

# Patient Awareness Of And Attitudes Toward Physician Board Certification

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Medical specialty boards issue credentials and define qualifications for specialists. Specialty boards function to assure the public of a specialist's preparation and skill. Licensure confers society's authority to practice medicine; board certification provides evidence of additional skills and training beyond that required for licensure in most states.

Certification constitutes recognition by peers of a specified level of clinical competence. Specialty board certification is also increasingly used as an indicator of clinical competence by hospitals and third-party carriers.<sup>1</sup> Moreover, board certification plays an important role in physicians' referrals.<sup>2</sup>

We conducted the study reported here to examine patients' attitudes toward board certification of primary care physicians.

## Methods

The data are from the 1992 Kentucky Health Survey, a probability telephone survey of adult (18 years old and older) Kentucky residents conducted in June 1992 by the Survey Research Center at the University of Kentucky. The telephone survey used random-digit dialing with Waksberg clustering.<sup>3</sup> The response rate of the survey was 60 percent, supplying a sample of 617 persons. The survey margin of error was slightly less than  $\pm 4$  percentage points at the 95 percent confidence level.

## Questionnaire

The questionnaire included several items relating to the respondent's primary care physician. The respondents were initially asked whether they had a physician whom they could consult whenever

they have medical problems or questions. If the respondent reported that he or she had a regular physician, the respondent was asked the sex of the physician, the specialty of the physician, a rating of the quality of care received from the physician, and the board certification status of the physician.

The perceived quality of care delivered by one's physician was assessed by a previously used four-point measure.<sup>4,5</sup> This general patient perception of the construct seemed appropriate because of the limited and general knowledge patients can bring to an assessment of quality of care.<sup>6</sup>

Several items dealt with board certification and recertification. First, the question assessing perception of the board certification status of one's physician was addressed only to those individuals who reported that they had a physician. To supply some context for the respondent before asking the board certification of the respondent's physician, the item assessing perception of board certification status contained the following stem: "In an effort to make sure that doctors are current and knowledgeable on important medical information, medical specialty societies have board certification tests." Second, all respondents were asked to reply according to a four-point scale (1 = very important, 2 = somewhat important, 3 = not very important, 4 = not important at all): "How important is it to you that a doctor who is treating you has passed a board certification test in his or her specialty?" Third, all respondents were asked to reply using the same four-point scale of importance: "Many medical societies have periodic recertification tests for doctors. These tests allow the doctor to be evaluated by other doctors to see if he or she is current on medical information. How important is it to you that the doctor treating you has been recertified if the original certification was at least 10 years old?"

Urban residence was defined as residence in a county that is part of a metropolitan statistical area (MSA). Conversely, rural respondents were individuals whose residence was in a county that is not part of an MSA.

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In addition to standard demographic indicators (e.g., sex, race, income, education), the respondents' health status was assessed. The study used a five-point (excellent, very good, good, fair, and poor) indicator of self-perceived health status that was used in the National Health Interview Survey.<sup>7</sup>

### Statistical Analyses

All analyses were performed with the use of the Statistical Analysis System (SAS)<sup>8</sup> and reported *P* values are two-tailed. Bivariate analyses consisted of chi-square tests for categorical data, Student *t*-tests for interval data, and Pearson correlations and analysis of variance (ANOVA) for analyses with categorical independent variables and interval-level-dependent variables.

### Results

The demographic characteristics of the sample are shown in Table 1. The sample characteristics are similar to age-dependent 1990 Kentucky census figures.<sup>9</sup>

Eighty-five percent of the respondents reported that they had a physician with whom they could consult for medical problems and advice. The reported specialties of the physicians were family practitioners (38 percent), general practitioners (42 percent), general internists (9 percent), obstetricians (4 percent), and pediatricians (1 percent); 6 percent reported some other type of physician. Fifty-four percent of the respondents reported that the quality of care delivered by their

physician was excellent, 40 percent thought that the quality was good, and 6 percent believed it was fair.

Fifty-three percent of the respondents reported that their physician was certified by the appropriate medical specialty board, 12 percent believed that their physician was not board certified. Seventy-nine percent of the respondents thought it was "very important" that their physician be board certified, 16 percent said it was "somewhat important," 3 percent reported that it was "not very important," and 2 percent indicated it was "not important at all." When the respondents were asked whether it was important that the physician treating them had passed a recertification examination if the original certification was at least 10 years old, 77 percent said it was "very important," 19 percent reported that it was "somewhat important," 3 percent thought it was "not very important," and no respondent indicated it was "not important at all."

The reported board certification status of the personal physicians was not related to demographic and background indicators (i.e., rural or urban residence, education, respondent sex, race, income, respondent age, health status, physician sex, and quality of care). When the analysis was limited to respondents who reported knowing their physician's board certification status (i.e., excluding "don't know" responses), only age showed a significant relation, with older respondents more likely to report that their physician was board certified ( $t = -2.12, P = 0.03$ ).

Table 2 indicates the relation between reported physician specialty (coded as family practitioner, general practitioner, and other specialty) and board certification awareness. When the analysis was undertaken only with individuals who offered a "yes" or "no" response, a significant relation did not exist between board certification knowledge and physician specialty ( $P = 0.26$ ).

The importance of board certification yielded a significant relation with the perception of board certification of one's physician ( $P = 0.0001$ ). The mean importance was 1.12 for those who reported board-certified physicians, 1.40 for those who reported noncertified physicians, and 1.49 for those who did not know. The importance of board recertification also yielded a significant relation with perceived knowledge of board certification ( $P = 0.0001$ ). The mean importance of recertifica-

**Table 1. Sample Demographic Characteristics (n = 617).**

Age, years (mean ± SD)	45 ± 16
Total family income (\$)	
Median per year	25,182
	No. (%)
Sex	
Men	266 (43)
Women	351 (57)
Race	
White	582 (94)
African-American	29 (5)
Other	6 (1)
Residence (MSA county)	
Urban	303 (49)
Rural	314 (51)
Education	
< High school	125 (20)
≥ High school	492 (80)

**Table 2. Relation between Board Certification Awareness and Physician Specialty.\***

Specialty	Physician Board Certified		
	Yes No. (%)	No No. (%)	Don't Know No. (%)
Family physician	89 (48)	23 (12)	73 (40)
General practitioner	104 (50)	26 (12)	78 (38)
Other	71 (72)	10 (10)	18 (18)

\*Chi-square &lt; 0.001.

tion for those who reported board-certified physicians was 1.18, 1.38 for those who reported noncertified physicians, and 1.45 for those who did not know.

Importance of board certification was significantly related to race and sex but not to other demographic and background characteristics. Women respondents placed a higher value on board certification than men respondents ( $t = -2.29$ ,  $P = 0.02$ ), and those who were not white placed more importance on board certification than those who were white ( $t = -2.59$ ,  $P = 0.01$ ). A moderately high correlation was found between the attitude toward board certification and board recertification ( $r = 0.56$ ).

## Discussion

Our data suggest that patient knowledge of medical specialty characteristics of the physician from whom they receive medical care is limited. More than one-third of the respondents did not know whether their physician was board certified. Moreover, of those who said that their physician was a general practitioner, 50 percent believed that he or she was board certified. This information is especially noteworthy because there currently exists no certifying board for general practitioners.

Attitudes toward specialty board certification suggested that patients prefer a physician who is board certified and that this preference extends to a desire for periodic recertification. Ninety-five percent of those surveyed indicated that it was somewhat or very important to them that their physician be board certified, although 35 percent of the respondents did not know the board certification status of their physician. This discrepancy appears to indicate incongruence between patients'

knowledge of and their attitudes toward specialty board certification.

The results are based on a sample of adults from Kentucky, thereby possibly limiting the generalizability of the findings. Kentucky, however, seems an appropriate place for study of this issue because of an essentially equal rural and urban population distribution and because primary care physicians are widely available. The sample was limited to persons with telephones. While this restriction would omit only a small proportion of the general population,<sup>10</sup> a possible exclusion of some individuals of lower socioeconomic status must be considered,<sup>11</sup> as well as possible bias as a result of nonresponse of some contacted individuals.<sup>12</sup>

The specialty boards and organizations such as the Council of Medical Specialty Societies were created to develop standards and procedures for certifying specific competencies of their respective diplomates. Our findings show that, in at least one state, a surprising number of patients are not aware of their personal physician's certification status. Moreover, the public shows confusion regarding the difference between family practice and general practice. These data suggest that the specialty of family practice might benefit from greater public education regarding board certification and the recertification process.

## References

- Omer GE Jr. The development of orthopedic certification in the United States. *Clin Orthop* 1990; 257:11-7.
- Gonzalez ML, Rizzo JA. Physician referrals and the medical market place. *Med Care* 1991; 29:1017-27.
- Waksberg J. Sampling methods for random digit dialing. *J Am Stat Assoc* 1978; 73:40-6.
- Bertolino JG, Mainous AG III. Patient and physician characteristics associated with perceived quality of care. *Fam Pract Res J* (in press).
- Mainous AG III, David AK. Clinical competence of family physicians: the patient perspective. *Arch Fam Med* 1992; 1:65-8.
- Goldman RL. The reliability of peer assessments of quality of care. *JAMA* 1992; 267:958-60.
- Adams PF, Benson V. Current estimates from the National Health Interview Survey, 1990. Hyattsville, MD: US Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Center for Health Statistics. *Vital and Health Statistics* 1991, Series 10, No. 181. DHHS publication (PHS) 92-1509.
- SAS Institute. *SAS users guide: statistics*. 5 ed. Cary, NC: SAS Institute, 1985.

9. 1990 Census of population and housing (1990). Summary population and housing characteristics, Kentucky. Washington, DC: US Department of Commerce, Economics and Statistics Administration, Bureau of the Census, 1991. (CPH-1-19.)
10. Marcus AC, Crane LA. Telephone surveys in public health research. *Med Care* 1986; 24:97-112.
11. Corey CR, Freeman HE. Use of telephone interviewing in health care research. *Health Serv Res* 1990; 25:129-44.
12. Sheatsley PB. Questionnaire construction and item writing. In: Rossi PH, Wright JD, Anderson AB, editors. *Handbook of survey research*. San Diego: Academic Press, 1983:195-230.