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# PAR EXCELLENCE

ADVANCING YOUR PRACTICE WITH PAR

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## Validity and Reliability

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The CPSA and the PAR Program are frequently challenged about whether PAR is reliable and valid. PAR has been studied extensively in many studies that have built up the evidence for the validity and reliability of the questionnaires.

In its simplest form, validity assesses whether the instrument measures what it is intended to measure. Reliability (stability) is the degree to which questionnaire scores are consistent over repeated measures and are free of errors of measurement. In assessing the PAR instruments we have examined the evidence and the theory that support the interpretation of PAR scores. We have done this by examining logical evidence from qualified experts about key characteristics of the questionnaires and what they measure, as well as through empirical evidence from actual data and its statistical analyses.

To establish the validity and reliability of the PAR questionnaires, we have paid attention to: 1) The content of questions (evidence of content validity); 2) The responses and scores (evidence of construct validity and reliability).

### Content Validity

- Every questionnaire in the PAR suite of questionnaires has been developed by a steering group of physicians in the specialty, for physicians in the specialty.

- Every draft questionnaire has been sent to all physicians who will be affected by that particular set of questions, so they could provide feedback to be used to modify the content.

### Construct Validity and Reliability

- Questions are then examined to see how many people could actually respond to the question. For questions with high 'unable to respond' rates (i.e. >20%), a decision is made by the Physician Performance Committee (PPC) about whether to keep it.

- Ratings are examined to ensure that responses are not biased by how well a respondent knows the physician. What we have found is that familiarity contributes little to the variance in ratings.

PAR questionnaires were designed to assess certain attributes (e.g., communication, technical skills, collegiality). Factor analyses are done to ensure that the items that are intended to correlate with one another do so, and they do for PAR.

The reliability of the questionnaires has been assessed through Cronbach's alpha analyses, which shows us the instruments and the scales have internal consistency reliability. We have also done generalizability analyses to ensure that individual physicians receive data that are reliable. Over many such analyses of PAR, we have determined that

25 patients with questionnaires between 20 and 40 items do produce reliable data for each physician. We have also demonstrated that eight co-workers and eight medical colleagues are required for questionnaires that range between 20 and 40 questions.

### Use of the data

Clearly there is no point in creating questionnaires if no one uses the data that is generated. As a final examination of the evidence for the validity of PAR, attention has been paid to the use that physicians make of their data.

Follow-up studies conducted by Pivotal Research have shown that approximately 50% of physicians use their PAR results to make changes in the ways they practice. Physicians report spending more time with patients, improving the explanations they provide to patients, co-workers, and colleagues, and taking more time to look after themselves. This is further evidence of construct validity.

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For a complete listing of all PAR articles which have been published in peer-reviewed journals, please refer to the PAR website, at [www.par-program.org](http://www.par-program.org).

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# Participation in PAR (as of December 31, 2007)

Group	First time	Second time	Total
GP/family physicians	1,926	1,009	2,935
Surgeons	548	229	777
Anesthesiologists	197	—	197
Medical specialists (1)	549	16	565
Psychiatrists	311	—	311
Pediatricians	194	—	194
Episodic care providers (2)	352	26	378
Diagnostic imaging	206	—	206
Laboratory medicine (3)	90	—	90
<b>Totals</b>	<b>4,373</b>	<b>1,280</b>	<b>5,653</b>

## Notes:

1. This group does not include psychiatrists or pediatrics (and its subspecialties), who use the same questionnaire tools but have different group norms.
2. This group includes emergency medicine, hospitalists, locum physicians and general/ family physicians who typically only see their patients one time.
3. Complete final reports sent out to the end of March 2008.

## Quick Notes:

### PAR for Laboratory Medicine

The final reports for the first group of laboratory medicine specialists have just been sent out. This is the seventh and most recent version of PAR. As with all versions, there is a considerable lag in producing reports for the initial group. Sufficient completed surveys must be accumulated before group norms can be calculated, and the validity and reliability confirmed, before any individual reports can be printed.

### Hospital groups express interest in PAR

Discussions are underway with a number of hospital groups outside of Alberta to use the PAR instruments as part of a quality improvement initiative for physicians with privileges in their facilities. The hospitals

believe that PAR's 360-degree feedback will enhance their quality-improvement culture. Arrangements have not yet been concluded, so the locations cannot yet be announced.

### PAR to consider version for post-graduate trainees

Over the year, the CPSA has given approval to a dozen or so post-graduate training programs around North America to undertake pilot studies to determine if the PAR tools and processes would work for their Residents and Fellows. Now the CPSA will begin detailed review of whether it should develop its own versions of PAR specifically for post-graduate trainees in Alberta. Discussions have just begun with the University of Alberta and the University of Calgary regarding the feasibility and logistics of using PAR for Residents here.

## PAR Online

The following information is available on the PAR website:

- Description of the PAR Program
- PAR Survey Instruments
- PAR Sample Physician Report
- CME Credits for Participation in PAR
- PAR Practice Visit Instruments
- PAR Attributes
- Information and Support from Professional Organizations
- Medical Information Links
- Practice Guidelines
- PAR Pearls
- Physician Educational Resources
- Patient Educational Resources
- Publications about PAR

[www.par-program.org](http://www.par-program.org)

New PAR versions can take up to a year from the mailing out of PAR notices to preparing the final reports.

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