Why Is Improving Diagnosis Important? Physician and Patient Perspectives

AHRQ Diagnosis Safety Summit 9/28/16

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Disclosure: No Relevant Conflicts

What is a "Diagnosis"?

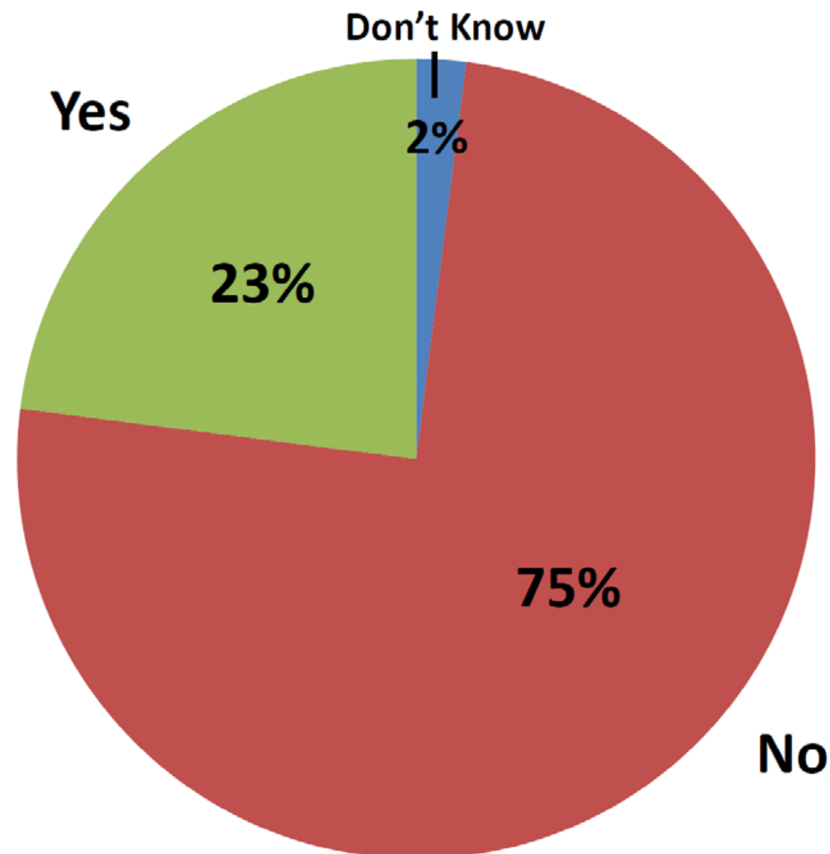
Preliminary diagnosis
Working diagnosis
Differential diagnosis
Syndrome diagnosis
Etiologic diagnosis
Possible diagnosis
Problem on Problem List
Self limited diagnosis
Ruled-out diagnosis
Computer diagnosis (EKG read)
Deferred diagnosis
Multiple/dual diagnoses
Preclinical diagnosis
Incidental finding

Over-diagnosis
Diagnosis complication
Billing diagnosis
Telephone diagnosis
Postmortem diagnosis
Prenatal diagnosis
Rare diagnosis
Difficult/challenging diagnosis
Undiagnosed disease
Contested diagnosis
Novel diagnosis
Refractory (to Rx) diagnosis
Futile diagnosis (e.g., hospice pt)
Delayed diagnosis

MA Residents Involved in a Medical Error Situation

BETSY LEHMAN CENTER for Patient Safety and Medical Error

% saying personally involved in a situation where a preventable medical error was made in their own care or in the care of someone close to them



Most Common Types of Medical Error Experienced by MA Residents

% saying…
(Among the 23% who said they or a person close to them experienced a medical error)

Your/their medical problem was misdiagnosed

51%

You/they were given the wrong test, surgery, or treatment

38%

You were given wrong or unclear instructions about your follow-up care

34%

You/they were given an incorrect medication, meaning the wrong dose or wrong drug

32%

You/they got an infection as a result of your/their test, surgery, or treatment

32%

Harvard School of Public Health / Betsy Lehman Center for Patient Safety and Medical Error Reduction / Health Policy Commission
The Public's Views on Medical Error in Massachusetts, September 2 – 28, 2014.

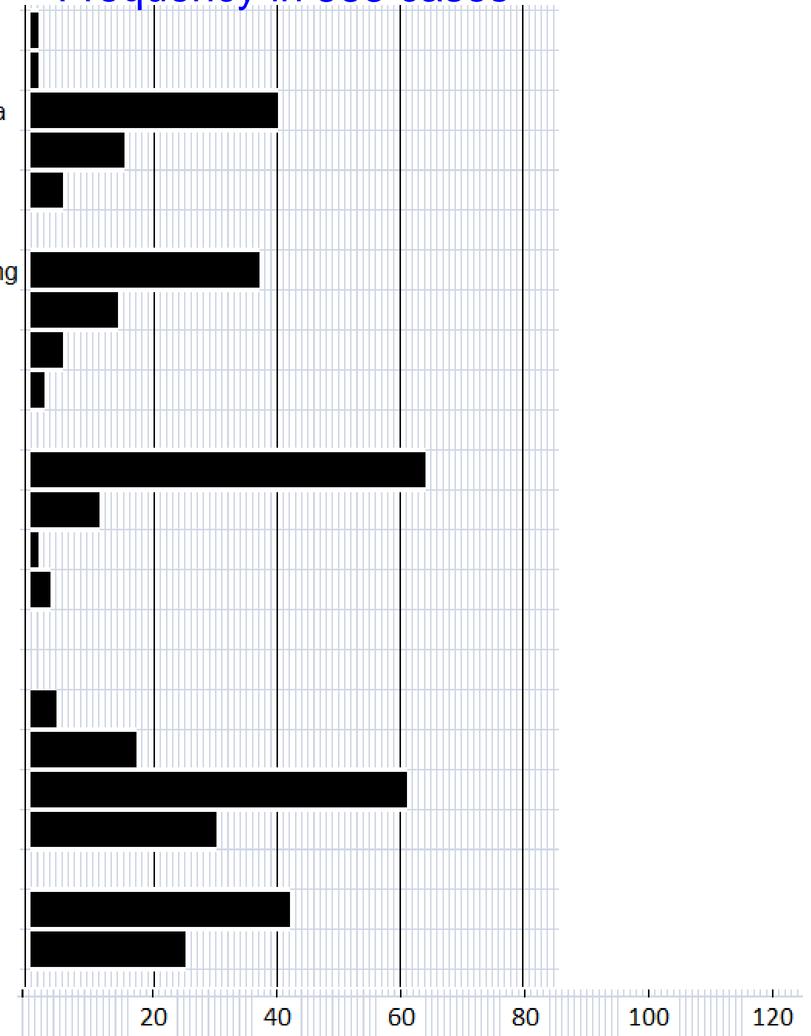
Safer practice can only come about from acknowledging the potential for error and building in error reduction strategies at each stage of clinical practice

Lucian Leape

Where in diagnostic process		*What went wrong*
1. Access/Presentation	A	Failure/delay in presentation
	B	Failure/denied care access
2. History	A	Failure/delay in eliciting critical piece of history data
	B	Inaccurate/misinterpretation
	C	Failure in weighing
	D	Failure/delay to follow-up
3. Physical Exam	A	Failure/delay in eliciting critical physical exam finding
	B	Inaccurate/misinterpreted
	C	Failure in weighing
	D	Failure/delay to follow-up
4. Tests (Lab/Radiology)		*Ordering*
	A	Failure/delay in ordering needed test(s)
	B	Failure/delay in performing ordered test(s)
	C	Error in test sequencing
	D	Ordering of wrong test(s)
	E	Test ordered wrong way
		Performance
	F	Sample mixup/mislabeled (eg wrong patient/test)
	G	Technical errors/poor processing of specimen/test
	H	Erroneous lab/radiology reading of test
	I	Failed/delayed reporting of result to clinician
		Clinician Processing
	J	Failed/delayed follow-up of (abnl) test result
	K	Error in clinician interpretation of test

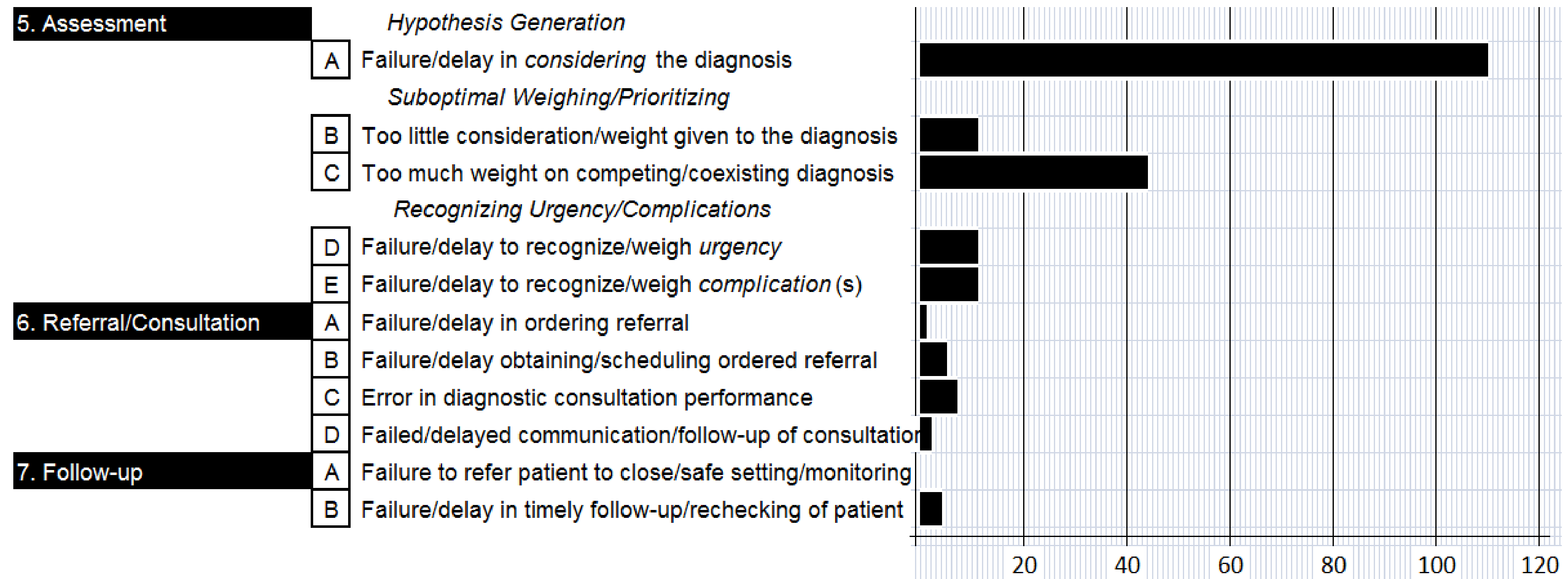
DEER Taxonomy

Localizing What Went Wrong



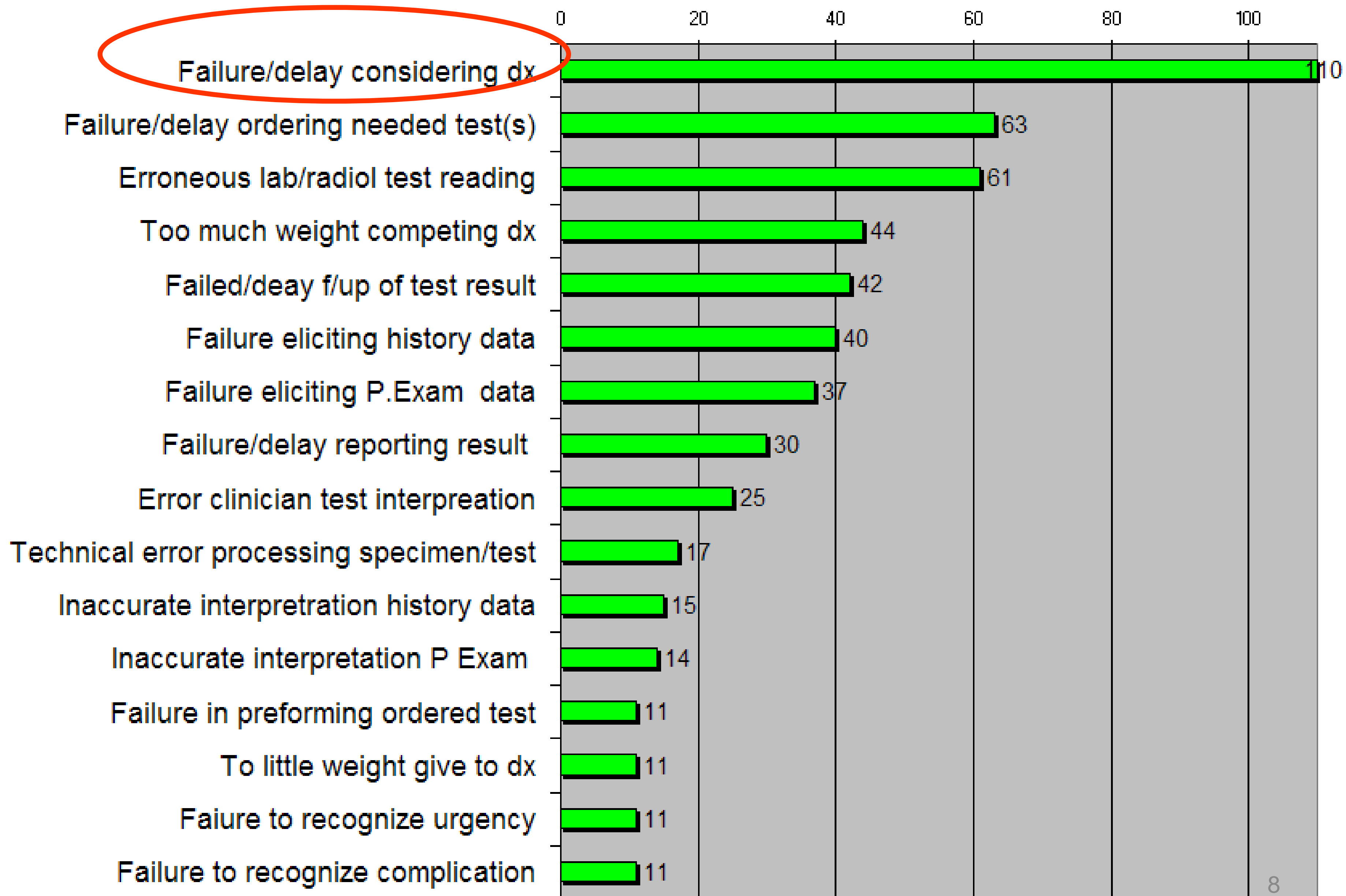
DEER Taxonomy (continued)

Localizing What Went Wrong



Schiff Arch Intern Med 2009

What went wrong: DEER Taxonomy Localization



Art Elstein
Cognitive Psychologist

Bob Wachter
Safety Systems Guru

Surprise at 1st Dx Error in Med (DEM) Conference 2008

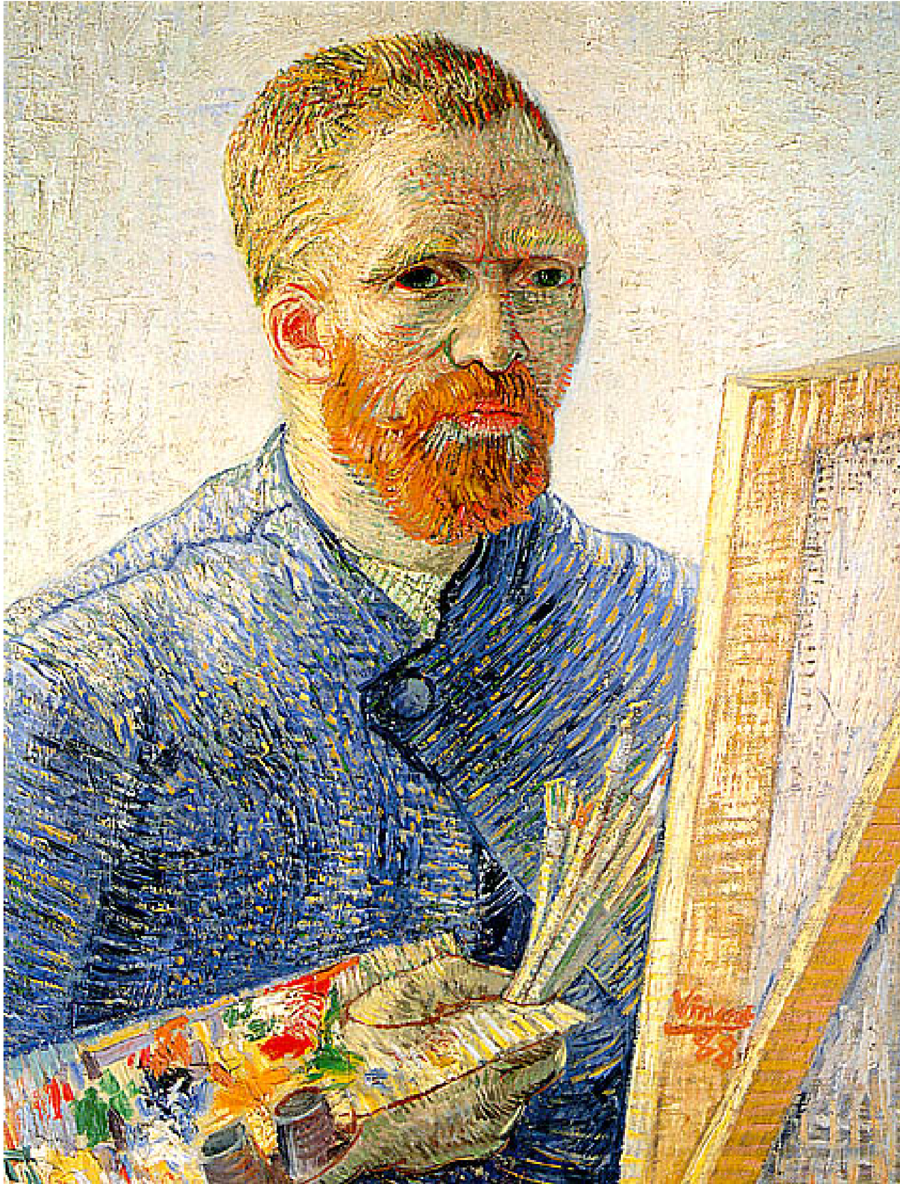
Box 1 Condensed set of categories describing different steps in diagnosis targeted by diagnostic health information technology (HIT) tools

- Tools that assist in information gathering
- Cognition facilitation by enhanced organisation and display of information
- Aids to generation of a differential diagnosis
- Tools and calculators to assist in weighing diagnoses
- Support for intelligent selection of diagnostic tests/plan
- Enhanced access to diagnostic reference information and guidelines
- Tools to facilitate reliable follow-up, assessment of patient course and response
- Tools/alerts that support screening for early detection of disease in asymptomatic patients
- Tools that facilitate diagnostic collaboration, particularly with specialists
- Systems that facilitate feedback and insight into diagnostic performance

El-Kareh
Hasan
Schiff

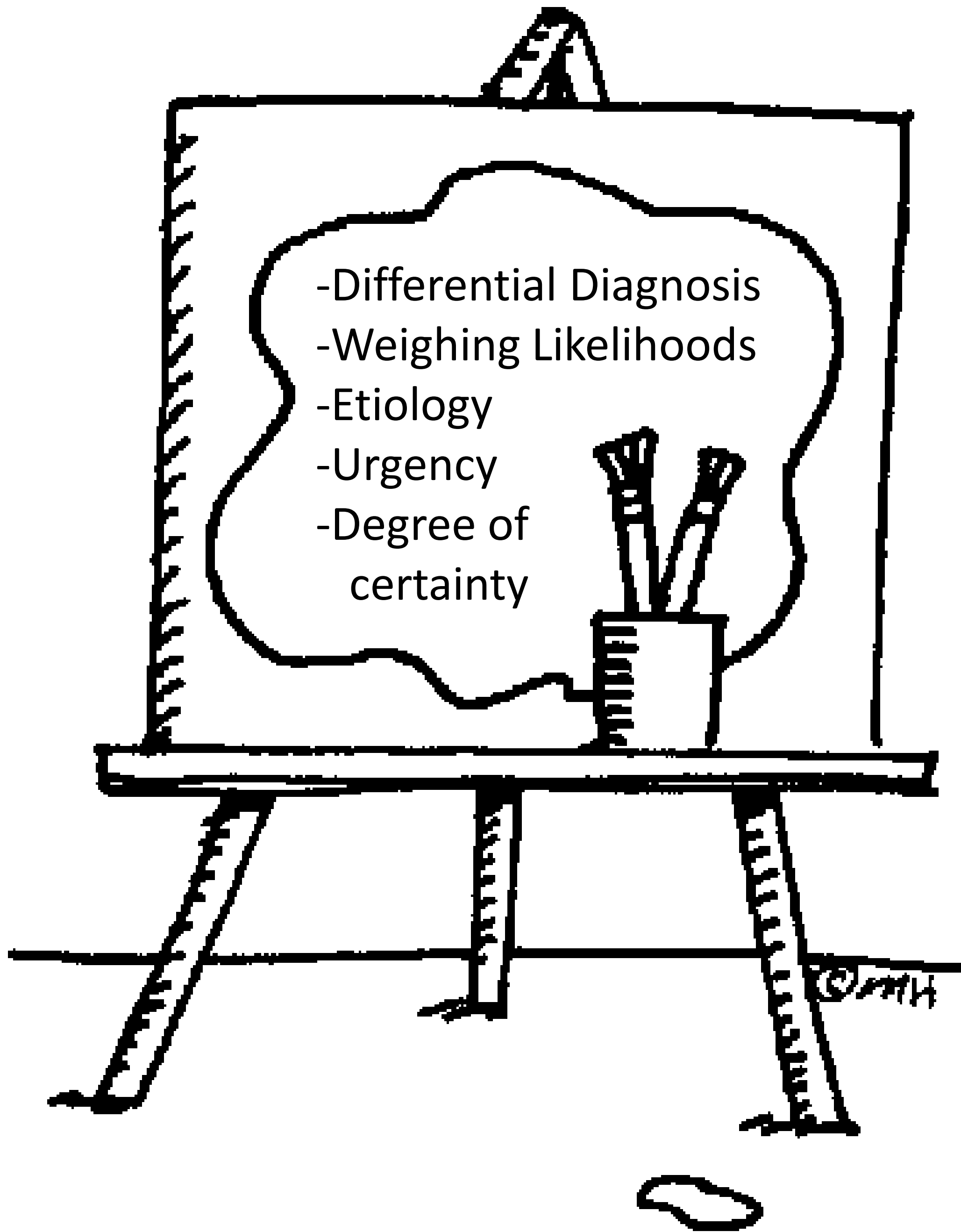
BMJ QS 2013

Clinical Documentation – C.Y.A ?



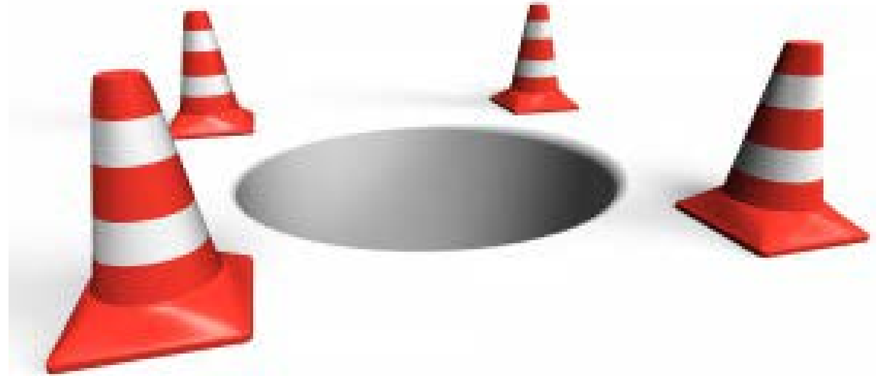
Van Gogh: Self-Portrait in Front of the Easel

Canvass for Your Assessment



Canvass for Your Assessment

What is a **Diagnostic Pitfall**?



Clinical situations where patterns of, or vulnerabilities to errors leading to missed, delayed or wrong diagnosis

GENERIC TYPES of PITFALLS

- **Disease A repeatedly mistaken for Disease B**
  - Bipolar disease mistaken for depression
- **Failure to appreciate test/exam limitations**
  - Pt w/ breast lump and negative mammogram and/or ultrasound
- **Atypical presentation**
  - Addison's disease presenting with cognitive difficulties
- **Presuming chronic disease accounts for new symptoms**
  - Lung cancer: failure to pursue new/unresolving pulmonary sx in patient with pre-existing COPD
- **Overlooking drug, other environmental cause**
  - Pancreatitis from drug; carbon monoxide toxicity fail to consider
- **Failure to monitor evolving symptom**
  - Normal imagining shortly after head injury, but chronic subdural hematoma later develops

IOM (NAM) Estimate Wrong??

- Main headline grabber- Every person 1/lifetime
  - Least evidence-based figure in report
- Suspect …….underestimate
- 4 Serious Diagnostic Errors Personally
  - DIARRHEA, LOWER ABDOM PAIN →APPENDICITIS
    - **SALMONELLA FOOD POISONING**
  - CHESTPAIN, SOB-→MED STUDENT ANXIETY SYNDROME
    - **40% LEFT LUNG PNEUMOTHORAX**
  - FEVER, SOB, ABNL CHEST X-RAY→ BACT PNEUNONIA
    - **CRYTOGENIC ORGANIZING PNEUMONIA (COP)**
  - POST EXERCISE FAINTNESS→OVER EXERTION
    - **PSVT (PAROXYMAL SUPRA-VENTRICUAR TACHYCARDIA)**

YOUR EXPERIENCES

- SUPPLIMENTAL SLIDES

crico COVERYS

Cases Closed: Allegations by Close Year

	2005	2006	2007	2008	2009	TOTAL
Diagnosis-related	72	82	79	83	81	397
Medication-related	11	13	14	14	16	68
Medical Treatment	14	4	10	8	5	41
Communication	2	4	1	5	3	15
Violation of Rights	5	0	2	3	1	11
Safety & Security	0	2	1	2	3	8
OB-related Treatment	2	2	0	0	2	6
Surgical Treatment	1	1	0	1	0	3
Breach of Confidentiality	1	1	0	0	0	2
Total Number of Cases	**108**	**109**	**107**	**116**	**111**	**551**

N=551 CRICO and Coverys outpatient PL cases closed 2005–2009 naming General Medicine staff/fellow physicians (excl. Hospitalists) and excluding ED locations.

Schiff et al JAMA Intern Med 2013

crico COVERYS

Cases Closed: Top Final Diagnoses

FINAL DIAGNOSES	NUMBER OF CASES
Cancer	190
Diseases of the heart	43
Diseases of blood vessels	27
Infection	22
Cerebrovascular disease	16
Lower gastrointestinal disorders	9
Orthopedic injuries	7
Pneumonia	6

TOP CANCERS	NUMBER OF CASES
Colorectal	56
Lung	29
Prostate	26
Breast	18
Other GI	10
Benign neoplasm	8
Urinary organs	8
Lymphatic and hematopoietic tissue	8
Head and neck	6
Uterus and cervix	5

N=551 CRICO and Coverys outpatient PL cases closed 2005–2009 naming General Medicine staff/fellow physicians (excl. Hospitalists) and excluding ED locations.

Diagnostic Situational Awareness Model