks@GVSU. It has been accepted for inclusion in Health Informatics and Bioinformatics Capstone Projects by an authorized administrator of ScholarWorks@GVSU. For more information, please contact [scholarworks@gvsu.edu](mailto:scholarworks@gvsu.edu).

---

**[Title]**  
**HIB Capstone**

**Presented By: Kalyani Yedla**  
**Advisor: Dr. Guenter Tusch**

---

**Abstract:** Clinical decision-support systems (CDSS) have significant potential in providing dental health professionals with wide range of tools for analyzing patient data and making decisions related to diagnosis, disease prevention and treatment of a wide range of health problems. However, there are challenges associated with CDSS in dentistry. Objective of this review is to address the different challenges associated with computerized decision making in dentistry.

**Methodology:**

A systematic search was attempted according to the PRISMA guidelines along different databases like PubMed, NCBI, EMBASE, Google Scholar including Journal of dental education. Research papers on Computerized decision making in dentistry are viewed targeting mostly on challenges associated in its implementation. Quality assessment was done based on the CASP.

**Results:**

As a result, 16 research papers are extracted based on the guidelines of the PRISMA. Research papers used in this review are published no later than 2012. Further analysis was conducted on the extracted papers to derive the challenges of CDSS. **Conclusion:**

In summary, current systematic review has revealed that implementation of CDSS significantly affected by the substantially high costs of CDSS acquisition, lack of related knowledge regarding the system. In addition, it has few technical challenges, legal challenges and challenges associated with the Practioner perception on system.

[Abstract]