Critical Values and Persistent Challenges in Communicating Pathology Results

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No conflicts of interest relevant to this presentation

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Critical Values and Persistent Challenges in Communicating Pathology Results

Key Words

patient safety
critical values
critical results
critical diagnoses
handoffs
National Patient Safety Goals
Critical Values and Persistent Challenges in Communicating Pathology Results

Objectives
At the end of this presentation attendees will understand

• expectations & challenges in effectively communicating critical values in AP
• practical solutions for implementing a critical values communication policy
Critical Values and Persistent Challenges in Communicating Pathology Results

Objectives
At the end of this presentation attendees will understand

• expectations & challenges in effectively communicating critical values in AP
2010 National Patient Safety Goals (NPSGs)
The Joint Commission†

“The purpose of The Joint Commission’s National Patient Safety Goals (NPSGs) is to promote specific improvements in patient safety.”

†http://www.jointcommission.org/
## 2010 National Patient Safety Goals (NPSGs)  
The Joint Commission†

**Goal 1**  
Improve the accuracy of patient identification

**Goal 2**  
Improve the effectiveness of communication

**Goals 3 – 6**  

**Goal 7**  
Reduce the risk of health care-associated infections

**Goals 8 – 16**  

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†http://www.jointcommission.org/
"The purpose of The Joint Commission’s National Patient Safety Goals (NPSGs) is to promote specific improvements in patient safety."

<table>
<thead>
<tr>
<th>Goal 1</th>
<th>Improve the accuracy of patient identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal 2</td>
<td>Improve the effectiveness of communication</td>
</tr>
<tr>
<td>Goals 3 – 6</td>
<td></td>
</tr>
<tr>
<td>Goal 7</td>
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</tr>
<tr>
<td>Goals 8 – 16</td>
<td></td>
</tr>
</tbody>
</table>

†http://www.jointcommission.org/
Goal 2 – Improve the effectiveness of communication among caregivers.

Report critical results of tests and diagnostic procedures on a timely basis (NPSG.02.03.01)
Develop written procedures
– definition

results of tests and diagnostic procedures [that] fall significantly outside the normal range and may indicate a life-threatening situation

†http://www.jointcommission.org/
Develop written procedures
– definition

**critical diagnoses**†

abnormalities that can be potentially life threatening and require rapid corrective action for improvement of patient outcome

†ADASP 2006

†http://www.jointcommission.org/
## Critical Diagnoses in Anatomic Pathology

### Examples (ADASP 2006)

<table>
<thead>
<tr>
<th>Findings with immediate clinical consequences</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>– crescents in &gt; 50% of glomeruli</td>
<td></td>
</tr>
<tr>
<td>– leukocytoclastic vasculitis</td>
<td></td>
</tr>
<tr>
<td>– uterine contents without villi or trophoblast</td>
<td></td>
</tr>
<tr>
<td>– fat in endometrial curettings or colonic endoscopic polypectomies, mesothelial cells in heart biopsies</td>
<td></td>
</tr>
<tr>
<td>– transplant rejection</td>
<td></td>
</tr>
<tr>
<td>– malignancy in superior vena cava syndrome, paralysis</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unexpected or discrepant findings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>– disagreement between frozen section and final dx</td>
<td></td>
</tr>
<tr>
<td>– disagreement between immediate and final FNA dx</td>
<td></td>
</tr>
<tr>
<td>– disagreement with outside interpretation</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Infections</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>– bacteria/fungi in CSF, heart valves, or bone marrow</td>
<td></td>
</tr>
<tr>
<td>– Pneumocystis, fungi, virocytes in pulmonary secretions</td>
<td></td>
</tr>
<tr>
<td>– AFB</td>
<td></td>
</tr>
<tr>
<td>– any invasive organism in immunocompromised patients</td>
<td></td>
</tr>
</tbody>
</table>
Develop written procedures
– definition

CAP (ANP.12175)

**significant or unexpected**
surgical pathology findings

†[http://www.jointcommission.org/](http://www.jointcommission.org/)
Goal 2 – Improve the effectiveness of communication among caregivers.

Report critical results of tests and diagnostic procedures on a timely basis (NPSG.02.03.01)

Quickly get important test results to the right staff person.

. . .

This is an easy-to-read document. It has been created for the public.

†http://www.jointcommission.org/
<table>
<thead>
<tr>
<th>Service Category</th>
<th>Median (50th percentile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of professional interaction</td>
<td>96.3</td>
</tr>
<tr>
<td>Diagnostic accuracy</td>
<td>96.1</td>
</tr>
<tr>
<td>Pathologist responsiveness to problems</td>
<td>93.6</td>
</tr>
<tr>
<td>Pathologists’ accessibility for frozen section</td>
<td>93.3</td>
</tr>
<tr>
<td>Tumor board presentations</td>
<td>93.1</td>
</tr>
<tr>
<td>Courtesy of secretarial and technical staff</td>
<td>93.0</td>
</tr>
<tr>
<td>Communication of relevant information</td>
<td>88.5</td>
</tr>
<tr>
<td>Teaching conferences and courses</td>
<td>88.2</td>
</tr>
<tr>
<td>Notification of significant abnormal results</td>
<td>86.3</td>
</tr>
<tr>
<td>Timeliness of reporting</td>
<td>79.8</td>
</tr>
<tr>
<td>Patient Safety Culture Composites</td>
<td>Average % Positive Response</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>1. Teamwork Within Units</td>
<td>79%</td>
</tr>
<tr>
<td>2. Supervisor/Manager Expectations &amp; Actions Promoting Patient Safety</td>
<td>75%</td>
</tr>
<tr>
<td>3. Management Support for Patient Safety</td>
<td>70%</td>
</tr>
<tr>
<td>4. Organizational Learning—Continuous Improvement</td>
<td>70%</td>
</tr>
<tr>
<td>5. Overall Perceptions of Patient Safety</td>
<td>64%</td>
</tr>
<tr>
<td>6. Feedback &amp; Communication About Error</td>
<td>62%</td>
</tr>
<tr>
<td>7. Communication Openness</td>
<td>62%</td>
</tr>
<tr>
<td>8. Frequency of Events Reported</td>
<td>60%</td>
</tr>
<tr>
<td>9. Teamwork Across Units</td>
<td>57%</td>
</tr>
<tr>
<td>10. Staffing</td>
<td>55%</td>
</tr>
<tr>
<td>11. Handoffs &amp; Transitions</td>
<td>45%</td>
</tr>
<tr>
<td>12. Nonpunitive Response to Error</td>
<td>44%</td>
</tr>
</tbody>
</table>
Medical Errors – “Very Important” Causes

<table>
<thead>
<tr>
<th>Reason</th>
<th>MDs</th>
<th>Public</th>
</tr>
</thead>
<tbody>
<tr>
<td>insufficient time spent with patients</td>
<td>37%</td>
<td>72%</td>
</tr>
<tr>
<td>overwork, stress, fatigue</td>
<td>50%</td>
<td>70%</td>
</tr>
<tr>
<td>failure to work together or communicate as team</td>
<td>39%</td>
<td>67%</td>
</tr>
<tr>
<td>understaffing of nurses</td>
<td>53%</td>
<td>65%</td>
</tr>
<tr>
<td>complexity of care</td>
<td>38%</td>
<td>62%</td>
</tr>
</tbody>
</table>
Designing for Safety in Healthcare
Report of the Institute of Medicine (IOM)
Committee on Quality of Health Care in America
November, 1999

Provide leadership
Respect human limits in process design
Promote effective team functioning
Anticipate the unexpected
Create a learning environment
What if no one sees my report today?

Anticipate the unexpected
Anticipate the unexpected

What if no one sees my report today?

. . . tomorrow?
What if no one sees my report today? . . . tomorrow? . . . ever?

Anticipate the unexpected

| COMMENTS: | 18 G CORE BIOPSY OF RIGHT UPPER LUNG MASS |
| TISSUES: | LUNG, NOS - RIGHT |
| SPECIMEN COMMENTS: | 18 G CORE BIOPSY OF RIGHT UPPER LUNG MASS |
| PRELIMINARY DIAGNOSIS | *** THIS IS A PRELIMINARY DIAGNOSIS. *** |
| | *** FINAL TO FOLLOW. *** |
| | LUNG, RIGHT UPPER LOBE, CT GUIDED BIOPSY: NON SMALL CELL CARCINOMA. |
Develop written procedures
– definition
– by whom and to whom

... using what standard process and which tools?

†http://www.jointcommission.org/
Handoffs & Transitions

primary care provider (PCP)

screening colonoscopy ordered
Handoffs & Transitions

- Screening colonoscopy ordered
- bx of susp polyp (“R/O cancer”)
- Primary care provider (PCP)
Handoffs & Transitions

life threatening?

primary care provider (PCP)

screening colonoscopy ordered

bx = adca

GI doc

bx of susp polyp ("R/O cancer")
Handoffs & Transitions

life threatening?
critical?

Merriam-Webster’s Collegiate Dictionary
CRUCIAL, DECISIVE (~ test)

primary care provider (PCP)
screening colonoscopy ordered

bx of susp polyp ("R/O cancer")

bx = adca

GI doc
Handoffs & Transitions

life threatening?
critical?
significant & unexpected?

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Handoffs & Transitions

life threatening? critical? significant & unexpected? important?

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Handoffs & Transitions

- life threatening?
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2010 National Patient Safety Goals (NPSGs)
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Quickly get important test results to the right staff person.

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†http://www.jointcommission.org/
Develop written procedures
– definition
– by whom and to whom
– criteria for *timeliness*

†http://www.jointcommission.org/
Improving Effectiveness of Communication
Reporting Critical Results – Rationale

The **objective** is to provide the responsible caregiver these results within an established time frame so that **the patient can be promptly treated**.

†http://www.jointcommission.org/
Customer Satisfaction in AP

Median for Excellent/Good Ratings for Each Service Category

- Quality of professional interaction 96.3
- Diagnostic accuracy 96.1
- Pathologist responsiveness to problems 93.6
- Pathologists’ accessibility for frozen section 93.3
- Tumor board presentations 93.1
- Courtesy of secretarial and technical staff 93.0
- Communication of relevant information 88.5
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- Notification of significant abnormal results 86.3
- Timeliness of reporting 79.8
Handoffs & Transitions

follow-up appt with PCP in 1 year

primary care provider (PCP)

screening colonoscopy ordered

bx of susp polyp ("R/O cancer")

GI doc

bx = adca

promptly?

... by and to whom?
Communicating ("Critical") Diagnoses

<table>
<thead>
<tr>
<th>% of Respondents (n=73)*</th>
<th>Routine report delivery</th>
<th>Phone call within 24 hrs</th>
<th>Phone call ASAP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vasculitis</strong></td>
<td>14%</td>
<td>31%</td>
<td>55%</td>
</tr>
<tr>
<td><strong>Neoplasms causing paralysis</strong></td>
<td>20%</td>
<td>20%</td>
<td>60%</td>
</tr>
<tr>
<td><strong>New diagnosis of malignancy, with clinical suspicion</strong></td>
<td>62%</td>
<td>28%</td>
<td>10%</td>
</tr>
</tbody>
</table>
What if no one sees my report today?

Anticipate the unexpected
Develop written procedures
– definition
– by whom and to whom
– criteria for timeliness

Implement the procedures

†http://www.jointcommission.org/
Significant & Unexpected/Critical Diagnoses in Surgical Pathology†

Do you have a written policy regarding anatomic pathology critical values or diagnoses?

YES

75%

25%

NO

†CAP Survey, Nakhleh et al. Arch Pathol Lab Med 2009
Significant & Unexpected/Critical Diagnoses in Surgical Pathology

Do you have a written policy regarding anatomic pathology critical values or diagnoses?

**YES** n = 817

- 75% General guideline without specific conditions (30%)
- General guideline with a few (= 5) specific examples (33%)
- General guideline with multiple (> 5) specific examples (18%)
- Strict policy with specifically defined list of diagnoses (19%)

†CAP Survey, Nakhleh et al. Arch Pathol Lab Med 2009
Develop written procedures
- definition
- by whom and to whom
- criteria for timeliness

Implement the procedures

Evaluate the timeliness of reporting

†http://www.jointcommission.org/
Monitoring Critical Diagnoses at The University of Michigan

natural language parser

key phrases = malignancy

procedure ≠ excision/resection

key phrase ≠ notification

cases verified in previous 24 hours

clinical notes

appointments

signing faculty

Director of Surgical Pathology

policy filter

EMR reconciliation
Monitoring Critical Diagnoses at The University of Michigan

- **contact provider**: no
- **provider contacted?**: signing faculty
- **no action required**
- **critical value?**: no
- **clinical notes**
- **appointments**
- **EMR reconciliation**

Director of Surgical Pathology

Policy filter
Monitoring Critical Diagnoses at The University of Michigan

10,433 events in 3 years
13.3 ± 5.9 per day (range 0 – 39)

29 (0.3%) actionable
“actionable” events?

**Case 1**
colon bx = invasive adca in patient undergoing average risk screening with no acknowledgement in EMR and no return appointment

**ACTION**: gastroenterologist confirmed plan to communicate to PCP

**Case 2**
unexpected diagnosis of lymphoma in sentinel LN done for melanoma

**ACTION**: confirmed with signing pathologist that provider had been contacted (not documented)
Critical Values and Persistent Challenges in Communicating Pathology Results

Key Points

• effective communication of significant results means having a plan to ensure information gets to the right person at the right time
• start by developing a policy in collaboration with providers
• implement – and document performance as measured against – your plan