Metrix Matrix:
A Novel Cloud-based System for Tracking non-RVU Value-added Work Metrics
Metrix Matrix

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Disclosures:
None.
Purpose

• New emphasis on value-based medicine
• Need new metrics to demonstrate radiologist’s worth
• Not just clinical productivity (RVU)
• But also value-added activities (“vRVU”)

METRIX MATRIX

MEDICAL UNIVERSITY OF SOUTH CAROLINA
Purpose

- **Metrix Matrix**
  - Novel cloud-based system
  - Developed at MUSC
  - Track value-added productivity ("vRVUs")
  - Efficient
  - Easy-to-Use
Materials / Methods

• Metrix Matrix
  – Password-protected home page
  – Access from Anywhere
    • PACS / workstation
    • Laptop
    • Smartphone
  – Links to Web-Based forms (Google Forms)
  – Populates Spreadsheets (Google Sheets)
MUSC Radiology Metrix Matrix

Abdominal Imaging
- Committees / Misc Mtgs
- Conferences
- OSH Consults
- Practice-based QI

Breast Imaging
- Committees / Misc Mtgs
- Conferences
- OSH Consults
- Practice-based QI
Materials / Methods

• vRVU Metrics Tracked
  – Tracked Time Spent
  – Interdisciplinary Conferences
  – Hospital Committee Meetings
  – Reviewing OSH studies (not billed at MUSC)
  – Practice-based Quality Improvement
Materials / Methods

• Tracked vRVU Examples
  – Interdisciplinary Conferences
    • Liver Tumor Board
  – Hospital Committee Meetings
    • Institutional Review Board (IRB)
  – Practice-based Quality Improvement
    • Protocol Management / Technologist Supervision
Results

- vRVU Metrics Tracking
  - All clinical Attending Faculty (n=40)
  - Single Radiology Department (MUSC)
  - 4 Months of data (1549 individual entries)

- Faculty Timing Experiment
  - How long does data entry take?
  - 2 Faculty / 3 Months
  - Stopwatch timing – total daily data entry
## Results

<table>
<thead>
<tr>
<th>Value-added Work Metric</th>
<th>Total # Hours (over 4 months, all Faculty)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interdisciplinary conferences</td>
<td>376.5</td>
</tr>
<tr>
<td>Conference prep-time</td>
<td>245.5</td>
</tr>
<tr>
<td>Hospital committees</td>
<td>84.0</td>
</tr>
<tr>
<td>Time Spent Reviewing OSH studies</td>
<td>86.6</td>
</tr>
<tr>
<td>Practice-based QI</td>
<td>430.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1223.5</strong></td>
</tr>
</tbody>
</table>
Results

- Total time spent on “v-RVUs” = 1223.5 hrs
  → 14.7 hrs / workday (almost 2 FTEs!)

- Approximated economic value
  - Assume
    - 5 wRVUs / FTE / hr (average)
    - Reimbursement $79 / wRVU
  → $483,283 / 4 months
  → Approximately $1,500,000 / year
Results

- Faculty Data Entry Timing experiment
  - 2 Faculty (1 Assist. Prof., 1 Assoc. Prof.)
  - 3 months of Timing
    - Total seconds / both faculty: 6181 sec
    - Total # days / both faculty: 103 days
    - Seconds per day per faculty: 60 sec
  - 1 minute spent per faculty per day!
Conclusion

• With upcoming changes in healthcare reimbursement
  – Emphasis on Value-based Medicine

• Radiologists must show their value
  – Beyond clinical productivity (RVU)
  – Also: value-added activities (“vRVU”)
Conclusion

• Metrix Matrix
  – Novel cloud-based system
  – Developed at MUSC
  – Track value-added productivity ("vRVUs")
  – Easy to use (~1 minute / day)

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