Using Terms & Rules in Public Health:
Are We Speaking the Same Language?

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Wednesday, August 14
9:15 to 10:30am

Agenda

- Why Does It Matter?
- Naming and Defining Terms
- Writing Business Rules

Why Does It Matter?

- Evaluation & Forecasting
  - Consistency
  - Accuracy
  - Timeliness
- IIS Best Practices
  - Common understanding
  - Better alignment
- General Communication
  - Less miscommunication
  - Less rework

Optimal Outcomes

Naming and Defining Terms
What's the Problem?

Writing Business Rules
What's the Problem?

Avoiding Errors

Terms:

- **Responsible Party**: a person responsible for a patient
- **Reminder/Recall Notification**: a communication indicating that a patient has one or more recommended vaccinations due or past due

Business Rule:

- A **reminder/recall notification** for a patient must be sent to the patient's **responsible party** if the patient is under 18 years of age.

Potential Outcome:

- Reminder/Recall Notification sent to the wrong person.

Avoiding Errors

Options:

1. Revise the definition of Responsible Party to be more specific.
2. Create a separate concept for people who should receive notifications (e.g., Reminder/Recall Notification Contact).
3. Add a rule to indicate which kinds of responsible parties should receive reminder/recall notifications:
   - A reminder/recall notification for a patient may be sent to a responsible party only if the responsible party has one of the following relationships to the patient:
     - Parent
     - Guardian.

Avoiding Ambiguity

Terms:
- **Date of Birth**: a patient's date of birth
- **Minimum Age**: the earliest age a vaccine may be administered

Business Rule:
- A patient's minimum age date must be calculated as the patient's **date of birth** plus the **minimum age**.

Potential Outcomes:
1. Valid vaccine dose administered is evaluated as invalid (or vice versa).
2. Patient is administered a vaccine at the incorrect age

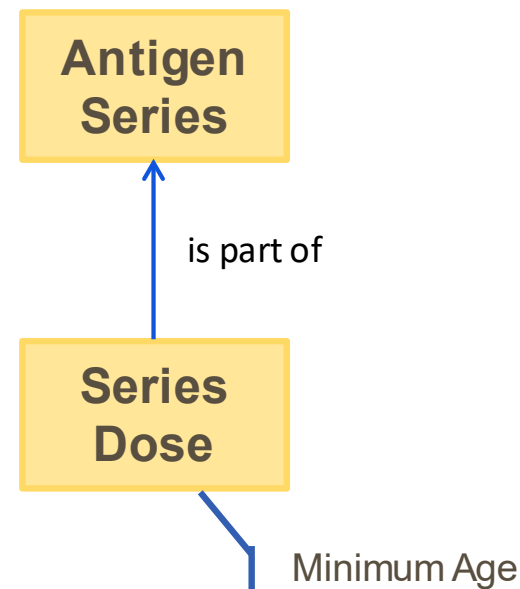1. CDC: CDSi Logic Specification v4.0, p. 31, 110, 112

Avoiding Ambiguity

Option:

1. Revise business rule based on concept/domain model:

   A patient's minimum age date *for a series dose within an antigen series* must be calculated as the patient's date of birth plus the minimum age for the series dose.

2. Check for comprehension/readability

Antigen Series

is part of

Series Dose

Minimum Age

Avoiding Inconsistency

1. A <u>patient series</u> must be considered a <u>scorable patient series</u>
    if all the following are true:

    - The <u>patient series</u> is a **standard patient series**
    - The **<u>series priority</u>** is the same or greater **<u>series priority</u>** as any **patient series** within the same <u>series group</u>.

2. A <u>patient series</u> must be considered a <u>scorable patient series</u>
    if all the following are true:

    - The <u>patient series</u> is a **regular patient series**
    - The **<u>series ranking</u>** is the same or greater **<u>series ranking</u>** as any **relevant patient series** within the same <u>series group</u>.

Avoiding Inconsistency
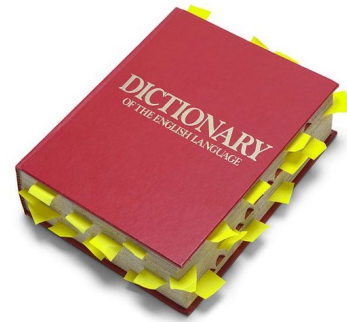
Potential Outcomes:

- Duplicate rules
- Duplicate implementations
- Rules become out of sync

Options:

1. Ensure all rules use defined terms
2. Identify synonyms
3. Select a "preferred" term and use it everywhere

Naming and Defining Terms
Best Practices

- Start with Dictionary definition

- Avoid reiterating the term name

- Focus on <u>what</u> it is

- Omit <u>how</u> it's used

- Avoid embedding rules

- For compound terms, start with the base term, then describe how it is different

- Identify synonyms and select a "preferred" term to be used in all documentation

Writing Business Rules
Best Practices

- Be rigorous about using defined terms
- Use "preferred" term when there are synonyms
- "must" and "may…only" vs. "should"
- Start with the subject
- Use bulleted lists
- Be explicit but concise
- Ensure rule is comprehensible

Resources

- CDC – Clinical Decision Support: https://www.cdc.gov/vaccines/programs/iis/cdsi.html

- MIROW – Best Practice Guides: https://www.immregistries.org/mirow

- White papers: http://www.brsolutions.com/publications/

- Business Rules Community: http://www.brcommunity.com

- RuleSpeak® http://www.rulespeak.com/

- Semantics of Business Vocabulary and Rules (SBVR): https://www.omg.org/spec/SBVR/About-SBVR/

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