Using Change Management to Maximize Adoption of Department-Wide Structured Reporting

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The radiologist’s report is of increasing importance in an era of value-based care

For many referring providers, the only artifact arising from the complex imaging value chain is the radiologist’s report.

These reports are finding new audiences since they are now directly available on patient portals.
The clinical report is the vital product in radiology’s value chain
The benefits, limitations, and challenges of structured radiology reports are well established.
### TABLE 1. Benefits and Limitations of Structured Radiology Reports

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<tr>
<th>Benefits</th>
<th>Limitations and Challenges</th>
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<td>Disease-specific report templates can improve report clarity and quality, and ensure consistent use of terminology across practices.</td>
<td>Radiologists may be resistant to change.</td>
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<td>Checklist style reports can reduce diagnostic errors (such as failing to report incidental renal cell carcinoma in a magnetic resonance spine performed for back pain).</td>
<td>Learning curve associated with new reporting style may negatively impact radiology workflow and productivity.</td>
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<td>Can reduce grammatical and nongrammatical digital speech recognition errors</td>
<td>Potentially increased error rates if used improperly (eg, failing to remove the prepopulated phrase of “normal gallbladder” in a patient who is status post cholecystectomy).</td>
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<td>Ensures completeness of radiology report documentation and thereby improves radiology reimbursement</td>
<td>Interruption of visual search pattern may increase reporting time.</td>
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<td>May be financially rewarding under the new Medicare Merit-based Incentive Payment System</td>
<td>Including unnecessary or irrelevant information in a template report may negatively impact the coherence of the report and its subsequent comprehension by referring physicians.</td>
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<td>Positively impacts research in radiology by facilitating data mining</td>
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<td>Provides opportunities for quality improvement</td>
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<td>Can help promote evidence-based medicine by integrating clinical decision support tools with radiology reports</td>
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While radiologists agree on the benefits of structured reporting, achieving adherence with new system-wide templates proved to be more difficult.

The literature offers several reasons this may be the case…
Personal motivation and resistance affect successful adoption of structured reporting

**Personal Resistance to Adoption**
- Loss of autonomy
- Disruption of established workflow
- Fear of commoditization of work
- Resistance to applying rigid generalized structures towards complex, unique cases
- Fear of “impoverishing resident education”

**Personal Motivation for Adoption**
- Improved referral physician satisfaction/relationship
- Culture of peer consensus on common report structure
- Potential for improved reimbursement
- Financial incentives tied to individual adherence

Powell DK, Silberzweig JE. State of Structured Reporting in Radiology, a Survey. Acad Radiol. 2015;
At Emory Department of Radiology, chest radiography was targeted as the first study to increase rates of structured reporting

Why?
- Chest radiographs (CXR) make up the largest volume of studies, in a department with >1M studies annually

Who?
- Three divisions reading CXRs
  - Cardiothoracic
  - Community
  - Emergency

What?
- Normal and abnormal CXR “approved” structured templates designated to be utilized by each division
To get **buy-in** from radiologists for **adopting the new CXR structured report**, the department leadership **planned and implemented** a series of **interventions** and **tracked usage** of the CXR structured report over time.
Buy-in for structured reporting implementation was obtained from division chiefs/faculty over one year

September 2016:
Templates Designated
- Designated by each division (Emergency, Community, Thoracic) for highest volume services (e.g., chest radiography)

January 2017 - March 2017:
Structured Reporting Requirement Communicated
- Requirement announced as upcoming incentive component and communicated at weekly faculty meetings
- Communications re-confirmed with division directors

July 2017:
Structured Reporting Requirement Rolled Out
- Approved templates usage instituted as a faculty incentive program for three divisions (Emergency, Community, Thoracic) interpreting CXRs
- Old unapproved CXR templates deleted.
- Template usage tracked using an alphanumeric code within each approved template
These interventions resulted in a steady increase in template utilization over a six month period.
Average usage of approved structured reports increased by 100%, for an overall usage rate of 92%.
CXR structured reporting was successfully implemented over six months at Emory Radiology

Structured reporting furthers radiology’s unrelenting focus on generating value in patient care

Structured reporting was implemented for chest radiograph studies over six months

Our approach in communication, consensus building, and financial incentives increased structured reporting usage from 46% to 92%
In a large, geographically diverse department with multiple stakeholders, it is possible to gain adoption of structured reports through a sequential combination of communication, consultation, consensus building, and financial incentives.