

RACGP position statement: Electronic clinical decision support in general practice

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1. Position

Electronic clinical decision support (eCDS) is well established in general practice but it has potential to play an even greater role in supporting the delivery of high-quality, evidence based care. The RACGP recommends:

- an overarching body should be created to encourage the advancement of eCDS and oversee the development and maintenance of technical and clinical standards
- development of eCDS for use in primary care must include extensive input from GPs including GPs suitably experienced in health informatics
- eCDS should be integrated with clinical information systems (CISs), either incorporated within the CIS or via direct electronic communication from within the system
- eCDS standards, at a minimum, should enable users to identify: attribution (who developed the eCDS), endorsement (who reviewed and approved it), age (when the information was prepared, including revision number to track changes over time), audience (what setting the eCDS is to be applied in) and strength of the evidence on which recommendations are based
- eCDS content should be drawn from up to date, evidence based and speciality relevant guidelines
- eCDS should be unobtrusive and information presented in a way that supports current clinical workflow, allowing the user to quickly make an informed decision and take action
- It should support clinicians to engage in patient-centred care such as shared decision making
- eCDS systems should be optional to use and designed to allow clinical judgement to override recommendations given that no CDS system can account for the breadth of clinical scenarios and clinical autonomy remains an important guiding principle.

2. Background

Multiple forms of eCDS systems are available in different formats. These range from simple computerised references to sophisticated systems integrating knowledge and patient clinical data. eCDS can provide person-specific information, presented at appropriate times during a consultation, to enhance decision-making in the clinical workflow. This information can be presented as alerts (e.g. for potentially dangerous situations), reminders (e.g. for preventive care), recommendations for investigations or interventions, data reports and summaries, templates, and relevant reference information.

The most common uses of eCDS is to address clinical needs to assist with accurate diagnoses, screening for preventable diseases, prompt for appropriate interventions, and identifying potential adverse drug events. eCDS requires specific medical and biographical knowledge about a patient and uses a reasoning or mechanism that uses this data to generate and present helpful information to the user as care is being delivered.

3. Benefits of eCDS

CDS can have a number of important benefits, including:

- **Enhancing patient safety** – timely information at the point of care to help inform decisions about patient care.
- **Enhancing health outcomes** – suggestions for possible investigations and diagnoses that match a patient's symptoms.
- **Increasing quality of care** – treatment guidelines and recommendations for ongoing care.
- **Reducing medication errors and therefore adverse events** – drug dosage recommendations and alerts for drug interactions and drug disease adverse outcomes.
- **Improving efficiency** – provide additional information regarding the best treatment and ongoing care from a patient safety and cost-benefit perspective.
- **Improving provider and patient satisfaction** – provide access to information that ensures patient safety and supports existing clinical decision making systems.
- **Cost benefits** – improved use of the Medicare Benefits Schedule (MBS).
- **Enhancing communication and data exchange** – can populate clinical details in pathology or radiology requests, allowing more targeted reporting from pathologists and radiologists.

4. Challenges

GPs must be able to trust the information and advice provided by eCDS. The current unregulated environment creates significant risks for practitioners due to the varying quality and currency of information, as well as the lack of consistency across different software. It is important that there is confidence in the development processes that underpin eCDS and in the way that information is delivered.

Clinical guidelines and treatment pathways that are incorporated into CIS should be accepted and supported by the profession and developed in a way that supports integration. The quality of the information and evidence underlying it are major determinants in impact of eCDS on patient safety and quality of care.

Many high quality guidelines are not integrated into eCDS. There is no process or agreement as to which guidelines should be used to develop eCDS. For example, there is no requirement to utilise endorsed guidelines (e.g. National Health and Medical Research Council or RACGP endorsed). To facilitate integration, guidelines need to be available in a standard format that supports integration into eCDS systems.

Useability is critical. Information must be presented in a way that supports current clinical workflow, allowing the user to quickly make an informed decision and take action. Integration with clinical information systems is essential. Accessing external resources outside of a GP's primary software program is time consuming and creates a barrier to the use. However, eCDS can be built into local CIS systems and accessed externally as required from the local system, or not incorporated at all in the local system and only accessed externally when required.

5. Conclusion

Both the RACGP and the eCDS software community recognise that addressing these challenges is a critical piece of work which needs to be progressed. The RACGP is advocating for the establishment of a body to oversee and progress work in this area and is well placed to lead this work.