

CLINICAL DECISION SUPPORT **THE WAY FORWARD!**



Canadian Association of Radiologists
L'Association canadienne des radiologistes

CLINICAL DECISION SUPPORT – THE WAY FORWARD!

On June 8, 2018 the Canadian Association of Radiologists (CAR) hosted a symposium to discuss Clinical Decision Support (CDS) in Canada. The CAR is interested in CDS as a means of providing referring physicians access to the latest diagnostic imaging guidelines. The purpose of the symposium was to bring together key stakeholders who have an interest in CDS. The focus of the meeting was on following topics:

- *the current state of CDS systems and options*
- *the implementation of CDS systems in Canada*

The meeting was a success with over 40 people in attendance. There was participation from various provincial health authorities, the College of Family Physicians of Canada, the Canadian Association of Emergency Physicians, Choosing Wisely Canada, Canada Health Infoway, the Canadian Institute for Health Information, the CAR Referral Guidelines Working Group as well as our corporate partners and some vendors specific to the CDS market. The keynote speaker, Dr. Denis Remedios, representing the Royal College of Radiologists, travelled from England to share his knowledge and experience with CDS systems and he delivered an engaging and informative presentation on the current state of diagnostic imaging guidelines and the rollout of a CDS project across the UK.

KEY CONSIDERATION FOR CDS

During the symposium participants had the opportunity to discuss the following areas:

1. The advantages of CDS to patients
2. Provincial support for a CDS system and implementation
3. Opportunities and barriers within the Canadian market which differentiate us from others
4. Process for the CAR to develop guidelines that are easily integrated into CDS
5. The best way to integrate CDS into EMRs
6. Ownership of the data from CDS systems
7. Sharing data from different CDS implementations to help improve CDS and the guidelines within
8. Federal and provincial advocacy that would aid CDS implementation

In addressing the above factors, the symposium participants displayed their support for CDS and outlined some opportunities as well as concerns for such systems.

BENEFITS OF A CDS SYSTEM(S)

Most participants agreed that a properly executed CDS strategy would drive more appropriate care. Logically more appropriate care would also lead to less unnecessary tests, decreased wait-times, minimize repeat exams and ultimately improve patient care. One group put forward the possibility of allowing patients access to the CDS system, encouraging patients to decrease their demands for imaging. As a benefit to both patients and physicians, CDS could also provide primary health care professionals a better understanding of diagnostic imaging options for a variety of clinical conditions.

RESEARCH

Peer reviewed studies of CDS implementations were referenced in the discussion; however, some participants felt that additional research and even pilot projects are required to clearly demonstrate the benefits of CDS. Generating this evidence would be an asset to receiving support from governments for CDS implementation. Additionally, it was suggested that provincial health authorities may be more supportive of CDS if there was federal leadership in implementing these systems. Leadership in the implementation of CDS could provide a common framework reducing interoperability issues of such systems.

Other issues surfaced during the discussion including appropriate testing of all types, appropriate care and referrals as systemic issues. The suggestion being to explore CDS in a broader implementation strategy beyond medical imaging, which would make it even more desirable for the provinces to support it.

POTENTIAL BARRIERS TO IMPLEMENTATION

The participants saw many barriers to the development and integration of CDS in Canada. The most frequently mentioned barrier was the fragmentation of our health care system which has multiple markets and financial models. Organizations currently providing CDS systems stated that it is not always clear who they should deal with. Another barrier is that some areas of the country continue to use analogue ordering systems, which do not allow for an integrated CDS system.

Cost was identified as a significant barrier. Our health care systems it not “free”, it is funded by Canadians through tax dollars. The additional cost of another information technology system needs to be justified and the value of CDS implementation has not been well established in Canada.

OPPORTUNITIES FOR IMPLEMENTATION

There are, however, opportunities. With many areas of Canada having underdeveloped electronic health record and electronic ordering systems, being able to integrate CDS at the earliest stages of digitization is a great advantage. During the meeting CDS was highlighted as an opportunity for a federal institution to take leadership on this health care initiative. By partnering with other national associations such as the Canadian Association of Emergency Physicians (CAEP), the College of Family Physicians of Canada (CFPC), the Society of Rural physicians of Canada, the Royal College of Physicians and Surgeons of Canada, and other federal government agencies, a standardized CDS implementation could be created for the benefit of all Canadians.

CDS vendors often promote their software as system that decreases overuse. The physicians present felt that discussions about preventing overuse were not always helpful and instead we should look at appropriateness as a whole including the underuse of appropriate imaging.

CDS can be implemented as a stand-alone software system which provides physicians with the latest referral guidelines and decision support. The participants agreed that the best way to ensure CDS uptake is to create a seamless user experience by integrating it into the clinical workflow as part of the EMRs. Integration can provide other benefits such as immediate feedback and more rapid patient scheduling. Physicians do not want a more complicated workflow for referrals. CDS implementation needs to make physicians’ lives easier, not harder.



COLLABORATION AND PARTNERSHIP IN DEVELOPMENT

Physicians are interested in the data that CDS system will generate. Achieving support from physicians for CDS implementation would include providing more data regarding CDS systems and providing access to research. Of the CDS vendors present, there was some variability in how they see their rights to the data in their systems. Any implementation of CDS within Canada should ensure that some form of data sharing agreement is in place in order to obtain better evidence for the guidelines, improve the guidelines and improve the systems because one of the barriers to CDS is seen as a lack of supporting data. Any implementation in place should be monitored to ensure that the latest guidelines are being followed. Recognizing that the data in these systems has value, there should be incentives for CDS vendors to share the data.

RECOMMENDATION

The CAR Referral Guidelines Working Group, led by Dr. Martin Reed, recognized that CDS is the modern tool required to implement new imaging referral guidelines developed by the CAR. They also recognize that relationships need to be built among physician groups for change to take place. To that end it was suggested, and it has already begun, that CAEP and CFPC and the CAR work together to develop guidelines that are applicable to all front-line physicians and health practitioners. By continuing to work together and by involving referring physicians in the development of guidelines, we can have a more effective approach to appropriate medical imaging referrals.

THE OUTCOME FROM THIS MEETING WAS A CONSENSUS THAT IMPLEMENTING CDS SYSTEMS IN CANADA IS THE PATH FORWARD.

NEXT STEPS

We have only begun to embark on CDS system discussions. A cooperative approach and additional research is required to move this initiative forward. It is also essential to have the provincial perspective and support from the health authorities. Having CDS systems in place nationally would ensure that physicians have access to the current referral guidelines to help their patients to make informed decisions.

The CAR will continue to take a leadership role by bringing all the various stakeholder groups together to promote implementation of CDS in the Canadian health care system.

