The Residency Performance Index (RPI): AFMRD's Tool for Program Improvement

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For the Association of Family Medicine Residency Directors (AFMRD) Board
Disclosures

• The presenters have no relevant financial disclosures to identify.
• The RPI tool is the exclusive property of the AFMRD and is meant for the use of its members only.
Objectives

• Background / Tool Development
  • What is RPI?
  • Why and how was it developed?
  • Domains
  • Data collection / report structure
• Using RPI Data
  • How to NOT use it
  • Individual Data
  • Aggregate Data
• Limitations
• Next Steps
• Discussion
The Residency Performance Index: An Effort at Residency Quality Assessment and Improvement in Family Medicine

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The Residency Performance Index (RPI) was launched in 2012 to help programs identify strengths and areas for improvement in their educational activities and resident clinical experiences that could be tracked and reviewed as part of the annual program evaluation.

Results
Approximately 100 program directors began using the tool and 70 finished the process, and were provided aggregate data. Initial review of this experience revealed difficulties with collecting data, and lack of information on graduates’ scope of practice. It also showed the potential usefulness of the tool as a program improvement mechanism.

Conclusions
The RPI is a new quality improvement tool for family medicine residency programs. Although some initial challenges need to be addressed, it has the promise to aid family medicine residency in its internal improvement efforts.
What is the RPI?

• A tool for family medicine residency program assessment.

• Developed by AFMRD to spur program quality improvement.

• It is available at no cost to AFMRD members for use by individual programs to gauge and improve their performance in the metrics measured.
Why develop the RPI?

• Pressure from constituencies inside and outside GME and FM to account for training.

• Desire on part of AFMRD and FM as discipline to raise the quality bar of residencies.

• Roll out of the NAS and new RC-FM requirements that mandate annual program reviews/improvement plans.
How was RPI developed?

- Initial task force established by AFMRD Board to develop QI tool – “dashboard” for PD’s.

- Chose criteria felt critical to program quality and yet measureable and/or published.

- Concepts borrowed from RPS criteria for excellence and TransforMED MHIQ.

- Convention of “red, yellow, green” to indicate floor, status quo, and excellence targets.
RPI Quality Domains

- Resident patient care experience.
- ABFM certification rates.
- ACGME accreditation status.
- Scholarly/QI activities.
- Resident procedural training.
- Program leadership experience.
- PCMH status of residency clinic.
- Graduate scope of practice.
<table>
<thead>
<tr>
<th>RPI Quality Domains</th>
<th>RPI Data Elements</th>
<th>Criteria Rationale/Data Acquisition</th>
</tr>
</thead>
</table>
| Patient Care Experience                | Volume of resident patient encounters    | Minimum accreditation standards  
Web ADS averages for family medicine  
Criteria for excellence published by the AAFP’s Residency Program Solutions Panel of ConsultantsALE  
Chosen to reflect the comprehensiveness of family medicine training, both in terms of demographics and setting                                                                                                                                 |
|                                        | Resident procedural competency upon graduation | Procedure lists derived from 2 widely recognized sources:  
ACGME RC-FM’s proposed draft program requirements  
A list of procedures published by the STFM Group on procedural training”                                                                                                                                 |
|                                        | PCMH recognition level                    | Based on NCQA levels                                                                                                                                                                                                             |
| Academic Environment                   | In-Training Examination scores           | ABFM reports                                                                                                                                                                                                                   |
|                                        | Faculty scholarly activity                | ACGME Common Program Requirements  
Criteria for the PCMH” |
|                                        | Resident scholarly activity               | ACGME Common Program Requirements for the PCMH” |
|                                        | Resident QI project participation         | ACGME Common Program Requirements                                                                                                                                                                                                 |
| Program Leadership and Stability       | Program accreditation cycle length        | ACGME designation                                                                                                                                                                                                                 |
|                                        | PD tenure and qualifications              | Measured as No. of years current PD has served  
Measured as No. of PDs in the last 10 y  
Measured as PD participation in specific family medicine fellowship training                                                                                                                                 |
| End Product/Graduates                  | Board certification pass rates (5-y average) | Derived from ACGME accreditation standards and ABFM aggregate initial certification data                                                                                                                                              |
|                                        | Graduate scope of practice                | Based on policy briefs published by the Robert Graham Center and the ABFM that demonstrate a declining scope of practice”  
Given the importance of the PCMH model to the specialty’s future, the task force chose to include whether a program’s graduates were practicing in a PCMH” |
Examples

• Worksheet

• Disclaimer

• Structure and sample of results
Worksheet

Residency Performance Index (RPI)

This worksheet will introduce the RPI tool and allow you to prepare your information before you attempt to enter your data online. We hope that review/completion of this worksheet before data entry will make the online process much easier.

Data you will need: volumes

- WebADs patient volumes of last 3 years of grads broken down by ICU, peds inpts, patient age distributions (age >60, age <10)
- 2013 ABFM ITE results summary
- ABFM certification results for previous 3 years
- ACGME certification letter with citations
- Compilation of core faculty scholarly activity past 5 years
- Resident QI projects Class of 2013
- Resident Scholarly Activity Class of 2013
- Audit of resident procedures
- PD experience/continuity
- PCMH recognition level
- Alumni survey on graduates’ scope of practice & PCMH recognition level (*optional data)
**Worksheet:**

The following tables summarize the questions that you will have to answer online. These can be printed and used to fill in your answers before you enter them online.

---

<table>
<thead>
<tr>
<th>Program Identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your ten-digit ACGME Program Number?</td>
</tr>
</tbody>
</table>

**Resident outpatient experience –**

*On the survey, you may answer these 4 questions for up to 5 separate FMC sites.*

<table>
<thead>
<tr>
<th>Describe your FMC’s Certification Level (1, 2, 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average # of patient visits in the FMC for your graduating residents over the last 3 yrs</td>
</tr>
<tr>
<td>% of pts over the age of 60 seen by your residents in the FMC</td>
</tr>
<tr>
<td>% of pts under the age of 10 seen by your residents in the FMC</td>
</tr>
</tbody>
</table>

**Resident inpatient and ER experience**

<table>
<thead>
<tr>
<th>Average # of personally managed adult medicine inpatients for your residents during their 3 year residency</th>
</tr>
</thead>
</table>
Disclaimer

The Residency Performance Index (RPI) is a tool developed and maintained by the AFMRD and is intended for the use of its members. Your program's individualized survey results in the form of an RPI report may only be used for your internal planning purposes. Publication or comparison to other programs or other data sets is strictly prohibited. The AFMRD will own all RPI data and survey results and will only use your data in anonymous, aggregate form for the purpose of advancing the mission of the AFMRD and its members.
## Example of Report

### Residency Performance Index

<table>
<thead>
<tr>
<th>Patient Visits: FMC 1</th>
<th>Your Program</th>
<th>Aggregate Median</th>
<th>Minimum Target Number</th>
<th>Green</th>
<th>Yellow</th>
<th>Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>FM C 1 Name: Clevehill</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FM C 1 PCMH Certification:</td>
<td>Mid-Level</td>
<td>Mid-Level</td>
<td>Mid-Level</td>
<td>Highest level</td>
<td>Mid level</td>
<td>No Cert.</td>
</tr>
<tr>
<td>Question 1: FMC 1 - What is the average number of patient visits in the FMC for your graduating residents over the last three years?</td>
<td>Question 1</td>
<td>1915</td>
<td>1792.50</td>
<td>1650</td>
<td>&gt;1900</td>
<td>1650-1900</td>
</tr>
<tr>
<td>Question 2: FMC 1 - What is the percentage of patients over age 60 seen by your residents in the FMC?</td>
<td>Question 2</td>
<td>12%</td>
<td>16.00%</td>
<td>10%</td>
<td>&gt;15%</td>
<td>10%-15%</td>
</tr>
<tr>
<td>Question 3: FMC 1 - What is the percentage of patients under age 10 seen by your residents in the FMC?</td>
<td>Question 3</td>
<td>18%</td>
<td>13.00%</td>
<td>16%</td>
<td>&gt;15%</td>
<td>10%-15%</td>
</tr>
<tr>
<td>Question 4: What is the average number of personally managed adult medicine patients for your residents during their three-year residency?</td>
<td>Question 4</td>
<td>1250</td>
<td>768.00</td>
<td>750</td>
<td>&gt;850</td>
<td>750-850</td>
</tr>
<tr>
<td>Question 5: What is the average number of personally managed ICU patients for your residents during their three-year residency?</td>
<td>Question 5</td>
<td>75</td>
<td>28.50</td>
<td>15</td>
<td>&gt;24</td>
<td>15-24</td>
</tr>
<tr>
<td>Question 6: What is the average number of personally managed pediatric ER patients for your residents during their three-year residency?</td>
<td>Question 6</td>
<td>400</td>
<td>96.00</td>
<td>75</td>
<td>&gt;100</td>
<td>75-100</td>
</tr>
<tr>
<td>Question 7: What is the average number of personally managed pediatric inpatient patients for your residents during their three-year residency?</td>
<td>Question 7</td>
<td>125</td>
<td>120.00</td>
<td>75</td>
<td>&gt;100</td>
<td>75-100</td>
</tr>
</tbody>
</table>

### Exam Scores

<table>
<thead>
<tr>
<th>Exam Scores</th>
<th>Your Program</th>
<th>Aggregate Median</th>
<th>Minimum Target Number</th>
<th>Green</th>
<th>Yellow</th>
<th>Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 8: What is your program's composite score in the previous year on the In-Training Exam?</td>
<td>Question 8</td>
<td>444</td>
<td>440.00</td>
<td>438</td>
<td>&gt;438</td>
<td>&lt;438</td>
</tr>
<tr>
<td>Question 9: What is your program's first-time-take rate of the ABFM Board Certification Exam for the previous three years?</td>
<td>Question 9</td>
<td>100%</td>
<td>95%</td>
<td>100%</td>
<td>100%</td>
<td>95%-99%</td>
</tr>
<tr>
<td>Question 10: What is your program's first-time-pass rate on the ABFM Board Certification Exam for the previous three years?</td>
<td>Question 10</td>
<td>96%</td>
<td>93%</td>
<td>100%</td>
<td>&gt;95%</td>
<td>85%-95%</td>
</tr>
<tr>
<td>Question 11: What is the length, in years, of your program's last ACGME accreditation cycle?</td>
<td>Question 11</td>
<td>10</td>
<td>5.00</td>
<td>5</td>
<td>4-5</td>
<td>3-1.9</td>
</tr>
</tbody>
</table>

### Comparative Data

[Comparative Data Chart]
What RPI is NOT

• DO NOT use it as an advertising/promotional tool.

• RC and others do not have access and it is NOT an accrediting tool.

• NOT A RANKING SYSTEM
RPI as a powerful Communication Tool

• Easily communicates current state and future needs to faculty and leadership

• Reminds us of:
  • Good work accomplished
  • Goals ahead

• Graphic depiction of complicated nature of residency training and accreditation
  • Reiterating the vital roles of program directors / faculty

• Appeals to data-minded leadership
Specific Uses of RPI Data

• Individual Program Data

• Aggregate Data
Individual Program Data

• PEC (Program Evaluation Committee) and APE (Annual Program Evaluation)

• Leverage for program resources
RPI = Underutilized Tool

• 2014 Survey of AFMRD members regarding PEC
  • Mostly PDs

• “What data do you review or use at or prior to your main program evaluation meeting?”
<table>
<thead>
<tr>
<th>Answer Choices</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Board Pass Rate</td>
<td>72.54%</td>
</tr>
<tr>
<td>ITE scores</td>
<td>74.65%</td>
</tr>
<tr>
<td>Faculty survey of program</td>
<td>80.28%</td>
</tr>
<tr>
<td>ACGME residency survey</td>
<td>90.85%</td>
</tr>
<tr>
<td>Graduate surveys</td>
<td>70.42%</td>
</tr>
<tr>
<td>Residency Performance Index (RPI)</td>
<td>10.56%</td>
</tr>
<tr>
<td>Duty Hour reports</td>
<td>52.82%</td>
</tr>
<tr>
<td>Vision, Mission</td>
<td>45.07%</td>
</tr>
<tr>
<td>Overall Educational goals</td>
<td>68.31%</td>
</tr>
<tr>
<td>Overall curriculum</td>
<td>82.39%</td>
</tr>
<tr>
<td>Match / recruitment data</td>
<td>50.70%</td>
</tr>
<tr>
<td>Faculty development summaries</td>
<td>30.99%</td>
</tr>
<tr>
<td>Clinical Data (diabetes, htn, etc)</td>
<td>10.56%</td>
</tr>
<tr>
<td>Clinical Competency Committee compliance</td>
<td>21.13%</td>
</tr>
<tr>
<td>Semi-annual review data</td>
<td>33.80%</td>
</tr>
<tr>
<td>Lecture schedule</td>
<td>38.03%</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>16.90%</td>
</tr>
</tbody>
</table>

Total Respondents: 142
PEC and APE

- New RC requirement

- RPI report can summarize much of the necessary program data presented in the APE (Annual Program Evaluation)
  - Many RPI domains are PEC domains

- RPI report can serve as a great start to the creation of the required action plan
ACGME and NAS expectations

• APE and Action Plans are key components to new “Self-Study” process

• Documentation / tracking of improvements
  • Over the course of the 10-year self study
  • RPI reports could serve a key component of APE and can serve as a tracking tool
Ten Year Self-Study: Conceptual Model

ACGME provides summary data from Annual Reviews for Self-Study.

Ongoing Improvement

Yr 0: ACGME Review, Ann Prgr Eval
Yr 1: ACGME Review, Ann Prgr Eval
Yr 2: ACGME Review, Ann Prgr Eval
Yr 3: ACGME Review, Ann Prgr Eval
Yr 4: ACGME Review, Ann Prgr Eval
Yr 5: ACGME Review, Ann Prgr Eval
Yr 6: ACGME Review, Ann Prgr Eval
Yr 7: ACGME Review, Ann Prgr Eval
Yr 8: ACGME Review, Ann Prgr Eval
Yr 9: ACGME Review, Ann Prgr Eval
Yr 10: ACGME Review, Ann Prgr Eval

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Leverage for your “Asks” from leadership

• RPI data can convey program needs in an “official way”
  • Similar to the upside of an RC citation
  • But without the accreditation repercussions

• Easily communicate successes as well as potential challenges in meeting requirements

• Gives comparative data
Examples

• Faculty resources not being met and need to hire

• IT needs for new counting requirements

• $ to pay for Boards

• Using results internally to spur faculty and residents to excel (healthy competition).
Aggregate Data

• Track gaps and potential trends in FM training

• Identify training and faculty development needs

• AFMRD and others can tailor educational offerings

• Focus advocacy efforts with accrediting bodies like RC and ABFM
Aggregate data

• Key measures looking at health of FM for the future – Pediatric care, PCMH status, Maternity care, OB/Gyn procedural training.

• Focus on areas nationally that fall into “yellow” or “red” zones of metrics.

• Based on 2013 data
Question 1: FMC 1 - What is the average number of patient visits in the FMC for your graduating residents over the last three years?

1792.50

Question 2: FMC 1 - What is the percentage of patients over age 60 seen by your residents in the FMC?

16.00%

Question 3: FMC 1 - What is the percentage of patients under age 10 seen by your residents in the FMC?

13.00%
Question 4: What is the average number of personally managed adult medicine patients for your residents during their three-year residency?

Question 5: What is the average number of personally managed ICU patients for your residents during their three-year residency?

Question 6: What is the average number of personally managed pediatric ER patients for your residents during their three-year residency?

Question 7: What is the average number of personally managed pediatric inpatient patients for your residents during their three-year residency?

<table>
<thead>
<tr>
<th>Question</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 4</td>
<td>768.00</td>
</tr>
<tr>
<td>Question 5</td>
<td>28.50</td>
</tr>
<tr>
<td>Question 6</td>
<td>96.00</td>
</tr>
<tr>
<td>Question 7</td>
<td>120.00</td>
</tr>
</tbody>
</table>
Question 8: What is your program's composite score in the previous year on the In-Training Exam?

Question 9: What is your program's first-time-take rate of the ABFM Board Certification Exam for the previous three years?

Question 10: What is your program's first-time-pass rate on the ABFM Board Certification Exam for the previous three years?

440.00
95%
93%
Question 11: What is the length, in years, of your program's last ACGME accreditation cycle?

Question 12: What is the average length, in years, of your last three ACGME accreditation cycles?
Question 13: How many presentations at national/regional meetings and/or peer-reviewed publications have been completed per FTE core faculty in the past five academic years?

Question 14: What percentage of your most recent graduating class of residents completed a scholarly activity during residency?

Question 15: What percentage of your most recent graduating class of residents completed at least one QI project during residency?
Question 16: How many years has the program director been a program director (all programs)?

Question 17: Is the program director a NIPDD graduate?

Question 20: How many program directors has the program had in the last 10 years?

>5 Years
Yes
2 PDs
<table>
<thead>
<tr>
<th>Question</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 22: What percentage of the graduates serves as the primary</td>
<td>43.00%</td>
</tr>
<tr>
<td>attending for hospitalized adults?</td>
<td></td>
</tr>
<tr>
<td>Question 23: What percentage of the graduates serves as the primary</td>
<td>26.00%</td>
</tr>
<tr>
<td>attending for hospitalized newborns, infants, and children under age</td>
<td></td>
</tr>
<tr>
<td>18?</td>
<td></td>
</tr>
<tr>
<td>Question 24: What percentage of the graduates provides ambulatory care</td>
<td>89.50%</td>
</tr>
<tr>
<td>for newborns, infants, and children under age 10?</td>
<td></td>
</tr>
<tr>
<td>Question 25: What percentage of the graduates provides prenatal,</td>
<td>21.50%</td>
</tr>
<tr>
<td>intrapartum, and postpartum maternity care?</td>
<td></td>
</tr>
<tr>
<td>Question 26: What percentage of the graduates is in a practice that is</td>
<td>25.00%</td>
</tr>
<tr>
<td>PCMH-certified (any level) by NCQA or Joint Commission (adult or</td>
<td></td>
</tr>
<tr>
<td>pediatrics)?</td>
<td></td>
</tr>
</tbody>
</table>
EXAMPLE OF PROCEDURE DATA
<table>
<thead>
<tr>
<th>Procedure 1: Anoscopy</th>
<th>Procedure 1</th>
<th>Most residents competent (&gt;50%)</th>
<th>100% Competent</th>
<th>100% Competent</th>
<th>&gt;50% Competent</th>
<th>&lt;50% Competent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure 2: Chest x-ray interpretation</td>
<td>Procedure 2</td>
<td>All residents competent</td>
<td>100% Competent</td>
<td>100% Competent</td>
<td>&gt;50% Competent</td>
<td>&lt;50% Competent</td>
</tr>
<tr>
<td>Procedure 3: EKG interpretation</td>
<td>Procedure 3</td>
<td>All residents competent</td>
<td>100% Competent</td>
<td>100% Competent</td>
<td>&gt;50% Competent</td>
<td>&lt;50% Competent</td>
</tr>
<tr>
<td>Procedure 4: Eye fluorescein exam</td>
<td>Procedure 4</td>
<td>All residents competent</td>
<td>100% Competent</td>
<td>100% Competent</td>
<td>&gt;50% Competent</td>
<td>&lt;50% Competent</td>
</tr>
<tr>
<td>Procedure 5: Corneal/sclera foreign body removal</td>
<td>Procedure 5</td>
<td>Most residents competent (&gt;50%)</td>
<td>100% Competent</td>
<td>100% Competent</td>
<td>&gt;50% Competent</td>
<td>&lt;50% Competent</td>
</tr>
<tr>
<td>Procedure 6: Immobilization and stabilization of severe sprains</td>
<td>Procedure 6</td>
<td>All residents competent</td>
<td>100% Competent</td>
<td>100% Competent</td>
<td>&gt;50% Competent</td>
<td>&lt;50% Competent</td>
</tr>
<tr>
<td>Procedure 7: Immobilization and stabilization of non-displaced fractures</td>
<td>Procedure 7</td>
<td>Most residents competent (&gt;50%)</td>
<td>100% Competent</td>
<td>100% Competent</td>
<td>&gt;50% Competent</td>
<td>&lt;50% Competent</td>
</tr>
<tr>
<td>Procedure 8: Interpretation of routine musculoskeletal x-rays</td>
<td>Procedure 8</td>
<td>All residents competent</td>
<td>100% Competent</td>
<td>100% Competent</td>
<td>&gt;50% Competent</td>
<td>&lt;50% Competent</td>
</tr>
<tr>
<td>Procedure 9: Injection and aspiration of joints</td>
<td>Procedure 9</td>
<td>All residents competent</td>
<td>100% Competent</td>
<td>100% Competent</td>
<td>&gt;50% Competent</td>
<td>&lt;50% Competent</td>
</tr>
</tbody>
</table>
Experience so far with RPI

• Beta test in 2011 – 16 programs tested, tool refined.

• First run in 2012-2013 = 70 programs completed tool, in 2013-14 = 115 programs.

• Mostly positive response as to usefulness in guiding program improvement efforts.

• Some concerns on data collection (difficult, redundant with ADS) and anonymity of data.
Limitations

- Possibility of Selection Bias
  - highly functioning programs participate thus skewing aggregate data.

- Redundant data entry into ADS and RPI may dissuade some from using.

- Metrics and “red, yellow, green” levels set by expert opinion?
Discussion

• Feedback

• Ideas / Suggestions