

Exercises for Analysis Phase

Analysis, Part 1: What Clinical Practice Guideline are we implementing in a DSS and why?

<u>Five Analysis Areas for PIs and Knowledge Modelers</u>	<u>Questions</u>
<u>(1) Clinical Significance</u>	<p>In what clinical area is a DSS most needed? What is your area of expertise and why is a DSS needed over other types of program intervention? How many patients would be impacted by the system? Will the DSS focus on diagnosis and/or management? Is there a real-world clinical need for a DSS at the VA? How often would the DSS be used by providers? Which providers might use the system?</p>
<u>(2) Guideline Examination</u>	<p>What VA guidelines are available? What year were they developed? Why is a model needed and not just simple rules? How comprehensive is the guideline? Does it integrate multiple guidelines outside the VA? What are those guidelines and how respected are they? What percent of the guideline is evidence based versus expert consensus? How much resource did the VA put into developing the guideline? Is there a strong need to use national guidelines outside the VA? Is it necessary to use more than one guideline and why? Is the medical condition one in which knowledge is advancing rapidly?</p>
<u>(3) Usage of the System</u>	<p>How many users are there? What level of training and experience to they have in management of the illness? What level of training and experience do they have with DSSs? How technologically literate are the users?</p>
<u>(4) Purpose of the System</u>	<p>What is the system designed to accomplish? Would the DSS focus on prevention, diagnosis, and/or treatment of a condition? Would the DSS need to be supplemented with other computerized tools?</p>
<u>(5) Context</u>	<p>What is the technical infrastructure at the setting where the guideline would be implemented? What kind of personal computer are the users using (work stations, PDAs, etc.)? What human, technical, and budgetary resources are available? What is the funding environment like? Who would need to “buy-in” to development of the DSS? Who would need to “buy-in” to the maintenance of the DSS?</p>

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- Site Map
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- Policy
- Presentations



Clinical Practice Guidelines

Office of Quality and Performance 

CARDIOVASCULAR

- [Chronic Heart Failure \(CHF\)](#)
- [Hypertension \(HTN\)](#)
- [Ischemic Heart Disease \(IHD\)](#)
- [Dyslipidemia \(LIPIDS\)](#)

DEPLOYMENT HEALTH

- [Medically Unexplained Symptoms: Chronic Pain & Fatigue](#)
- [Post-Deployment Health Evaluation & Management](#)

ENDOCRINE

- [Diabetes Mellitus \(DM\)](#)

EYE

- [Glaucoma](#)

GENITOURINARY TRACT

- [Erectile Dysfunction \(ED\)](#)
- [Pre-End-Stage Renal Disease \(ESRD\)](#)

MENTAL HEALTH

- [Major Depressive Disorder \(MDD\)](#)
- [Post Traumatic Stress Disorder \(PTSD\)](#)
- [Psychoses \(PSYCH\)](#)
- [Substance Use Disorder \(SUD\)](#)

MUSCULOSKELETAL

- [Low Back Pain \(LBP\)](#)

OB/GYN

- [Uncomplicated Pregnancy \(UCP\)](#)

PAIN

- [Opioid Therapy for Chronic Pain](#)
- [Post Operative Pain](#)

PULMONARY

- [Chronic Obstructive Pulmonary Disease \(COPD\)](#)

REHABILITATION

- [Stroke Rehabilitation](#)

OTHER

- [Biological, Chemical, and Radiation Induced Illnesses, Blast & Explosions](#)
- [Gastroesophageal Reflux Disease \(GERD\)](#)
- [Management of Tobacco Use](#)

U.S. PREVENTIVE SERVICES TASK FORCE RECOMMENDATIONS

- [Approved Recommendations from the Evidence-Based Practice Workgroup](#)
- [Guide to US Preventive Service Task Force \(USPSTF\) Clinical Preventive Services 2005 Recommendations](#)

What's New!

Clinical Practice Guidelines

Implementation of evidence-based clinical practice guidelines is one strategy VHA has embraced to improve care by reducing variation in practice and systematizing "best practices". Guidelines, as generic tools to improve the processes of care for patient cohorts, serve to reduce errors, and provide consistent quality of care and utilization of resources throughout the system. Guidelines also are cornerstones for accountability and facilitate learning and the conduct of research. The guidelines on this site are those endorsed by VHA's National Clinical Practice Guidelines Council.



Clinical practice guidelines initially evolved in response to studies demonstrating significant variations in risk-adjusted practice patterns and costs. Researchers hypothesized that establishing criteria for the appropriate use of procedures and services might decrease inappropriate utilization and improve patient outcomes.

VHA Guidelines

VHA, in collaborations with the [Department of Defense \(DoD\)](#) and other leading professional organizations, has been developing clinical practice guidelines since the early 1990s. Guidelines for the Rehabilitation of Stroke and Amputation and the Care Guide for Ischemic Heart Disease were among the first distributed throughout VHA in 1996 and 1997. Since that time, numerous others, including guidelines on Diabetes Mellitus, COPD, Major Depressive Disorder, Psychoses, Tobacco Use Cessation, Hypertension, and more, have been developed and distributed for implementation throughout the system.

VHA defines Clinical Practice Guidelines as recommendations for the performance or exclusion of specific procedures or services for specific disease entities. These recommendations are derived through a rigorous methodological approach that includes a systematic review of the evidence to outline recommended practice. Guidelines are frequently displayed in the form of an algorithm, which is a set of rules, in a flowchart format, for solving a problem in a finite number of steps. Clinical guidelines are seen by many as a potential solution to inefficiency and inappropriate variation in care. However, it is acknowledged that the use of guidelines must always be applied in the context of a provider's clinical judgment for the care of a particular patient. For that reason, the guidelines may be viewed as an educational tool analogous to textbooks and journals, but in a more user-friendly format.

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Specifications for a DSS: Sample Table of Contents for
ATHENA: Opioid Therapy

Table of Contents

Project Overview and Purpose

General Purpose of the DSS and Audience for this Document
The Clinical Practice Guideline
Specific Goals of the DSS
Expert Panel
Roles and Responsibilities of the Team

Usage Specifications

Provider Definition: User Demographics and Anticipated Tasks
Patient Definition: Demographics
Flowchart of Workflow Leading to Trigger for DSS
Definition of Data Extract Timing
Definition of Triggers for DSS to Launch

Functional Specifications for Knowledge Base (Patient Recommendations)

Data Entry and Update Advisory
Categories of Guidelines
Categories of Recommendations
Categories of Patient Data

Functional Specifications for Support Tools

Graphs
Checklists
Assessments
Guides
Glossary

Technology Specifications

Data Extraction from VistA
Demographics
Pharmacy
Labs
Appointments/Consults
ICD Codes
Vitals
Health Factors
Progress Notes
JAVA Development
Client Listener
Computation of Recommendations (EON and Protege)
Display of Recommendations (GUI Integration)
Write-Back of Data to VistA
Vitals
Progress Notes
Health Factors

- Support Tools
 - Graphs
 - Checklists
 - Assessments
 - Guides
 - Glossary
- Integration of the Entire System
- Deployment of the System

- Testing Specifications
 - Offline Testing
 - System Testing
 - Accuracy Testing
 - Usability Testing
 - Online Testing
 - Provider Feedback
 - Patient Acceptability
 - Quantitative Outcomes

- Organizational Readiness Specifications
 - Organizational Buy-In
 - Training
 - Incentives

- Evaluation Specifications
 - Outcome Measures for Changing Provider Behavior**
 - Outcome Measures for Improving Patient Health**

Analysis, Part 2: What are the specifications for the DSS?

<u>Five Analysis Areas for Knowledge Modelers</u>	<u>Questions</u>
<u>(1) Purpose of the System</u>	Will the DSS focus on prevention, diagnosis, assessment, and/or management? What are the specific objectives of the DSS?
<u>(2) Outcome Measures</u>	How will we know that we have improved physician behavior? How will we know that we have improved patient outcomes?
<u>(3) Usage of the System</u>	Who are the users? Where are their machines located? Define usage scenarios. Where would the best trigger for the DSS be? Understand current barriers to following guideline in current setting. Identify other attempts ongoing in terms of managing the condition.
<u>(4) Define Data and Clinical Knowledge</u>	Identify guideline sections to implement. What are the basic categories of the guidelines you will implement? What VA data is needed? What VA data is actually available? Do you need to collect additional data and why? What type of recommendations will be generated?
<u>(5) VA Technology Environment</u>	Data extraction, local versus national. Data write-back, local versus national. Interface to CPRS for trigger?

Group Exercise, Requirements for the ATP III

Mock VA Clinic Scenario:

Background:

NIH is currently promoting the primary prevention of coronary heart disease (CHD) as a way to reduce the burden of CHD through the implementation of the ATP III guideline. There is good evidence that treatment can substantially reduce the risk of CHD development and CHD morbidity and mortality.

Problem:

An assessment at the VA Health Care System identifies that 40% of outpatients with CHD do not have a lipid measurement and of those with above target lipids and CHD, 50% do not have a prescription for LDL-lowering drug therapy. 40% of patients admitted with CHD are discharged without LDL management strategy. The Board requests the clinical manager to identify barriers to following guidelines and develop programs to improve patient screening and therapy. Performance measures need to improve for both physician practice and patient outcomes as this is how quality enhancement is measured at the VA.

Setting:

The VA Health Care System provides primary care to 20,000 insured adults in eight locations in a 10,000 square mile area covering urban and rural settings. Providers in primary care clinics include physicians (50%), physician assistants (15%) and nurse practitioners (35%). The VA Health Care System uses an electronic medical record to document all practice and ordering of tests and medications. The data repository is centralized.

Workflow:

The system is currently paperless. Patients are checked in by the nurse who is responsible for checking vitals, entering them into the electronic health record during the check-in. The nurse can order screening tests and other procedures when needed, but there is no guarantee that the most recent lab screens are available when the patient is seen by the clinician. The clinician uses the electronic health record during the visit. All orders (lab, pharmacy, consults, and exams) are entered in the computer during or immediately after the visit. Clinician documentation is entered in "progress note" during or after the visit. The clinics have protocols for primary prevention and follow-up of common chronic diseases when risk factors are present.

Purpose of the System:

Which Guideline:

What is the general purpose of the HBC ATP III CPG?:

What are the specific goals of the DSS? How would you prioritize the sections of the ATPIII Guideline? Which sections would you focus on first and why?:

Outcome Measures

How will provider behavior improvement be measured?

How will patient outcome improvement be measured?

Usage of the System:

What behaviors do you want to change? (hint, think about the outcomes you want to impact and whose behavior needs to change – the providers? the patients?)

**Screening:
Management:**

In what setting would the DSS be implemented? (e.g., inpatient, outpatient, geriatrics, laboratory, pharmacy, speciality clinics)

**Screening:
Management:**

Who are the possible user groups of the DSS? Who can act on the behaviors you want to change? (e.g., nurses, physician assistants, physicians, laboratory specialists, pharmacists):

**Screening:
Management:**

What kind of DSS could provide the most impact? A computerized pop-up DSS is an obvious choice, but what other types of applications might provide even more leverage? (e.g., email, pages, clinical reminders, MyHealtheVet).

**Screening:
Management:**

Who are the patients who will benefit from the DSS?

**Screening:
Management:**

When will the DSS be triggered in the workflow?

**Screening:
Management:**

Define Data, Clinical Knowledge, and Recommendations:

What are the basic categories of guidelines (clinical knowledge) you will implement?

What patient data will you use to make recommendations?

Will you need to collect additional patient data and why?

What are the basic categories of recommendations made by your DSS?

VA Technology Environment:

What are the data extraction issues?

What are the CPRS trigger issues?

What are the data write-back issues?

Planning and Information Collection for Form Specifications:

What activities did you conduct to form your specifications for your DSS?

What additional assumptions did you make to form the specification document for your DSS?