

Frequently asked questions

Why is evidence-based medicine important?

Evidence-based medicine is the practice of identifying methods of care that are proven effective based on the literature and documented studies. Evidence-based protocols are a means of systematically implementing such proven practices at the provider level — literally putting the evidence into the physician’s hands at the point of care. Following protocols can significantly improve clinical outcomes, reduce costs and safeguard patient safety. However, research suggests that in the U.S. evidence-based medicine is practiced approximately half the time¹. This lack of standardization contributes to sub-optimal quality of care and medical errors². Variation in care practices also contributes to clinical disparities across ethnic groups and regions³.

What is the clinical impact of diagnosis-based order sets?

Diagnosis-based order sets apply evidence of clinical efficacy from medical literature to a patient’s diagnoses. These order sets incorporate all relevant aspects of care or “clinical pathways” to ensure best practice compliance, improved morbidity, reduced complications, shortened length of stay (LOS), lower costs and fewer unnecessary tests.

Currently, most hospitals have developed a limited number of diagnosis-based order sets to address high volume patient types such as Congestive Heart Failure and Community acquired Pneumonia. Typically, these guidelines are made available to the prescriber as a paper-based checklist 1-3 pages in length. A patient presenting multiple diagnoses would require the prescriber to manually audit the guidelines for therapeutic duplication, redundant tests, medication interactions and the like. Additionally, the practical limitation of reviewing existing protocols often results in these checklists becoming outdated – no longer reflecting best practices guidelines.

1 McGlynn, Elizabeth A., Asch, Steven M., Adams, John, Keeseey, Joan, Hicks, Jennifer, DeCristofaro, Alison, Kerr, Eve A. The Quality of Health Care Delivered to Adults in the United States. *N Engl J Med* 2003 348: 2635-2645.

2 Rothschild, JM, Landrigan CP, Cronin JW, et al. The Critical Care Safety Study: The incidence and nature of adverse events and serious medical errors in intensive care *Critical Care Medicine*. 2005 33(8):1694-1700.

3 Wenneberg JE. Understanding geographic variations in health care delivery. *N Engl J Med*. 1999; 340:52-53.

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What is Automated Admissions Decision Support (AADS)?

ordering to medication administration and vital signs monitoring. AADS specifically addresses the needs of the attending physician at the time of hospital admission. Most hospital orders are written at the time of admission, setting the care plan for the patient. The initial order is a driver for quality and effectiveness for the entire patient's stay; therefore, it is imperative for the overall care of the patient to get it right at admission.

An AADS system guides the prescriber or hospitalist through diagnosis-based order sets using software that provides reminders on evidence-based medicine, documentation and all collaboration needs of the hospital staff. This results in a comprehensive care plan which when printed becomes the chart reference for all caregivers.

How is AADS different from Computerized Provider Order Entry Systems (CPOE)?

AADS differs from CPOE systems in scope, interaction with core systems and complexity. Unlike CPOE systems, which facilitate on-going order management throughout the inpatient stay, AADS is focused solely on generating comprehensive admission orders that establish the inpatient care plan. Changes to that care plan follow established hospital procedures apart from the AADS system. AADS can benefit physicians as a stand-alone or integrated solution unlike CPOE systems, which seek to integrate all clinical data relevant to prescribing such as lab results. The most advanced AADS application also has the ability to merge order sets for patient's presenting with

multiple diagnoses — a capability not yet available in enterprise CPOE systems. In these ways, an AADS system presents far fewer challenges to prescriber workflow and information technology integration. AADS is more affordable, can be implemented in a shorter time frame, has met high physician acceptance and receives favorable marks for clinician usability.

What is Order Optimizer?

A software program designed by physicians at the hospitalist company, Intercede Health, Order Optimizer is an AADS system that generates a single admission care plan from one or more diagnosis-based order sets. The program allows the physician to select multiple diagnoses from a list that contains, a steadily increasing number, (178 presently) of the most common admitting diagnoses. Order Optimizer also provides the ability for physicians and institutes to add additional diagnoses, physician or hospital protocols and other site-specific content.

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What clinical knowledge powers the decision support within Order Optimizer?

Order Optimizer protocols were developed by an in-house group of specialists utilizing evidence-based processes focusing on meta-analyses, specialty society statements and medical literature. Identified best practices are regularly reviewed and authenticated by American Medical Reviews (AMR), a clinical review entity. AMR is a third-party resource that assigns experts to review each of the order sets on a consistent monthly basis. Pharmacy orders are rationalized in the First Databank system to ensure safe dosing and avoid interactions and therapeutic duplications.

How does the merging feature of Order Optimizer help physicians?

Eight of ten Americans age 65 or older are living with heart disease, diabetes or some other form of chronic illness, according to a report by the U.S. Centers for Disease Control and Prevention (CDC)⁴. A quarter of these adults age 65+ take five or more medicines on a regular basis.⁵ The co-morbidities of most patients require careful treatment of not only the primary diagnosis for hospitalization, but also the patient's other chronic conditions. Upon admission, multiple diagnoses can present complex and time consuming prescribing challenges. The physician must ensure that care is comprehensive while reconciling duplicate therapies, potential interactions, dietary restrictions and best practice or regulatory compliance issues.

Order Optimizer's patent-pending merging algorithm automatically creates a merged order set encompassing all of the patient's diagnoses. This allows the physician to efficiently create one comprehensive patient-specific care plan that accurately addresses all of the patient's needs for medications, laboratory tests, radiology, dietary, respiratory, physical therapy, etc. By merging the orders for multiple diagnoses, all caregivers are armed with the optimum treatment plan. The order set is then easily printed or uploaded electronically in a concise, computer-generated format, creating standardized, legible treatment information in patient's chart or electronic health record.

⁴ The State of Aging and Health in America 2007. Centers for Disease Control. March 2008.

⁵ Medco Drug Trends Report 2008, May 2008 (data from 2007)

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How does Order Optimizer assist physicians in the safe prescribing of medications?

Unintentional medication discrepancies are common and often due to errors taking an accurate medication history when generating patient orders⁶. Order Optimizer provides physicians with several decision support features that allow for safe prescribing of medications. First, the system assists the physician in documenting existing patient medication prescriptions and reconciling those orders with their admitting orders. Order Optimizer also assists in medication selection based on appropriate evidence, controls wrong dose errors by suggesting appropriate dosing, avoids therapy duplications or interactions and prevents prescribing medications to which the patient is allergic. Order Optimizer helps the facility remain in compliance with the Centers for Medicare and Medicaid Services (CMS) and The Joint Commission (TJC) mandates for patient safety.

Besides medications, what sort of ordering errors can Order Optimizer prevent?

Order Optimizer provides assistance in preventing the ordering of unnecessary or duplicative laboratory or diagnostic tests and ensures that tests ordered are the correct choice for specific diagnoses. Order Optimizer strictly adheres to safe medical nomenclatures and approved abbreviations per TJC mandates. The system measures performance and documentation of TJC Core Measures or other user-defined clinical indicators of care. Furthermore, Order Optimizer encourages prescriber compliance with the hospital's formulary. One of the greatest benefits of Order Optimizer is not only in the orders it facilitates, but in the reduction of unnecessary orders. Cases in which dietary restrictions, code status, discharge planning and level of care are inadequately documented or omitted altogether at admission may result in longer lengths of stay, complications and even patient harm. Order Optimizer helps with proper documentation for DRG coding, which may improve reimbursement for the hospital.

⁶ Pippins JR, Gandhi TK, Hamann C, Ndumele CD, Labonville SA, Diedrichsen EK, Carty MG, Karson AS, Bhan I, Coley CM, Liang CL, Turchin A, McCarthy PC, Schnipper JL. Classifying and predicting errors of inpatient medication reconciliation. *J Gen Intern Med.* 2008 Sep;23(9):1414-22. Epub 2008 Jun 19.

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How does Order Optimizer impact physician ordering time?

Order optimizer is proven to cut physician ordering time by as much as 65% in the following three ways:

1. The “Favorites” tool within Order Optimizer allows physicians and other care providers to develop pre-populated evidence-based order sheets, which can be merged or changed by the physician on an as needed basis. Favorites gives the provider the ability to move through the program more rapidly for faster order generation and enables the physician to document by exception, rather than repetition.
2. The Site Customization Process which allows order sets to be customized for site-specific medications and protocols of care. This customization process assists in saving physicians time when collaborating with hospital care initiations. Also facilitating the compliance with formularies and protocols of care.
3. The Merging Technology is logic-driven so the software automatically combines orders for multiple diagnoses to streamline workflow. Order Optimizer’s physician-designed interface is intuitive and easy-to-use. Physicians no longer have to strike duplicate tests, drugs and therapies from redundant clinical pathways. The system generates a clean, streamlined care plan in less time.
4. Thorough Guidance Cues provided by Order Optimizer during admission orders reduces omissions and eliminates the need for the physician to deal with clarification questions from other care givers or to place forgotten orders later.

How does Order Optimizer benefit other caregivers?

Order Optimizer provides nurses, respiratory therapists, laboratories, diagnostic departments, dieticians and others with clear, concise orders in the patient chart. All necessary information is consolidated in a single document from the time of admission so that caregivers know where to find it. Just as Order Optimizer saves physicians time, it also reduces the time that would otherwise be required of other caregivers to contact the physician for missing, conflicting or incomplete orders. The system can meet the needs of any organization by providing orders electronically or printed for the chart.

Can Order Optimizer be used in the Emergency Department?

The Emergency Department is seen as the initial point of entry for most inpatient facilities, accounting for more than 50% of all admissions into the hospital. Order Optimizer employed in emergency care gets the appropriate treatment started earlier for patients with urgent care orders. Emergency Room physicians can quickly and easily create comprehensive admission orders, rather than abbreviated “holding orders” which may delay implementation of all the care a patient needs on admission. Such detailed admission orders eliminate the lag between the ER physician’s temporary orders and the follow-up attending physician’s inpatient orders, smoothing the transition between care areas.

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What are some of the benefits that Order Optimizer provides to other stakeholders?

Health Plans and Physicians

Health plans strive to improve efficiency without compromising patient care. Health plans benefit from Order Optimizer through its ability to reduce the costs of care by lowering the number of redundant and costly procedures and tests. Templates guide physicians to use the health plan's formulary and most cost-efficient medications. Order Optimizer helps physicians and the health plan to easily determine the appropriate level of care. "Favorites" allows health plans to have their own evidence-based protocols built into the physician's orders, creating greater ease of compliance. Ultimately, more thorough care plans generated with Order Optimizer aid in decreasing readmission rates.

Hospitals

Quality, safety and efficiency are hospitals' top priorities. Order Optimizer provides hospitals with many benefits including increased throughput and efficiency, reduced utilization of unnecessary resources, formulary compliance, decreased costs of care per admission, and improved physician management of length of stay. Order Optimizer allows for improved coding accuracy and drives proper documentation for Diagnosis Related Group (DRG) coding. Order Optimizer helps improve patient safety and reduce medical errors by systematizing legible, concise orders. "Favorites" allows hospitals to define their own evidence-based protocols for the physician and other care providers. Finally, Order Optimizer supports quality improvement by assisting in the tracking of core measures.

Patients

Order Optimizer's ultimate goal is to facilitate optimal health outcomes from the care provided to patients. Order Optimizer improves care quality and patient safety. Comprehensive care plans and merging technology address all medical issues allowing for smoother transitions from one care environment to another. Order Optimizer allows for efficient care through use of cost-efficient drugs and procedures, which are highly valuable to all patients.