Objectives: To characterize the role of board certification in general surgeon, surgical specialist, and nonsurgical subspecialist credentialing and contracting policies and to examine possible variation among different types of health plans.


Setting: Health plans across the United States.

Participants: Health plan credentialing personnel from a random sample of 223 health plans stratified by enrollment size, plan type, Medicaid enrollment, and tax status.

Main Outcome Measures: Proportion of health plans that require specialty board certification at initial contract or at some point during association with the plan and health plan requirements for recertification.

Results: Of 223 health plans, 9 were ineligible, and credentialing personnel completed the telephone survey in 176, which resulted in an overall response rate of 82%. More than 60% of the health plans in this study did not require surgical specialists, general surgeons, or nonsurgical subspecialists ever to be board certified to contract with the plan. Approximately two-thirds of respondents reported that they did not require surgeons (65%) or nonsurgical subspecialists (63%) with time-limited board certification to recertify in their specialty. More than half of the health plans reported that they made exceptions to their board certification policies based on geographic or network need.

Conclusions: Most health plans did not use specialty board certification to assess surgeon and nonsurgical subspecialist competence.

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The manner in which Americans receive medical care has changed during the past 20 years as the United States has shifted to a health care system that is dominated by managed care. By 2007, 160 million Americans were enrolled in managed care programs. Managed care organizations seek to improve health care efficiency through the elimination of unnecessary services, reduction of clinical errors, and improvement of patient well-being.

Central to the provision of quality care is the selection of competent medical professionals who treat managed care members. The process of systematically reviewing medical professional qualifications is known as credentialing. Although hospitals have practiced credentialing in the United States since the early 1900s, managed care organizations did not formalize their credentialing processes until the late 1980s. Until that time, managed care organizations were regulated through state insurance laws, which provided little oversight as to quality or regulation of contracted medical care professionals.

Physicians are typically affiliated with several insurers, hospitals, or practices. Thus, a physician may be credentialed and recredentialed by various organizations multiple times. In the 1980s, managed care organizations accepted the credentialing performed by hospitals, with the assumption that, if a physician were granted privileges at a hospital, he or she must be providing competent care.

As managed care enrollment increased, the National Committee for Quality Assurance (NCQA) was established to provide oversight for managed care organizations, as the Joint Commission did for hospitals. To formalize standards of care for the managed care industry, the NCQA and the Joint Commission began accrediting managed care organizations in 1991 and 1994, respectively. The Utilization

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Review Accreditation Commission (URAC) also expanded its utilization review services in 1996 to include the accreditation of health plans.7

As part of the accreditation process, the NCQA and URAC require managed care organizations to establish credentialing committees that will review medical professional training and experience, licensure, and competence. One of the competency assessments available to health plans in the credentialing process is specialty board certification. In the early part of the 20th century, the American Board of Medical Specialties (ABMS) was created to validate physician competence through standardized professional training and rigorous evaluation.8 Board certification initially started as a one-time event and did not require renewal. In the 1970s, specialty boards began issuing time-limited certificates, which require renewal every 6 to 10 years.

In 2000, the 24-member boards of the ABMS approved a plan to move from recertification to maintenance of certification by the creation of a comprehensive process to assess and improve physician competence in the United States.9,10 Maintenance of certification is a continuous process that evaluates physician performance in 6 core competencies: patient care, medical knowledge, practice-based learning, interpersonal skills, professionalism, and systems-based practice.12

Little research exists that pertains to how or whether health plans use board certification in contracting decisions. A 2006 study13 on health plan contracting policies for pediatricians showed that just 41% of health plans require their general pediatricians to be board certified at some point. However, it is unknown whether these findings can be generalized to other specialties. Because children do not use high-cost procedures to the same degree as adults, health plan credentialing policies for pediatricians may not be as stringent.14 Furthermore, no federal legislation or health plan accreditation organization mandates the use of board certification in contracting decisions, so significant variation may exist. To characterize the role of board certification in contracting policies and to examine possible variation among different types of health plans, we conducted a national survey of health plan contracting policies and practices that pertains to requirements for board certification and recertification of surgical specialists, general surgeons, and nonsurgical subspecialists.

The survey was pilot tested for clarity with representatives from a convenience sample of health plans within the state of Michigan and revised to clarify potentially ambiguous questions. Pilot surveys were not included in the analyses. This study was approved by the University of Michigan Medical School Institutional Review Board.

STUDY SAMPLE

The sampling frame of 413 health plans was obtained from the 2006 HealthLeaders-InterStudy Competitive Edge HMO/PPO (Health Maintenance Organization/Preferred Provider Organization) Database. HealthLeaders-InterStudy is a research organization that collects nationwide health plan data and performs analysis on the health plan industry. Because health plans under the same ownership have identical policies that pertain to board certification requirements,15 the sample was selected by plan owner rather than by individual health plan. Health plans with no enrollment owing to having exited or entered the health care market were excluded from the sample.

Using the sampling frame, the research team selected a random sample of 223 health plans weighted to provide nationally representative estimates. The sample was stratified by enrollment size (low, <150 000; medium, 150 000 to <1 million; and high, ≥1 million), plan type (HMO, PPO, or mixed), Medicaid enrollment (<50% vs ≥50%), Medicare enrollment (<5% vs ≥5%), and tax status (for-profit vs not-for-profit).

Health plans were sampled with varying probabilities from each stratum. Weights were applied to create a representative sample of the overall health plan population. The total sample weight (TSW) calculated for each health plan was based on the probability of selection into the study (P) and the response rate (RR). The following formula was used: TSW = [1/P] × [1/RR].

DATA COLLECTION

From October 27, 2006, through March 30, 2007, the research team attempted to contact the selected health plans. Interviewers requested to speak with the department responsible for physician credentialing or contracting at the health plan. When the appropriate person was identified and located, interviewers explained the purpose of the study and obtained verbal consent to participate. Respondents included credentialing directors, credentialing coordinators, and managers of physician contracting. A small number of health plans requested to complete the survey via e-mail or fax.

STATISTICAL ANALYSIS

First, frequency distributions were calculated for each survey item. Second, the research team compared survey responses by health plan characteristics. Weighted χ² statistics were computed for each survey item. P < .05 was considered statistically significant. Percentages reported are unweighted for the total sample; however, percentages reported by health plan demographic characteristic are weighted.

RESULTS

RESPONSE RATE

Of 223 health plans, 9 were ineligible because they did not perform credentialing or reported that they were exiting the market. Of the remaining 214 health plans, 176 credentialing personnel completed the telephone interview, which represents an overall response rate of 82%.
Because not all health plan personnel answered every question, the total numbers presented for each question may differ slightly owing to missing responses. Assessment of the health plan sampling variables among respondents and nonrespondents demonstrated no response bias.

HEALTH PLAN DEMOGRAPHICS

Of the 176 health plans that completed the interviews, 47% (n=83) were classified as low enrollment and 16% (n=29) were high enrollment. Thirty-eight percent (n=66) were HMOs, 23% (n=40) were PPOs, and 40% (n=70) were classified as having a mixed plan. Seventy-eight percent (n=138) had less than 50% Medicaid enrollment, and 72% (n=126) had less than 5% Medicare enrollment. Sixty-nine health plans (39%) reported NCQA accreditation.

There is overlap among the health plan characteristics (ie, a for-profit health plan can also have high enrollment), so all percentages do not total 100.

OVERALL RESULTS

Less than 40% of health plans reported that they ever require surgical specialists, general surgeons, and nonsurgical subspecialists to obtain board certification at some point during their affiliation with the plan (Table 1). Health plans with high enrollment were more likely than plans with medium or low enrollment to require board certification (59% vs 34% vs 36%; P=.01). Ninety-eight percent of those health plans reported that their certification policies are the same for surgical specialists, general surgeons, and nonsurgical specialists.

Most health plans that did not require board certification at any point still required surgical specialists (84 [79%]), general surgeons (86 [79%]), and nonsurgical specialists (86 [80%]) to complete an Accreditation Council for Graduate Medical Education–approved residency program. PPO plans (58%) were less likely than HMO plans (88%) and mixed plans (91%) to require completion of residency training.

Board certification requirements did not vary significantly by reported NCQA accreditation status. Only one-third of NCQA-accredited health plans reported that they require board certification at some point for general surgeons (33%), surgical specialists (33%), and nonsurgical subspecialists (35%).

CREDENTIALING REQUIREMENTS

AT INITIAL CONTRACTING

Among the health plans in this study that ever required board certification, approximately one-fifth required surgeons and nonsurgical subspecialists to be board certified at the point of initial contract (Table 2). Approximately half the health plans reported that they made exceptions to their certification policy for recent graduates. These health plans allowed additional time for recent graduates to become board certified while requiring physicians with more experience to be board certified at initial contracting. We classified these health plans as having a mixed policy for board certification.

Most health plans (94%) in this study that did not require board certification at initial contracting required surgical specialists, general surgeons, and nonsurgical specialists to have successfully completed an Accreditation Council for Graduate Medical Education–approved residency program. One-quarter of health plans that required board certification at some point during affiliation with the plan did not set a time frame for certification (Table 2).

Among health plans that ever required certification (n=68), most reported that they made exceptions to their certification policy at the point of initial contracting (Table 3). A greater proportion of medium- and low-enrollment plans made exceptions to their certification policies. Both HMOs and PPOs were more likely than mixed plans to report exceptions to their certification policy for general surgeons.
Most health plans with exceptions to their certification policies (69% [n=47] surgical specialists, 70% [n=46] general surgeons, and 69% [n=47] nonsurgical subspecialists) made them for physicians with a certain number of years of service or for physicians who have been under contract with the plan since a specific time (eg, grandfather clause). Half the health plans reported that they also made exceptions for surgical specialists (51% [n=35]), general surgeons (52% [34]), and nonsurgical subspecialists (51% [35]) in the case of a geographic or network need. More than a third of health plans made exceptions to their certification policies for surgeons (44% [30]) and nonsurgical subspecialists (43% [29]) on a case-by-case basis. High-enrollment Medicaid plans were more likely to make exceptions on a case-by-case basis for surgeons (64% vs 34%; P=.02) and nonsurgical subspecialists (62% vs 34%; P=.03).

**PRIVILEGING POLICIES**

Twenty-three health plans reported that they grant privileges for specific procedures (14%). HMOs, low-enrollment plans, and high-enrollment Medicaid health plans were more likely than their peers to grant privileges for procedures. Among these 23 health plans, 57% granted privileges for nonsurgical procedures such as colonoscopies and 55% granted privileges for hospital-based procedures (eg, cardiac catheterization). Twenty of the 23 health plans (87%) granted privileges for specific procedures for surgical specialists.

Six health plans (26%) reported that board certification is required of nonsurgical subspecialists for specific invasive procedures, such as endoscopy or heart catheterizations. One health plan reported that surgical specialists are required to be board certified for specific procedures, such as robotics surgery. These 23 health plans reported that they use the NCQA and medical society guidelines most frequently to set criteria for privileging for surgical specialists (13 [65%]) and nonsurgical specialists (13 [57%]).

**TRACKING BOARD CERTIFICATION**

A total of 175 health plans (89%) reported that they track board certification expiration dates for surgeons, and 138 health plans (90%) track certification expiration dates for nonsurgical subspecialists. High-enrollment-type, mixed-type, and high-enrollment-Medicare-type health plans were more likely to track expiration dates than their peers. Forty-nine health plans (28%) indicated that they use a credentials verification organization to verify certification status.

Nearly all health plans reported that they verify certification of specialists at initial credentialing (175 [99%]) and every 2 years as part of recredentialing (168 [95%]). Sixty-eight health plans (39%) indicated that they verify certification on expiration of the certificate, whereas 39 (22%) reported continuous monitoring.

**RECERTIFICATION REQUIREMENTS**

The surgical specialists and general surgeons were combined for the portion of the survey that focused on recertification requirements. Approximately two-thirds of respondents reported they did not require surgeons (65%) or nonsurgical subspecialists (63%) with time-limited board certification to recertify in their specialty. Among health plans that ever require board certification, 77% required surgeons and nonsurgical subspecialists with time-limited certificates to recertify. No health plan required surgeons or nonsurgical subspecialists with permanent certificates to recertify.

Most health plans that required surgeons and nonsurgical subspecialists to recertify established time frames for recertification based on a unique plan with each physician (Table 4). Few health plans reported that they did not allow a gap in certification for surgeons (17%) or nonsurgical subspecialists (19%). Four health plans did not have a deadline for recertification of surgeons or nonsurgical subspecialists.

Seventeen health plans (10%) reported they have terminated contracts for surgeons who failed to certify or recertify, and 20 health plans (12%) have terminated contracts for nonsurgical subspecialists. High-enrollment (15%) and medium-enrollment (16%) health plans were more likely than low-enrollment (6%) health plans to terminate contracts.

**INCENTIVES FOR BOARD CERTIFICATION**

Seven percent of the health plans reported that they offered surgeons or nonsurgical subspecialists economic incentives or rewards, such as salary differentials or bonus payments, for board certification. Thirty-eight health plans (22%) offered a pay-for-performance program for surgeons and nonsurgical subspecialists. Two of these health plans reported that board certification was a part of their pay-for-performance program.
of the pay-for-performance program for surgeons, and 1 health plan reported that certification is part of the program for nonsurgical subspecialists.

Table 4. Time Frame in Which Recertification of Surgeons and Nonsurgical Subspecialists Must Occur for Those Health Plans that Require Recertification

<table>
<thead>
<tr>
<th>Total Unweighted Sample, No. (%)</th>
<th>Weighted, %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Enrollment Size</td>
</tr>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>Surgeons required to recertify (n=60)</td>
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</tr>
<tr>
<td>No gap in certification</td>
<td>10</td>
</tr>
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<td>No time frame</td>
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<tr>
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</tr>
<tr>
<td>Unique plan with provider or other</td>
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</tr>
<tr>
<td>Nonsurgical subspecialists required to recertify (n=63)</td>
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</tr>
<tr>
<td>No gap in certification</td>
<td>12</td>
</tr>
<tr>
<td>No time frame</td>
<td>4</td>
</tr>
<tr>
<td>Defined time</td>
<td>1</td>
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<tr>
<td>Unique plan with provider or other</td>
<td>46</td>
</tr>
</tbody>
</table>

Abbreviations: HMO, health maintenance organization; PPO, preferred provider organization.

COMMENT

The most important finding from this study is that more than 60% of health plans did not require surgical specialists, general surgeons, or nonsurgical subspecialists ever to be board certified to contract with the plan. This finding was similar to previous findings that pertain to health plan board certification requirements for pediatricians and pediatric subspecialists. However, our findings on certification requirements for surgeons and nonsurgical subspecialists indicate that a smaller proportion of health plans require certification compared with hospitals, although published findings have been limited to the pediatric specialties. Previous research indicated that 70% of hospitals require pediatricians to obtain board certification at some point.

This finding suggests that most health plans do not view board certification as an important tool for assessing physician competence. Although specialty boards have adopted a more comprehensive and ongoing assessment of physician competence, health plans appear to use alternative measures, such as residency completion, for credentialing surgeons and nonsurgical subspecialists. A little more than a third of health plans require surgeons (35%) and nonsurgical subspecialists (37%) with time-limited certificates to recertify in their specialty.

Currently, the NCQA does not require board certification for accreditation. However, NCQA’s Health Plan Employer Data and Information Set includes measures of the proportion of board-certified physicians credentialed at health plans nationally. However, until 2008, these estimates included physicians with expired certificates, a factor that makes the data unreliable.

Although major health plans have begun to recognize physician participation in the American Board of Internal Medicine maintenance of certification as part of economic-incentive or pay-for-performance programs, few respondents reported that they have such programs in place for surgeons or nonsurgical subspecialists. Such programs may be less developed or underused for surgical specialties.

Those health plans that offer economic incentives for board certification may use physician certification to distinguish themselves in the marketplace. A 2003 national Gallup poll among the general public found that 98% of respondents believed that physicians should go through the board-certification process and 78% stated that recertification is important. Research has also shown that board certification is an important tool for physicians when assessing peer competence. A recent study found that board certification is a major factor for one-third of primary care physicians in their decisions to refer patients to specialists.

Most health plans that required certification reported that they made exceptions to their certification policies. More than half these health plans reported that they made exceptions based on geographic or network need. This raises the question of whether health plans are potentially sacrificing physician standards to make sure that certain areas and populations are served. Research has shown that health plans with high Medicaid enrollment have fewer board-certified primary care physicians and specialists. Studies have also found a difference in the board-certification rates of physicians who treat predominately white patients vs black patients, with those who primarily treat black patients being less likely to be board certified.

Although few studies have examined the relationship between board certification and clinical outcomes, existing studies have indicated that board-certified physicians provide higher quality care. Norcini et al found that board certification was associated with a 19% reduction in mortality after acute myocardial infarctions. Turchin et al found that the probability of antihypertensive treatment intensification in patients with diabetes mellitus decreased by 21.3% for every decade since
last board certification. Although the local culture undoubtedly influences the quality of care, additional research is needed.

High-enrollment health plans were more likely to require board certification compared with medium- and low-enrollment plans. Credentialing is not an inexpensive process; cost estimates range from $60 to $400 per application.30,31 Although the verification of board certification is only one potential part of the credentialing application, high-enrollment health plans may be better able to absorb the extra cost of credentialing in addition to potential pay differentials for board-certified surgeons and nonsurgical subspecialists.

Some health care leaders have expressed concerns about redundancy of credentials verification for health plans, hospitals, and insurers.32 Yet, to ensure safe patient care requires a system-level approach to credentialing. Medical errors are not limited to uncertified surgeons and nonsurgical subspecialists. However, use of board certification appears to be an underused and unrecognized tool for physician assessment.

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