

# Developing a Patient Safety Taxonomy for Ambulatory Primary Care Settings

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# Overview

- Why taxonomies are important
- What a medical error taxonomy should include
- How the AAFP/Linnaeus Collaboration taxonomy developed – trigger points and organizational strategy
- Where we think primary care medical error taxonomy development might lead next

# Why medical error taxonomies are important

- They organize thinking
- They are a tool for measuring frequency and severity
- They encourage standardization in error detection, analysis, classification, and recording
- They can identify priorities for action
- They can identify priorities for research

# Why medical error taxonomies are dangerous

- They discourage thinking outside the “taxonomy box”
- They may not measure the things that are really important
- Their standardized language may hide differences in interpretation
- Although they inspire theories, they cannot serve as theories themselves

# What medical error taxonomies should include

- Medical error descriptors
- Contributing factors descriptors
- Consequence descriptors

# What medical errors taxonomies might also include

- Severity measures
- Prevention strategies

# The AAFP/Linnaeus Collaboration International Taxonomy of Medical Errors in Primary Care: Development

- 2000: Study from the National Network for Family Practice and Primary Care Research
- 2001-2003: Linnaeus Collaboration Primary Care International Study of Medical Errors
- 2002-2004: 2 AAFP studies of:
  - Laboratory and diagnostic imaging errors
  - Errors reported by patients, practice staff, and physicians

# Key decisions in taxonomy development

- To base the taxonomy on reports of “things that went wrong”
- To adopt a qualitative research analytic approach
- To “bracket” prior knowledge
- To conservatively interpret reports
- To adopt a “systems” perspective

# Taxonomy development trigger point 1

- Error reports of gaps in knowledge and poor execution of clinical tasks, for example:
  - ◆ Injection into sciatic nerve
  - ◆ Used wrong size blood pressure cuff
  - ◆ Ear flushing in a manner that caused bruising

# Taxonomy development trigger point 2

- Foreigners on the research team

# Taxonomy Development: Level I

1. Study 1
  - Process errors
  - Knowledge and Skills gaps
1. Study 2 – Same 2 codes
2. Study 3 – Same 2 codes

# Taxonomy Development: Level II

## Study 1

- Office administration errors
- Investigation errors
- Treatment errors
- Communication errors
- Errors in the Payment system
- Errors in the Execution of a clinical task
- Errors in Diagnosis
- Wrong Treatment decisions

## Study 2

+ Errors in Workforce Management

## Study 3

+ Execution of an Administrative task

# Taxonomy Development: Level III

## Study 1 - Filing system errors

- Chart completeness errors
- Patient Flow errors
- Message handling errors
- Errors of Appointment systems
- Laboratory errors
- Diagnostic imaging errors
- Other investigation errors
- Medication errors
- Other treatment errors
- Errors in communication with patients
- Errors in communication with non-physician colleagues
- Errors in communication with physician colleagues

# Taxonomy Development: Level III cont..

## Second study

- + Errors in maintaining a safe physical environment
- + Errors in communication among the whole team
- + Insurance claim errors
- + Errors in electronic payment
- + Wrongly charged for care not received
- + Non-clinical staff made wrong clinical decision
- + Failed to follow standard practice
- + Lacked needed expertise in a clinical task

# Taxonomy Development: Level III cont..

## Second study

Under the new level II category “Errors in workforce management”

- + Absent staff not covered
- + Dysfunctional referral processes
- + Errors in appointing after-hours workforce

# Taxonomy Development: Level III cont..

## Second study

- + Error in diagnosis by a nurse
- + Error in diagnosis by a pharmacist
- + Error in diagnosis by a hospital-based physician
- + Error in diagnosis - investigation misinterpretation
- + Error in diagnosis - examination misinterpretation
- + Delay in diagnosis

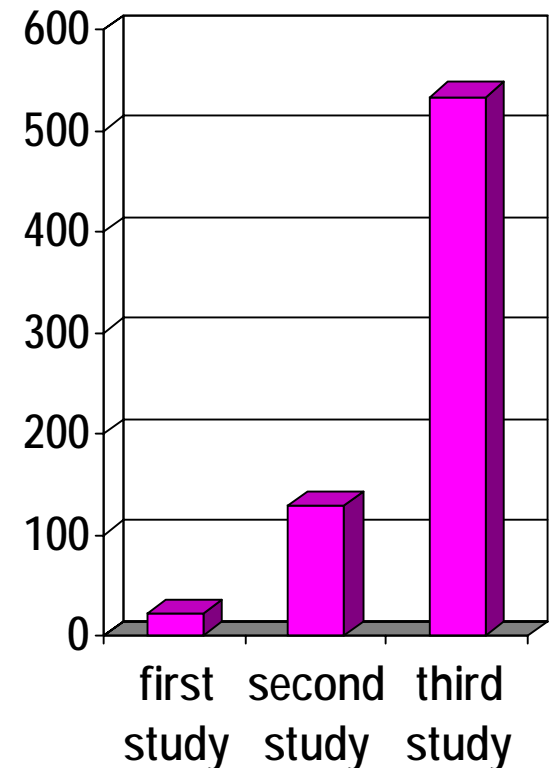
# Taxonomy Development: Level III cont..

## Third study

- + Payment disputes
- + Billing slip problems
- + Provider arriving late
- + Workload poorly managed
- + Non-admin staff making wrong admin decision
- + Failure to follow standard admin practice
- + Lack of experience/ knowledge in an admin procedure
- + Wrong or delayed diagnosis attributable to other

# Taxonomy Development: Levels IV and V

First study: 28 codes  
Second study: 128 codes  
Third study: 534+ codes



# Unique Contributions by Country

1.1.2.3.3	Record not on chart – dictation delay	US and Canada
1.1.1.5.3	No patient photograph in chart	Germany
1.1.3.6.2	Referral not accepted because patient lives outside catchment area	England
1.1.5.1.2	Housecall arranged but not made	Australia, Netherlands, and Germany
1.5.1.1.5	Care not covered by insurance	US and Germany
1.5.2.	Electronic payment system off-line	New Zealand

# Where to next?

- Clarify the theory
- Consolidate the taxonomy
- Do the research