Introduction

Research shows that two out of every three clinical encounters generate a question from a clinician about a diagnosis or treatment. Clinicians encounter about 11 clinical questions per day, but only 40% of their questions are ultimately answered. If all clinicians had their questions answered in real time, it would change approximately five to eight treatment decisions per day.

Often these unanswered questions stem from a clinician’s lack of knowledge or an inability to access the appropriate information when making decisions. Today, there are a number of clinical decision support (CDS) solutions available in the market that are designed to break down these barriers and close the knowledge gaps.

CDS is designed to bring best practices and evidence-based knowledge to the point of care. The best CDS solutions have robust content that is trusted by clinicians, are easy to navigate and use, and can integrate into the systems that clinicians use everyday.

As the NHS Reforms place pressure on both quality of performance and “doing more with less”, it’s more important than ever to select a CDS solution that has a proven association with improved outcomes. Both QIPP and the “Right First Time” initiatives have components which are associated with learning from the experience of others and delivering quality patient care. Evidence-based clinical decision support is at the heart of all these programs.
**QUESTION #1**

**Does your CDS solution answer clinical questions and provide treatment recommendations at the point-of-care?**

Clinicians look to clinical decision support solutions to answer questions quickly and easily. It’s essential that the resource you select has robust content covering the majority of medical specialties. Drug information, graphics, medical calculators and patient information should be key elements included in the content. Some CDS solutions offer this content as part of the core product while others may provide these at an additional cost.

The content should also be organized in a way which mirrors how clinicians think to make it easier for them to find the information they need quickly at the point-of-care. Links to related content, corresponding patient information topics, drug information, drug interaction information and original evidence should be integrated into the content.

Above all, the CDS solution must provide treatment recommendations. When evaluating solutions, it’s important to distinguish those that simply aggregate primary sources of medical evidence, and more comprehensive solutions that provide guidance for treatments under a range of scenarios. Even when there is contradictory evidence or the evidence is thin, clinicians still need to act. It’s important they have a CDS solution to guide them in making decisions about how to best treat their patients.

**Key questions to ask:**
- Does your CDS solution provide treatment recommendations?
- Does your CDS provide answers to most clinical questions?
- Are both the evidence and recommendations graded?
- Is the content available on desktop and mobile devices?

**QUESTION #2**

**Who authors and edits the content?**

The quality of a CDS system ultimately rests on the quality of the content. The creators of that content should be physician specialists, with expertise in the topic they author. Further, your clinicians have a right to know the identity of the authors and editors for each topic. Make sure the CDS system you select provides information about authors in a transparent way including their specialty and their academic affiliations.

**Key questions to ask:**
- Who are your authors and editors?
- Do you clearly identify the authors and editors of each topic?
- Are they physicians, medical students, or BSc or MSc level staff?
Are your authors and editors physician specialists in the topic they author or edit?

Are your authors active in clinical practice?

Are your authors affiliated with leading academic medical institutions?

Are your authors and editors knowledgeable about current research in their specialty area? Are they published in their specialty?

Are your authors considered experts within their specialty by the medical community?

**Is your clinical decision support system evidence-based?**

Evidence-based medicine is “the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence-based medicine means integrating individual clinical expertise with the best available clinical evidence from systematic research” (Sackett DL, Straus SE, Richardson WS, Rosenberg W, Haynes RB. Evidence-Based Medicine: How to Practice and Teach EBM. London: Churchill Livingstone; 2000.)

By providing clinical decision support that is evidence-based, your clinicians have access to best practices, and can safely eliminate practices that are proven to be ineffective. This will ultimately lead to increased quality of care. Evaluation of the evidence, in and of itself, is a complex field. It’s important that the evidence be evaluated by physicians who are trained in evidence evaluation, clinical epidemiology and the proper application of evidence-based medicine to clinical practice. It’s also important that your CDS solution provides guidance when no high-quality evidence exists. Clinicians still need to treat patients when only low quality or conflicting evidence is available. Your CDS system needs to present that evidence and provide a grade which makes the strength of the recommendation and the quality of the evidence transparent.

**Key questions to ask:**

- Is your content always based on the most current and best available evidence?

- Are your literature reviews conducted by physicians who are specialists in evidence evaluation, clinical epidemiology, and evidence-based medicine?

- Do you grade the body of evidence for quality level or do you grade each piece of evidence by evidence type alone?

- Do you provide guidance to clinicians when only low quality or conflicting evidence exists?
Do you notify clinicians when the body of evidence has reached an inflexion point suggesting a change to their usual practice?

**QUESTION #4**

**How frequently is the content in your CDS solution updated?**

Clinicians need the most current evidence-based medical information when making critical decisions at the point-of-care. The CDS solution you adopt should update content continually and notify clinicians when new information suggests a change in practice. Keep in mind that merely adding systematic reviews and links to new studies is not particularly helpful to clinicians. The solution you select should summarize the evidence for your clinicians and direct them on how new evidence should be applied in practice.

**Key questions to ask:**
- How frequently is the content in your CDS solution updated?
- What is the process for updating content?
- Are important updates published immediately?
- How is practice-changing information communicated?

**QUESTION #5**

**Does the clinical decision support solution improve quality?**

CDS solutions may claim to improve quality of care, but few actually offer evidence to support these claims. Effective CDS solutions should be able to prove an association with improved quality outcomes on high-priority health conditions, such as pneumonia, congestive heart failure and surgical infection prevention.

A CDS solution associated with improved outcomes enables your clinicians to provide better patient care, and, in turn, helps you meet CQC requirements and targets. Given the increasing trend towards patient choice, demonstrating strong patient outcomes is a decisive factor in public perception.

Overall, a CDS solution should be able to demonstrate changes in decision making that lead to better quality of care and patient outcomes.

**Key questions to ask:**
- Is there any evidence that shows an association between your solution and improved outcomes?
- How can your solution align with my facility’s current quality objectives?
- What key quality metrics can it impact?
How can your solution help us deliver efficiency savings demanded by the QIPP Agenda?

Healthcare professionals in the UK are charged with continuing to deliver improvements in quality of care while working to increase productivity and eliminate waste. This will demand that healthcare professionals work tirelessly to identify opportunities for big efficiency savings.

A great CDS solution should not only help with improving the quality of care, it should also impact the bottom line by saving doctors time, decreasing the length of stay, eliminating unnecessary diagnostic testing and referrals and even decreasing mortality rates.

Key questions to ask:
- Is there any evidence that your CDS solution can help generate economic efficiencies?
- Can it help my trust align with the QIPP agenda?
- What economic metrics can it impact?

Does your CDS solution provide deeper patient engagement?

Clinical decision support solutions should encourage shared decision making between clinicians and patients.

The patient information should be written by the same authors and editors as the clinical information, proving a continuum of care from what clinicians are reading and then sharing with patients. It’s also important that the information is current and updated on the same schedule as the clinical topics.

It’s also imperative that the patient information is written in a format that patients can easily understand. A CDS solution should provide patient education materials at different reading levels to meet the varying needs of patients.

Key questions to ask:
- What are the sources for the patient information content in your DS solution?
- At what reading level is your patient education material written?
- Can the information be printed and emailed to patients?
- Can patient information be accessed from your EHR and other clinical workflow systems?
Is your clinical decision support system comprehensive?

The importance of comprehensive coverage cannot be understated. Comprehensive coverage of medicine is challenging due to the complexity and diversity of the field. The questions that clinicians have at the point of care are often granular and cross specialties due to patient co-morbidities. For a clinical decision support system to be useful to your clinicians, it needs to answer the majority of their clinical questions at the point of care, including the granular questions in complex areas of medicine. Many clinical decision support systems provide limited coverage of medicine — for instance, they cover primary care medicine only, or provide coverage of only the most basic medical topics.

Key questions to ask:

- Do you cover primary care medicine exclusively, cover only one or two specialties, or do you provide comprehensive coverage including specialties?
- Does your system include coverage of areas such as Nephrology, Neurology, General Surgery, Obstetrics, Oncology, Pulmonary Medicine, Critical Care Medicine, and Hospital Medicine?
- Is your system useful primarily to students and new clinicians only, or does your system answer the majority of questions, including those of experienced clinicians?
- Can your system answer questions on patients with co-morbidities, including specific treatment recommendations on how to treat these patients?
- Does your system present coverage of conflicting studies and make a recommendation to the clinician based on the evidence?
- Does your system provide integrated drug information, and, ideally, a drug interaction tool?
- Does your system provide integrated, searchable graphics useful to clinicians at the point of care in screening, diagnostics and treatment?

Do clinicians trust the content?

Before you make the investment in a clinical decision support solution, ascertain whether your clinicians will actually use it. It essentially boils down to trust. Do clinicians trust the information to make clinical decisions?

Trust is built upon a number of the key factors, including the expertise of authors and editors, the quality of the content and the currency of the information. Beyond talking with peers and colleagues, the best litmus test to know if your clinicians will trust the solution is to have them evaluate it.
Key questions to ask:

- What is the clinician satisfaction rate with the CDS solution?
- How many clinicians use the solution?
- How many hospitals subscribe to the solution?
- How often is the solution used by clinicians on a daily, monthly and yearly basis?
- Do you offer a trial period for clinicians to test the program?

Summary

Selecting a CDS solution is more than providing information to your clinicians. It’s about choosing a solution that can impact the overall quality of care at your institution.

Knowing the right questions to ask CDS providers will help guide you when making a purchasing decision. Above all, perhaps the most important factor to consider is whether it’s a solution your clinicians will trust.
About UpToDate

UpToDate, part of Wolters Kluwer Health, is an evidence-based, physician-authored clinical decision support resource which more than 850,000 clinicians in 164 countries trust to make the right point-of-care decisions. The more than 5,700 world-renowned UpToDate physician authors, editors, and peer reviewers utilize a rigorous editorial process to synthesize the most recent medical information into trusted, evidence-based UpToDate recommendations, proven to improve patient care and quality. More than 60 research studies confirm the widespread usage of UpToDate and its association with improved patient care and hospital performance — including reduced length of stay, fewer adverse complications, and lower mortality.  

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Wolters Kluwer Health is a leading global provider of information, business intelligence and point-of-care solutions for the healthcare industry. Serving more than 150 countries worldwide, clinicians rely on Wolters Kluwer Health’s market leading information-enabled tools and software solutions throughout their professional careers from training to research to practice. Major brands include Health Language®, Lexicomp®, Lippincott Williams & Wilkins, Medicom®, Medi-Span®, Medknow, Ovid®, Pharmacy OneSource®, ProVation® Medical and UpToDate®.

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References

