Clinical Decision Support (CDS)

“A key functionality of health IT and certified EHRs that provides health care providers and patients with general and person-specific information, intelligently filtered and organized at appropriate times, to enhance health and health care”

--- www.cms.gov

Why do we do CDS?
- Clinical decision support provides timely information, usually at the point of care, to help inform decisions about a patient’s care.
- Clinical decision support can effectively improve patient outcomes and lead to higher-quality health care.

Reference: Agency for Healthcare Research and Quality: Advancing Excellence in Health Care

Benefits of CDS
- Patient Safety
- Lower costs
- Reduce patient inconvenience
- Promote Use of Evidence Based Practice
- Improve efficiency

Ten Commandments of CDS
- Speed is Everything
- Anticipate Needs and Deliver in Real Time
- Fit in the Users Workflow
- Little Things Can Make a Big Difference
- Recognize the Physicians will Strongly resist Stopping
- Changing Direction is Easier than Stopping
- Simple Intervention Works Best
- Ask for Additional Information Only When you Really Need It
- Monitor Impact, Get Feedback and Respond
- Manage and Maintain Your Knowledge-based Systems


5 Rights of CDS
- Deliver the Right information
- In the Right CDS intervention format
- At the Right Point in workflow
- To the Right person
- Through the Right channel


Beware of CDS
- Poorly designed interventions can be:
  - Distracting and disruptive.
  - Lead to frustrated providers.
  - Unintended consequences.
- Overuse of CDS causes user dissatisfaction & ignoring the CDS tools.
- Inadequate planning, resources, and communication about CDS interventions being planned leads to failure.
- Requires continuous quality improvement.

Reference: http://www.himss.org/library/clinical-decision-support/what-is

CDS Tool Kit
- Order Sets
- Health Maintenance
- Changes to Patient Header
- Navigators
- Scoring Systems
- Recommended Alternatives
- Alerts
- Banners
- Medication Warnings and Alerts
- Preference Lists
- Required Documentation

Roles of Informatics Team
- Subject Matter Experts (SME)
  - Submit Request
  - Provide Evidence Based Practice
  - Cheerleader
- Physician Informaticist (PI)
  - Liaison between SME and Build Team
  - Create/On-Going Support CDS Standardization Naming, Format
  - Basic knowledge of EHR functionality
- Application Build Analyst
  - Review CDS tool request with PI
  - Understand functionality within the EHR to build the correct tool to meet the “ask”
  - Build out the request
  - Test and Validate build, first with team and then with PI
  - Utilize standard format & naming conventions
- Report Writers/Analytical Analyst
  - Work with PI & Build team related to metrics
    - Baseline
    - Ongoing maintenance
    - Identify discrete data for reporting
- Champion
  - Provide Evidence Based Practice
  - Scoring Systems
  - Validate Workflow & Content
  - Champion
  - Sign Off on CDS Tool

Reference: http://www.himss.org/library/clinical-decision-support/what-is

Inadequate planning, resources, and communication about CDS interventions being planned leads to failure.

**CDS is what differentiates an EMR from a very costly ‘pencil’**

Sample Best Practice Advisory (BPA)

Skills Utilized
- Analysis
- Knowledge of Data and Data structures
- Evaluation
- Human Computer Interaction
- Design & Development
- Change Management
- Validation
- Collaboration