

Conceptualizing the ATPIII Guideline: From guideline text to formal statements

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Session objectives:

Identify scope and definition of clinical content from the clinical practice guideline to generate patient specific recommendations.

- Identify and define concepts to encode.
- Identify and define recommendations to encode.

I. Target Population: Who is eligible for the guideline recommendations?

Reference materials:

- ATP3 Executive Summary Page 3-5;
- ATP3 At-a-glance steps 2-4

Directions: Define the inclusion and exclusion criteria for patients eligible for guideline recommendations in a formal statement. The target population tells the DSS for which patients the system should generate recommendations.

HINTS:

- Is it restricted by gender?
- Is it restricted by age?
- Is it restricted by race?
- Are there any other conditions that would make patients ineligible?

EXAMPLE:

Define the Target Population:

Target population isn't restricted by gender or race. The guidelines are however written for adults over the age of 20. In addition, pregnancy can be excluded for reasons that we can talk about.

Target Population in a Formal Statement:

Target population is (All adults ≥ 20 years old and if sex = F then not pregnant)

Action if:

A. Target population meets above criteria

Include in study.

B. Target population does not meet criteria

Exclude from study.

II. Screening: What is the screening procedure?

Reference Materials:

- ATP3 Executive Summary Pages 3-5;
- ATP3 At-a-glance Steps 2-4

Directions: Define the tests used for screening and write formal statement

Hints:

- Which tests are mentioned?
- Are there any time constraints? (Most recent test? Test result in last 2 months)

Define the screening tests:

Action: Recommendations generated by the DSS:

- If there is no lipid profile, what would we like the DSS to recommend?
- If the most recent lipid is old (defined by you or the guideline or the expert panel), what would we like the DSS to recommend?

Screening Procedure in a Formal Statement:

III. Risk Factors

Reference materials:

- ATP3 Executive Summary Page 3-5;
- ATP3 At-a-Glance step 2-4
- HCUP ICD9 hierarchy.xls

Directions: The purpose of this section is to further develop the concepts of risk factors. Risk factors are used to group patients into risk categories.

- a. What ways exist in the guidelines for defining risk and how are they distinguished?

Workbook: Conceptualization of Guideline I: Defining Guideline Concepts

b. Concept Definition

Directions: Define the following risk factors as thoroughly as possible. You may choose to extract ICD9 codes from the HCUP file. Use the first section to brainstorm and define the concept in English, then come up with a formal statement defining the risk factor.

Hints:

- Keep in mind what can and cannot be defined by patient data (ex. Can you find smoking history in electronic medical record?)
- Are you going to define your disease concepts by ICD9 codes, procedure codes, medications or a combination of these factors?
- Do you need provider or patient data entry to get the information?
- Is time a factor in the risk factor?

EXAMPLE - RISK FACTOR 1: CIGARETTE SMOKING

Definition of cigarette smoking:

If patient has smoked more than 5 cigarettes a day for the past 6 months, then consider them a current smoker. However, this form of a definition is hard to capture from the patient and this type of detail would most likely not be in the EMR so we could use ICD codes instead.

Cigarette smoking in a formal statement:

IF (ICD9 code = 305.1 or 305.10 or 305.11 or 305.12 or 305.13) then tobacco use is equal to true.

RISK FACTOR 2: CLINICAL CHD

Definition of clinical CHD:

Clinical CHD in a formal statement:

RISK FACTOR 3: HYPERTENSION

Definition of hypertension:

Hypertension in a formal statement:

RISK FACTOR 4: LOW HDL

Definition of low HDL:

Low HDL in a formal statement:

RISK FACTOR 5: FAMILY HISTORY OF PREMATURE CHD

Definition of family history of premature CHD:

Family history of premature CHD in a formal statement:

Workbook: Conceptualization of Guideline I: Defining Guideline Concepts

RISK FACTOR 6: AGE

Definition of age:

Age in a formal statement:

IV. Define Risk Categories

References: ATP III: Executive Summary Table 5
ATP III: At a glance – Step 5

Directions: Please write a formal statement about the risk categories. Use the first section to brainstorm and define the concept in English, then come up with a formal risk category definition.

RISK CATEGORY: 0-1 RISK FACTOR

Definition of risk category “0-1 risk factor”:

The following are classified as major risk factors in the guideline:
cigarette smoking
hypertension
low HDL
family history
age

Risk category “0-1 risk factor” in a formal statement:

Hint: Can use mathematical functions (average, count) or Boolean operators (and, or, not)

IF patient has:

- (COUNT OF: risk factors is ≤ 1)
AND (NOT CHD /CHD equivalent)
THEN
0-1 risk category evaluates to TRUE

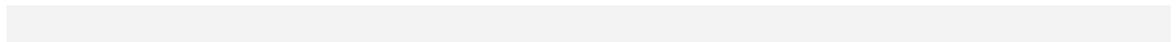
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RISK CATEGORY: CHD/CHD EQUIVALENT

Definition of risk category CHD/CHD EQUIVALENT:

Risk category CHD/CHD EQUIVALENT in a formal statement:

Hint: Can use mathematical functions (average, count) or Boolean operators (and, or, not)



V. Define Overall Patient LDL Goals

References: ATP III: Executive Summary Table 5

ATP III: At a glance – Step 5

Directions: Define overall LDL goals per risk category in English and then write a formal statement. Note that LDL goals for the patient are lower than the LDL level at which you initiate therapeutic lifestyle change or drug therapy.

Definition of LDL goals per risk category:

Example: If patient has CHD or CHD risk equivalent then the patient LDL goal is < 100mg/dL.

LDL goals per risk category in a formal statement:

Hint: Can use mathematical functions (average, count) or Boolean operators (and, or, not)

Example: IF patient has:

- (COUNT OF: risk factors is ≤ 1)*
- AND (NOT CHD /CHD equivalent)*
- THEN patient's LDL goal is <160mg/dL*

VI. Define Threshold at which to consider drug therapy

References: ATP III: Executive Summary Table 5

ATP III: At a glance – Step 5

Directions: Define Threshold at which to consider drug therapy in English and then write a formal statement.

Definition of Threshold at which to consider drug therapy:

Threshold at which to consider drug therapy in a formal statement:

Hint: Can use mathematical functions (average, count) or Boolean operators (and, or, not)

VII. Create a management algorithm defining the output of the DSS

References: ATP III: Executive Summary Table 5

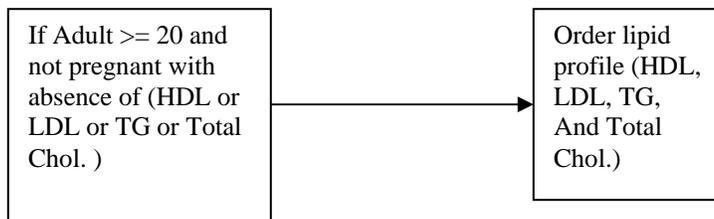
ATP III: At a glance – Step 5

Hints:

- This algorithm should be similar to the algorithm in the clinical practice guidelines.
- Define specific recommendations to issue for the following patient scenarios.

EXAMPLE:

Algorithm for patient without lipid profile:



Algorithm for patient with risk category 0-1 risk factor:

Workbook: Conceptualization of Guideline I: Defining Guideline Concepts

Algorithm for patient with risk category CHD or CHD risk equivalent: