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BUILDING A CLINICAL DECISION SUPPORT STRATEGY THAT CONSISTENTLY DELIVERS SUSTAINABLE, HIGH-QUALITY, COST-EFFICIENT HEALTHCARE

First in a series based on a Thought Leadership Brief
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SUMMARY

Clinical Decision Support (CDS) is considered to be one of the key drivers of meaningful healthcare reform. As such, it is not something that should be implemented without careful consideration (and periodic reconsideration) of what is needed and how it will be used. No matter where provider organizations are in their Clinical Decision Support programs, it is not too late to step back and take a truly strategic approach to improving the efficiency and effectiveness of a CDS system to help improve quality and cost of patient care.

INTRODUCTION: ELEMENTS OF A MEANINGFUL CDS STRATEGY

The U.S. healthcare reform revolution has forced us to rapidly re-evaluate how our physicians, nurses, and other providers access and utilize clinical information. "Clinical Decision Support" (CDS) is one of several vaguely defined concepts frequently cited as essential to advancing reform. Driven by financially punitive legislation, today's providers have scrambled to fill perceived CDS needs. But in doing so, these provider organizations have routinely failed to first sit back and think about *the process of building a truly impactful CDS strategy.*

While this may seem irreversible, it is important that providers understand that it is not too late to construct a well thought-out strategic approach to CDS, retroactively applying it and adjusting their course toward truly meaningful value improvement in healthcare delivery.

This paper provides a framework for development of a successful CDS strategy, built on *a clear goal, four pillars, a layered foundation and "pushing" and "pulling" Clinical Decision Support solutions.*

A CLEAR GOAL

Panicked by significant reimbursement threats posed by healthcare legislation, many providers quickly purchased CDS solutions without first clarifying their basic CDS goal. If this describes your organization, now is the time to assess your current CDS status and modify your plan, as needed. The ideal goal should be lofty, achievable only through effort, investment, re-evaluation, modification and persistence. Often described by multiple inter-related but unique adjectives, the goal of most successful CDS systems is to achieve some or all of the following: *consistent, sustainable, uniform, high-quality, cost-efficient healthcare.*

THE FOUR PILLARS

Not long ago, "provider" meant "physician." No longer. In order to aggressively move from reactive, acute, inpatient care to proactive, preventative and maintenance, ambulatory care, we must dramatically expand our definition of "provider" to include all who play key roles in healthcare delivery. Providers then are most successfully stratified based upon how they interpret, evaluate and utilize clinical information, as represented by four pillars.

Driven by financially punitive legislation, today's providers have scrambled to fill perceived CDS needs.

The first pillar is *Physicians*. This includes both inpatient and ambulatory generalists and specialists, given that as a group, physicians are fairly homogeneous in how they learn, interpret and utilize clinical information. The second pillar is *Nurses*. No traditional provider is so dramatically impacted by reform as those represented by this pillar, as the realization of meaningful healthcare reform requires a significant expansion of nursing duties and involvement. The third pillar, *Other Clinicians*, includes pharmacists, therapists and other non-physician, non-nurse traditional care providers. While less homogeneous than either physicians or nurses, grouping these providers is strategically practical when developing a CDS strategy. Finally, successful healthcare reform demands that we all accept that *the greatest burden for health and healthcare must fall onto patients themselves*. In fact, the most critical component in achieving a strategic CDS goal is the adoption of the "*Patient As Provider*." Thus Patients (including, family, friends, and other social support) are the fourth pillar.

The Structure of a Successful CDS Strategy.

THE FOUR FOUNDATIONAL LAYERS

There are *four broad requirements that all major CDS solutions must meet* in order to advance to your strategic goal.

(1) *Current, credible, evidence-based content.* A significant proportion of today's providers search for clinical information via Google or on Wikipedia or other "fast-search" sources, despite recognition that much of the information offered is neither current nor credible nor evidence-based. This is because speed to answer is highly valued by today's over-burdened providers. Thus r*apid access must be added to reliable content to promote usage.* In addition, CDS solutions that *draw from a single source* of content dramatically reduce the likelihood that different providers receive conflicting clinical information (which can confuse and endanger patients).

(2) *Clinical information that serves all major care provider types* (the four pillars), delivering content in the format most digestible for each provider type.

(3) *Provision of clinical information at all points of patent care.* Again, we must expand our traditional perspective to include not only the hospital and physician office, but also ambulatory and rehabilitation centers, skilled nursing facilities, pharmacies and commercial primary care clinics. To truly engage our patients, we must even consider places of employment and the patient home as points of care.

(4) *CDS solutions that are minimally disruptive to provider workflow.* This requires acceptance that, for the traditional provider, current CDS solutions do not accelerate workflow. In fact, they can interrupt and slow many care activities. That said, strategically implemented CDS solutions provide significant benefits to patients and providers alike that can outweigh drawbacks.

EMPOWERMENT THROUGH "PUSH" AND "PULL" SOLUTIONS

The final characteristic of a successful CDS strategy is an appreciation that physicians, nurses, other clinicians, and patients *are most empowered by a combination of both "push" and "pull" CDS solutions.*

Pull solutions require voluntary engagement. Like car seat belts, they provide great value, but only when used. The majority of today's CDS solutions are pull, requiring providers to interrupt workflow, access the solution and search for the content of interest.

> The most critical component in achieving a strategic CDS goal is the adoption of the "Patient As Provider."

Like automobile airbags, push solutions automatically deliver what's specifically needed to the user. And as with car safety systems, *the combination of CDS pull and push solutions offers the greatest opportunity* to drive the delivery of consistent, uniform, sustainable, high-value healthcare.

A multitude of CDS pull solutions for physicians are available through a variety of *reference solutions*. Today's physician push solutions go beyond automatic medication alerts. Order sets and the first credible care pathways now automatically present physicians with patient- and scenario-specific guidance. Conforming to the pushed information is not required (the response to the common physician objection that push solutions promote "cookbook medicine"); however, physicians are *forced to consider the evidence-based information.*

There are also a variety of CDS pull solutions for nurses, including various reference solutions, some of which allow nurses to selectively review skill activities via text, images and videos. Two major categories of CDS push solutions target nurses. The first are aimed at *continuing nurse education:* advanced teaching of concepts and skills, new nurse orientation and certification (and re-certification) solutions. The second category, *care-planning solutions,* drive consistent, sustainable, high-value direct patient care by pushing situational, patient-specific clinical information to nursing staff. Again, the combination of push and pull solutions offers the greatest value.

While more diverse than physicians or nurses, *Other Clinicians* also greatly benefit from a combination of push and pull CDS solutions. Some push solutions used by physicians (order sets) and nurses (care plans) also push current, credible, evidence-based content to this provider pillar. As with nursing, push solutions also are available that enhance the education of these providers through advanced teaching of concepts and skills, new clinician orientation, and certification (and re-certification) solutions. Finally, numerous pull (reference) solutions are available, specific to the type of "other" provider (such as drug information systems specifically designed for clinical pharmacists).

Patients routinely pull clinical information via Google or from Wikipedia and many even less credible sites. Fortunately, there is a plethora of credible information offering patients and their loved ones guidance that meets the four foundational requirements. But in facing the enormous challenge of shifting the population away from questionable sources to these credible sites, we must appreciate that most patients are seeking simple, clear, lay explanations of complex clinical issues, delivered at their educational level and in their primary language. Given the overwhelming importance of the *Patient As Provider*, more push solutions are entering the market that not only alert patients to engage in specific activities (for example, checking their blood glucose), but also prompt the patient to electronically report important clinical data back to the provider (such as side effects resulting from a newly prescribed drug).

ROLLING OUT AN IMPACTFUL CDS STRATEGY

While a clear goal, four pillars, four foundational layers and "push" and "pull" solutions are common to successful CDS strategies, provider organization budgets, timelines and specific needs are unique. Thus a CDS strategy must be designed and regularly modified to address the many variables specific to each provider organization.

Fortunately, when based on a single source of current, credible evidence-based content, the various CDS push and pull solutions can be implemented in a modular fashion and in virtually any order. That said, if resources are limited, the greatest ROI results from *push solutions* that, by their very nature, automatically present providers with credible clinical information and guidance. When resources allow, complementary pull solutions should be added, further empowering each of the four pillars.

Today, virtually all provider organizations utilize at least a handful of CDS tools (at least those available through their EHRs). *Regularly stepping back to assess and modify your CDS strategy is wise,* providing an opportunity to confirm or adjust your approach based on your current situation (budget, resources and provider and patient needs). If your strategic goal is still appropriate, move on; however, if it needs a minor or even major adjustment, modify it immediately.

Against your goal, evaluate your active CDS solutions. Do they meet all of the four foundational requirements? Are all four provider pillars served through a combination of push and pull solutions? Then focus your strategy on where CDS solutions gaps persist.

GOING FORWARD

Whether your provider organization is just beginning to contemplate a CDS strategy or you've already waded into the CDS pool, take a moment to step back. Bring together representatives of the four pillars with other major stakeholders whose active participation is necessary to achieve success. Clearly define (or redefine) an ambitious, meaningful CDS goal for your organization. Review your resources and prioritize your patient needs. Then select your next CDS solutions and develop a timeline for implementation. Such an approach empowers your organization as you strive for the delivery of consistent, sustainable, uniform, high-quality, cost-efficient healthcare.

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