

A Model for a Standardized National Family Medicine Graduate Survey

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Background and Objectives: Accreditation requirements mandate that family medicine residency programs perform surveys of graduates. As part of the Preparing the Personal Physician for Practice (P⁴) Project, we developed a model for a standardized national graduate survey to be used to assess practice characteristics of graduates, including the implementation of features of the Patient-centered Medical Home (PCMH). **Methods:** We conducted a content analysis of residency graduate surveys from the 14 programs involved in the P⁴ project to identify common elements of importance to residencies. We then designed a new graduate survey as a core measure of the P⁴ Project. It included practice characteristics, assessment of training, and the status of features of the PCMH. **Results:** Categories of variables common to the graduate surveys of the P⁴ programs included physician and practice characteristics, work load, scope of practice, career satisfaction, and assessment of training. We found variability among programs in the number of procedures and residency content areas listed on any individual program survey, with the number of procedure ranging from 0–21, and the number of content areas ranging from 0–61. The only PCMH feature included on any P⁴ program survey was the status of an electronic medical record. **Conclusions:** Graduate surveys from individual residency programs vary widely. Using a standardized national survey instrument would provide important information to understand the national practice characteristics and scope of practice in family medicine as well as to track the implementation of PCMH features among residency graduates.

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An important method of evaluating family medicine residency programs is to survey program graduates. The Residency Review Committee (RRC) for Family Medicine requires all family medicine residencies to formally survey their graduates as part of the accreditation process.¹ This requirement is intended to facilitate the use of graduate feedback to guide improvements in the curriculum and increase the relevance of resident training to the realities of future practice. In addition to questions assessing perceived preparedness for

practice, these surveys can provide an overview of the nature of family physicians' practices.

Responses to these questions can also document the extent to which family medicine residency graduates are fulfilling the mission to provide primary care in underserved areas, and this information can be used to support ongoing public financial support for training programs.²⁻⁴ Graduate surveys have also been used to evaluate the relationship between a specific component of residency training, such as geriatrics, and subsequent post-residency practice patterns.⁵ Survey data can also evaluate which aspects of residency training are associated with career satisfaction.⁶ Thus, graduate surveys can help inform decisions about policy, educational methods, and other issues of concern to the specialty.⁷

Variation in Graduate Surveys

While the content areas of these surveys are defined by the RRC, the specific questions are not. This lack of

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specificity has led to wide variation in questions asked by each program. Lack of standardization also makes it difficult to compare programs or their graduates' practices. Indeed, existing literature on graduate surveys in family medicine describes a wide range of questions about practice characteristics, scope of practice, privileging, and perceived adequacy of preparation in various content areas of residency training.⁸⁻¹²

New Directions for Graduate Surveys

In 2004, the Future of Family Medicine Report called for changes in family medicine training and practice aimed at improving the health of the American public.¹³ A set of 10 recommendations was made to begin a transformation toward a new model of care in which each American would have a Patient-centered Medical Home (PCMH).

Among these recommendations was a call for a period of innovation and experimentation in the training of family physicians. A new initiative, Preparing the Personal Physician for Practice (P⁴), was the method chosen to catalyze and inform innovation in residency education in the discipline.¹⁴ Evaluation is a central task of the P⁴ project and surveying graduates of the 14 participating residencies will provide essential data to measure the outcomes of residency training innovation. A graduate survey that includes the status of implementation of specific features of the PCMH provides the opportunity to understand how dissemination of the PCMH is occurring in practice.

In this report, we describe the development of a survey tool that can serve as a model for a standardized national graduate survey to be used by all family medicine residencies. The survey instrument can be used in a fashion similar to current surveys—to assess practice characteristics of graduates—and also to assess the degree of implementation of features of the PCMH. It can thus serve as a core measurement tool in the P⁴ project.

Methods

The P⁴ Project

The project involved 14 residency programs and is sponsored by the American Board of Family Medicine and the Association of Family Medicine Residency Directors. The project is administered by a steering committee made up of family medicine educators, an evaluation team from the Department of Family Medicine at Oregon Health and Science University (OHSU), and advisers from other disciplines and health-oriented organizations. It is conducted in collaboration with TransforMED,¹⁵ a practice redesign initiative of the American Academy of Family Physicians (AAFP). The P⁴ project is positioned to answer questions such as how best to align residency training with the new model of practice and how to determine which educational methods are most effective in producing skilled personal physicians for the PCMH.

The process by which programs applied to participate in P⁴ consisted of an initial letter of intent, followed by a detailed application for those programs selected to go on to the second stage of the application process. The steering committee considered eight selection criteria, outlined in Table 1. The P⁴ Residency Programs are listed in Table 2.

Content Analysis of Surveys

We conducted a detailed content analysis of 18 residency graduate surveys used by the 14 P⁴ programs. Four programs used two surveys (three had separate surveys for recent graduates and later graduates, and one residency used a program-specific survey as well as a survey from their regional network of affiliated residencies). One of the authors performed an initial review of the surveys and established common categories for the questions. We added an additional category to capture survey questions that assessed the status of implementation of PCMH features.

We then sorted the questions from the surveys into common categories. For example, a category called

Table 1

Selection Criteria for the P⁴ Project

1. Importance of the proposed innovations for broad application to the training of family physicians to be personal physicians
2. Reputation, experience, and leadership of the applicant residency program and its sponsors
3. Innovativeness of proposed changes
4. Alignment with patient-centered medical home (PCMH) characteristics
5. Capacity to evaluate proposed innovations and conduct the experiment on site
6. Likelihood that proposed innovations would inspire students, residents, faculty, and practicing physicians toward outstanding performance
7. Sustainability and financial viability
8. Ability to work well with other residencies, the P ⁴ Steering Committee, and TransforMED

“Fellowship Status” included all questions related to fellowship training. We recorded the number of programs with questions in each category and determined a frequency score for each category. When a program had two surveys, a category that appeared on either survey was included for that program.

Survey Design and Testing

We selected the final questions for the P⁴ graduate survey to balance three competing needs: (1) the 14 individual programs’ needs to collect their own specific information about their graduates, (2) the P⁴ project’s need to collect data on all residents from all programs, and (3) the need to keep the survey’s length reasonable. The members of the P⁴ Evaluation Team from OHSU’s family medicine department and the P⁴ Steering Committee drafted an initial instrument using the results of the content analysis and group discussion. If a question appeared on surveys from at least three programs, it was included in the first draft survey.

The evaluation team sent this draft survey instrument to all P⁴ programs in March 2008 for feedback, which resulted in further revisions. A subcommittee of faculty from the P⁴ programs made final revisions to the survey and developed the process for administering it. Each P⁴ program could elect to add site-specific questions to the instrument.

The greatest variation in the P⁴ program graduate surveys occurred in the procedure lists and the content areas listed for graduates to assess the adequacy of their training. The list of procedures chosen for the final survey was derived from the procedures listed on individual surveys, core procedure lists published in the literature,¹⁶ and from the Society of Teachers of Family Medicine (STFM) Group on Hospital Medicine and Procedural training.¹⁷ We specifically designed the list to be inclusive rather than exclusive to account for the significant variation in procedures performed in various residency programs.

We selected the content areas for the final survey primarily from residency program content required by the RRC for Family Medicine.¹ This list included content areas present on the majority of P⁴ program surveys. We chose the career satisfaction questions from validated measures of physician job satisfaction from the Physician Worklife Survey.¹⁸ We selected variables from the practice survey tool used in the TransforMED

Table 2

P⁴ Training Program Sites

Baylor HCHD Family Medicine Residency Program, Houston, Tex
Cedar Rapids Medical Education Foundation Family Medicine Residency Program, Cedar Rapids, Iowa
Christiana Care Health System Family Medicine Residency Program, Wilmington, Del
Hendersonville Family Medicine Residency Program, Hendersonville, NC
John Peter Smith Hospital Family Medicine Residency Program, Fort Worth, Tex
Lehigh Valley Family Medicine Residency Program, Allentown, Pa
Loma Linda University Family Medicine Residency Program, Loma Linda, Calif
Middlesex Hospital Family Medicine Residency Program, Middletown, Conn
Rochester University Family Medicine Residency Program, Rochester, NY
Tufts University Family Medicine Residency Program at Cambridge Health Alliance, Malden, Mass
University of Colorado Family Medicine Residency Program, Denver, Colo
University of Missouri-Columbia Family Medicine Residency Program, Columbia, Mo
Waukesha Family Medicine Residency Program, Waukesha, Wis
West Virginia University Rural Family Medicine Residency, Harpers Ferry, WV

project to assess the status of PCMH implementation in graduates’ practices.

The final survey was pilot tested with recent (2006) graduates of family medicine residencies not involved in the P⁴ program. We interviewed graduates who participated in the pilot test survey to determine if responses reflected the intention of the questions on the survey. Survey questions were then revised, and the final survey was implemented as part of the P⁴ project in June 2008. The survey instrument is available at <http://www.transformed.com/p4-learnings.cfm>.

Institutional Review Board (IRB) Approval

Specific IRB applications differed for each P⁴ program based on what innovations they were testing and their site-specific measures. All programs and OHSU submitted their projects to their respective IRBs and received exemptions, waivers, or approvals.

Results

Eighteen surveys were included in the content analysis, which represented the most recent graduate surveys used in the 14 P⁴ programs. The surveys varied in length from 1 to 10 pages. Table 3 lists how often the variables chosen for the final survey had been included on P⁴ residency programs’ individual graduate surveys.

The number of procedures listed on any individual program survey ranged from 0 to 21 with a mean of 11 and median of 14. Combining the procedures from all lists resulted in a total of 48 separate procedures. We omitted some procedures if they were not included on national procedure lists^{16,17} and similar procedures were combined, resulting in 43 procedures listed on the final survey.

The number of content areas under the category of “Assessment of Adequacy of Training” listed on any individual program survey ranged from 0 to 61 with a mean of 22 and median of 19. The content areas from all lists totaled 98 combined. The list of content areas chosen for the final survey includes RRC areas and those areas present on the majority of P⁴ program surveys.

Of the 28 PCMH features included on the final survey, the only feature included on any P⁴ program original survey was the presence of an electronic medical record (EMR).

Discussion

There is significant variation in the graduate surveys used by family medicine residency programs, and little

work has been done to compare graduate survey data among programs. Collaboration among the 14 programs involved in the P⁴ process compelled us to create a more standardized approach to graduate surveys. We thus created a survey instrument that can serve as a core survey of all family medicine graduates, with individual programs free to add customized questions about their own specific training.

If all residencies surveying their graduates used the same core questions, cross-program benchmarking could lead to better understanding of and improvements in residency education. For example, pooling graduate data from all family medicine residencies would allow better understanding of variations in the services offered by family physicians and their practices across regions (eg, Southwest versus Northeast) and settings (rural versus urban). It would allow us to examine how closely our residency training matches the needs of our service areas and to understand how practice transformation is occurring. Additional questions added to the core survey by individual programs would permit further assessment of the unique situations or approaches to training of individual programs.

The AAFP regularly surveys member physicians. The most recent survey includes some features of the PCMH, but the number of respondents is relatively low (2006 Practice Profile Survey-1 =32%), making it difficult to draw conclusions from this data.¹⁹ The AAFP also surveys residency graduates each year regarding intended activities (eg, fellowship training, teaching), practice arrangements (eg, group versus solo practice) and size of community, but the response rates to these surveys are also low (12% in 2008).²⁰ In contrast, the response rates of graduate surveys reported in the literature are relatively high (mean=75%, range 40%–97%).²⁻⁹ This may be due to graduates’ loyalty to their training programs as well as the concerted efforts of program directors to keep in touch with graduates and solicit feedback about their residency training experience. The superior response rate of graduate surveys underscores the importance of using a standardized survey to define the services in family physician offices nationally and to better assess the adoption and evolution of the PCMH model.²¹

Limitations

The most important limitation of our work is that the graduate surveys of the P⁴ programs are not necessarily representative of all family medicine residencies, and thus the variables used in our final survey instrument may differ from those that appear on many other residency program graduate surveys. However, the P⁴ programs represent a

Table 3

Final Graduate Survey Variables: Frequency of Use in Individual P⁴ Program Surveys

	<i>P⁴ Program Surveys Including This Variable</i>
Physician Characteristics	
Board certification status	43%
Certificate of Added Qualification status	29%
Fellowship status	21%
Location (state) of practice	50%
Practice Characteristics	
Current professional setting (eg, solo, group practice, academic)	86%
Practicing in federally designated medically underserved setting	50%
Size of community you practice in	71%
Length of time at current practice	29%
Practice payer mix	43%
Number of office visits/day	29%
Number of hours worked/week	21%
Salary range	14%
Career Satisfaction	
Family medicine as a specialty choice	36%
Assessment of Adequacy of Residency Training	
Overall assessment of residency preparation for practice	36%
Scope of Practice	
Maternity care	100%
Adult inpatient care	71%
Adult intensive care	64%
Nursing home care	36%
Newborn nursery care	29%
Pediatric inpatient care	43%
Surgical inpatient procedures	29%
Emergency department care	21%
Any difficulty getting hospital privileges	21%
Teaching activities	43%

diversity of sizes, program types (university based and community based), geographic regions, and settings (urban and rural). The question categories chosen for the final survey were consistent across all the P⁴ programs and very similar to the categories described in reports of graduate surveys in the literature.

Another potential limitation is the length of the survey itself. Additional questions dealing with work-hour details, types of health professionals in the practice, and reasons for stopping inpatient care and maternity care, though useful, would have added even further to the length. Questions about these issues could be added by individual programs of those programs that required information about those issues or such questions could be included in future revisions of our standardized survey instrument.

Similarly, it was not possible for our survey instrument to include a single list of all procedures that might be performed by family physicians without being exhaustive. We found considerable variation in the list of procedures included on the graduate surveys of the P⁴ programs, reflecting varied program types and locations. A standard list, such as we developed for our survey instrument, combined with program-specific questions, would provide national comparison data while simultaneously meeting the needs of individual programs to assess the quality of their training.

Conclusions

In conclusion, we found wide variation in graduate survey tools used by P⁴ programs, but there was consistency in certain categories of questions that were used to construct a standardized national instrument. Using a standardized graduate survey can lead to more meaningful comparisons among residency programs, better delineation of the scope of practice in the discipline, and further knowledge of how new models of care are being disseminated.

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