

Safety Culture

An Intervention Model That Promotes Accountability: Peer Messengers and Patient/Family Complaints

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As organizations work to become kinder, safer, and more efficient, they will need to launch various safety, quality, and risk prevention initiatives. Some improvement programs will be motivated internally and some influenced by external agencies' mandates or incentives. For example, value-based purchasing incentivizes organizations to address human behavior that negatively affects clinical outcomes and patient experiences of care.¹⁻³ The rationale is that organizations with the best outcome- and satisfaction-related results should be rewarded and that those with poorer results motivated to improve. Health care organizations therefore need plans to address faulty systems of care, as well as unnecessary variation in health care professionals' behavior and performance that negatively affects clinical outcomes and patient satisfaction.⁴ The plans must be backed by an organizational infrastructure that reliably identifies and fairly addresses behavior and performance that are not consistent with the organization's values and goals (that is, fall short of best practices, fail to achieve intended outcomes, or undermine a culture of safety).⁴⁻⁷

Patients and their families are well positioned to partner with health care organizations to help identify unsafe and dissatisfying behaviors and performance. Indeed, patients may be the first to recognize and report such issues.⁶⁻¹⁰ Many health care organizations respond to unsolicited narrative reports of patient concerns (complaints and grievances¹¹) with service recovery efforts aimed at reducing inflammation, addressing concerns, and retaining patient and community loyalty.^{12,13} Concurrently, learning organizations look for patterns of systems failures and human performance issues that emerge from these reports.⁴ Although the Centers for Medicare & Medicaid Services provides guidance for managing complaints and grievances,¹¹ the value of such reports lies in what the organization decides to do with information thus learned.

Patient complaints are nonrandomly distributed among physicians and represent an example of variation in professional practice and performance.¹⁴⁻¹⁹ They are associated with compli-

Article-at-a-Glance

Background: Patients and their families are well positioned to partner with health care organizations to help identify unsafe and dissatisfying behaviors and performance. A peer messenger process was designed by the Center for Professional and Patient Advocacy at Vanderbilt University Medical Center (Nashville, Tennessee) to address "high-risk" physicians identified through analysis of unsolicited patient complaints, a proxy for risk of lawsuits.

Methods: This retrospective, descriptive study used peer messenger debriefing results from data-driven interventions at 16 geographically disparate community ($n = 7$) and academic ($n = 9$) medical centers in the United States. Some 178 physicians served as peer messengers, conducting interventions from 2005 through 2009 on 373 physicians identified as high risk.

Results: Most (97%) of the high-risk physicians received the feedback professionally, and 64% were "Responders." Responders' risk scores improved at least 15%, where Nonresponders' scores worsened (17%) or remained unchanged (19%) ($p \leq .001$). Responders were more often physicians practicing in medicine and surgery than emergency medicine physicians, had longer organizational tenures, and engaged in lengthier first-time intervention meetings with messengers. Years to achieve responder status correlated positively with initial communication-related complaints ($r = .32, p < .001$), but all complaint categories were equally likely to change over time.

Conclusions: Peer messengers, recognized by leaders and appropriately supported with ongoing training, high-quality data, and evidence of positive outcomes, are willing to intervene with colleagues over an extended period of time. The physician peer messenger process reduces patient complaints and is adaptable to addressing unnecessary variation in other quality/safety metrics.

cations of surgical procedures and physicians' malpractice claims risk.¹⁴⁻²⁰ Thus, physicians who stand out with respect to patient complaints should want to know their status so they can address practice-related issues that increase personal and organizational claims risk. Low-risk colleagues and health system partners, too, should desire their high-risk physicians to learn of and address their status.

We drew from academic detailing research²¹⁻²⁶ to create the Patient Advocacy Reporting System® (PARS®), both a tool and a tiered feedback ("intervention") process (Figure 1, right) for promoting professional accountability.^{4,7} The PARS tool identifies "high-risk" physicians, namely those associated with the highest numbers of unsolicited patient complaints (at or above the 95th percentile for the physician group) and, therefore, at increased risk for lawsuits.¹⁴⁻¹⁹ The data are derived from aggregated, coded complaints across time and include comparisons with local and national peer groups.²⁷

The questions addressed in this article are as follows:

1. Will physicians agree to be trained as messengers and deliver sensitive data?
2. Will those who agree continue as messengers over time?
3. Are any characteristics of high-risk physicians associated with postintervention change in patient complaints?
4. Are any characteristics of peer messengers or the intervention process associated with postintervention change in patient complaints?

Answers will help inform health care leaders who aim to address patterns of behavior and performance problems that negatively affect patients' experiences of care and lead to dissatisfaction, poor outcomes, and claims risk.

Methods

STUDY DESIGN

This retrospective, descriptive study used a database of unsolicited patient complaints (defined, as in our previous research,^{7,28-30} as complaints voluntarily voiced, that is, *not* solicited by standardized, Likert-type forced-choice patient satisfaction surveys) from 16 geographically disparate community ($n = 7$) and academic ($n = 9$) medical centers in the United States (2 northeastern, 5 southeastern, 6 midwestern, and 3 western). All 16 medical centers independently executed business associates agreements, in accordance with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy Rule,³¹ with the Center for Professional and Patient Advocacy (CPPA) at Vanderbilt University Medical Center, Nashville, Tennessee, and engaged CPPA's services to analyze their complaint data. Each center had a system to receive and record unsolicited patient

Promoting Professionalism Pyramid

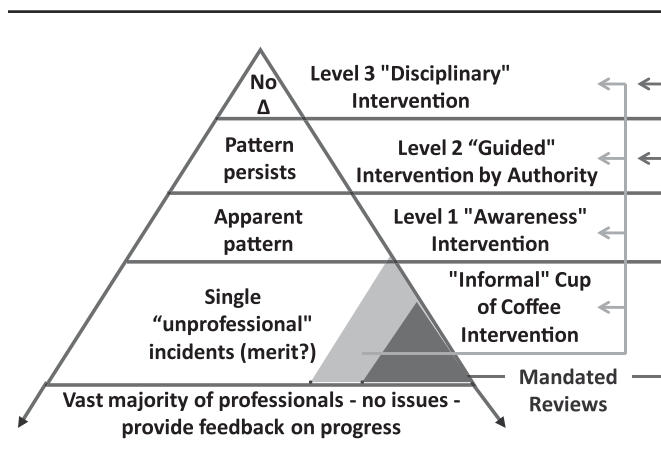


Figure 1. The pyramid is a model describing a process of tiered interventions and related conversations for promoting reliability and accountability. The goal of a Level 1 "Awareness" intervention, the focus of this paper, is to deliver confidential, nondirective and nonpunitive awareness that behavior and performance appears to be at variance with organizational policies, procedures, expectations for practice, clinical outcomes, or other norms. Source: Adapted from Hickson GB, et al. A complementary approach to promoting professionalism: Identifying, measuring, and addressing unprofessional behaviors. Acad Med. 2007;82(11): 1040-1048. Used with permission.

complaint reports and for secure transfer of their complaint database to CPPA. CPPA used the PARS methodology to code complaints and generate "risk scores" for each center's medical group members.^{7,28-30} CPPA maintains the multicenter patient complaint database.

Interventions within each medical group were supported by the following two peer-based (but fully de-identified) comparisons:

1. Rankings on risk scores within the specific physician's total physician group and general area of practice (medicine, surgery, emergency medicine)
2. Comparison with specialty-specific physicians (for example, urologists, trauma surgeons, orthopedists, pediatric cardiologists) in the multicenter database.^{7,29,30,32} The Vanderbilt University Medical Center Institutional Review Board (#080942) approved the study and determined that it satisfied the criteria for exemption from informed consent.

PARTICIPANTS

All physicians ($N = 24,592$) with active practices affiliated with participating medical groups or privileges at participating medical centers during the study period were eligible for inclusion. Of these physicians, 178 were recruited and trained as members of their medical groups' "Messenger" Committees (*see*

Step 4, right). Each messenger conducted a first intervention meeting with one or more of 373 identified high-risk physicians between January 1, 2005, and December 31, 2009.

UNSOLICITED COMPLAINTS AND CODING

CPPA staff coded all narrative reports for specific embedded complaints. The coding system and interrater and test-retest reliabilities have been previously reported.^{28,33,34} Complaint codes include 34 specific categories subsumed under 6 general categories: communication, concern for the person, care and treatment, access and availability, environment, and billing. All complaints describing specific dissatisfactions associated with clearly identified physicians are included in the research database. Complaints are accepted on their face and as expressed by the patient or family; complaints are not evaluated for validity. The distribution of numbers and types of complaints across these categories established the basis for feedback to each high-risk physician.^{27–30,32–34}

PROCEDURES: THE EIGHT STEPS IN THE LEVEL 1 “AWARENESS” INTERVENTIONS

The CPPA process for providing feedback involves use of the tiered intervention model in Figure 1, described elsewhere.⁴ *Single* events may often be addressed via an informal “Cup of Coffee” conversation between peers. This study focuses on Level 1 Awareness interventions, which are conducted after a concerning pattern of behavior—based on aggregated data reflecting multiple events—appears to have emerged. The tiered approach recognizes that post-Awareness-intervention follow-up data will identify some physicians who appear unable or unwilling to address underlying causes of complaints and reduce risk. In such cases, organizational goals will not be attained without active physician group engagement, buttressed by leaders’ commitment to address persistent problematic behavior and performance.⁶ Physicians whose post-Awareness-intervention risk scores do not improve proceed to Level 2 “Authority-Guided” interventions.^{4,7,32,34–36}

The Awareness intervention process consisted of eight steps implemented by the participating sites (*left* side of Figure 2, page 438), each of which required infrastructure support (*right* side of Figure 2).

Step 1. Each cooperating site provided the researchers with names and specialties of affiliated physicians and databases containing all unsolicited complaint reports. Only the CPPA and a participating site have access to that site’s data. Complaint coding was completed,^{27,28} and complaints across all coding categories established each physician’s “complaint type profile.”

Step 2. A weighted sum algorithm was used to generate a risk score for each site’s physicians from the previous four years of complaint data.^{29,30,34}

Step 3. The threshold for considering eligibility for initial peer interventions was defined as a risk score at or above the 95th percentile for the physician group. Intervention letters, comparative figures and tables, and supporting documents were created to support peer-delivered Level 1 Awareness interventions.⁷

Step 4. At each site, a Physician Messenger Committee (Patient Complaints Monitoring Committee [PCMC]) was established in compliance with state requirements for protected peer review. Institutional leaders nominated committee chairs/cochairs and members based on several characteristics: respected by colleagues, committed to confidentiality, willing to receive training, and contributing to committee demographic and practice specialty diversity.⁷ Messenger physicians received eight hours of instruction on conducting intervention visits.⁷ Training established the research basis, then emphasized that messengers share the data in a respectful, nonpunitive, nonjudgmental, and nondirective fashion. Messengers were taught to avoid any natural tendency as “fixers” to be diagnostic or prescriptive, therefore to make no recommendations except suggesting that the colleague review and reflect on the feedback materials. Training included skill practice with feedback on delivering the data; addressing common reactions, questions and challenges; and expressing appropriate appreciation for the colleague (Sidebar 1, page 439).

Step 5. Each organization’s local Messenger Committee chair or cochair made specific messenger assignments. Messengers sent high-risk physicians a letter in advance of intervention meetings to signal the colleague’s standing with respect to peers and to keep the reason for the visit from coming as a surprise.

Step 6. In a first-time visit, the messenger shares data with a high-risk physician, makes him or her aware of his or her risk status, and asks the physician to reflect on why he or she appears to stand out.

Step 7. The messengers provide the high-risk physicians with feedback during follow-up visits.

Step 8. CPPA team members discuss progress with site leaders.

Appendix 1 (available in online article) provides two cases—Case Study 1 (a Responder), with sample intervention materials, and Case Study 2 (a Nonresponder).

Messengers completed a debriefing form (Appendix 1, Figure 6) immediately after visits (step 6 of Figure 2, page 438). Debriefing forms served three functions: (1) track completion of intervention meetings, (2) assess messengers’ self-reported fi-

Steps in the Intervention Process and Corresponding Implementation Requirements (Infrastructure)

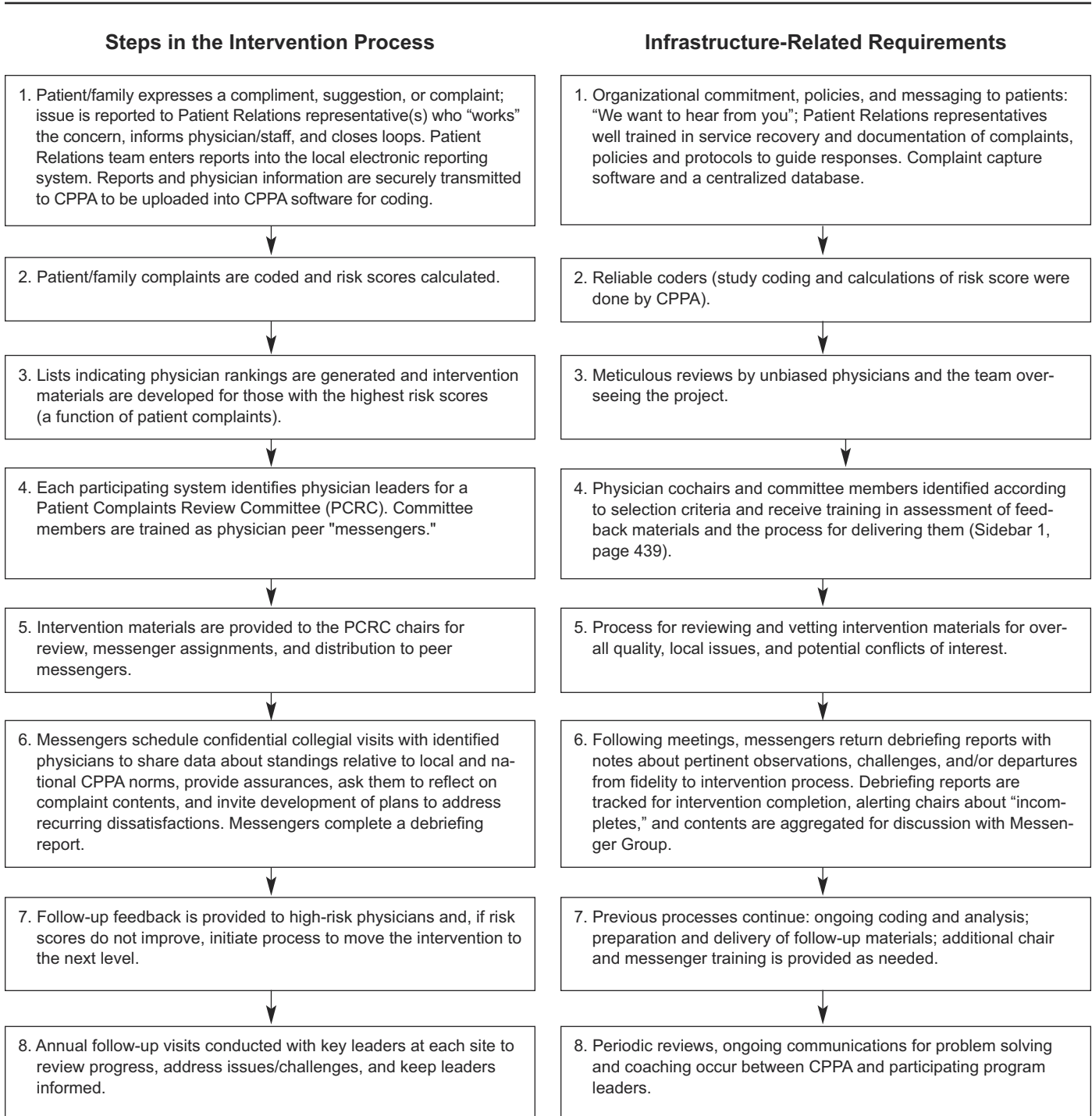


Figure 2. The Awareness intervention process consisted of eight steps implemented by the participating sites (left side), each of which required infrastructure support (right side). CPPA, Center for Professional and Patient Advocacy.

Sidebar 1. Messenger Committee Intervention Skills Training

Messenger Committee members receive instruction on the research background; keys to opening, sharing data, and closing meetings with high-risk colleagues; common reactions, questions, and challenges; and providing both reassurances and promise of follow-up. The steps for conducting an intervention include the following:

1. Scheduling a meeting, allowing time for discussion and questions/answers
2. Reviewing the letter, particularly the rankings and assurances
3. Inviting (at least with a pause) the physician's view of the rankings
4. Asking the colleague to review the data and other materials provided in the folder
5. Suggesting the colleague aim to identify ways that will address apparent sources of patient/family dissatisfaction
6. Signaling genuine appreciation for the colleague's time, willingness to review the data, and his or her value to the organization
7. Explaining that follow-up data will be provided
8. Completing a debriefing form (Appendix 1, available in online article, Figure 6).

Messenger training includes didactic instruction with discussion throughout. Probably more important is the significant portion of time spent on demonstrations and practice exercises with feedback. Committee members rehearse how to open the meeting, share the data, respond to a wide variety of challenges and questions, and close the meeting, respecting their colleagues' professionalism and problem-solving abilities throughout.

delity to the intervention process as designed, and (3) compile messengers' impressions of the meeting. All messengers returned debriefing forms following completion of the first-time intervention and up to two follow-up interventions. All interventions occurred during the five years between January 1, 2005, through December 31, 2009, and were analyzed for study outcomes. Complaint tracking continued through December 31, 2011.

DATA SET

Institutions began annual interventions at different times as they entered into collaboration with the CPPA. Some began interventions before 2005; only physicians whose first-time interventions were conducted after 2005 were included in the analysis. Other institutions began interventions between 2005 and 2009.⁷

Messengers' postmeeting debriefing reports provided data for examining associations with risk score changes over time. Correlates consisted of messenger and high-risk physician characteristics (specialty type [surgery, medicine, or emergency medicine], gender, and number of years at institution) and characteristics of the intervention process (match between physician and mes-

senger specialties, meeting length, messengers' perception of intervention recipients' receptivity [positive, negative, or neutral], and messengers' reports of physicians' attributions for their high-risk status, if any, offered at any point during the meeting). Risk scores were computed annually according to each site's intervention schedule.

DATA ANALYSIS

Descriptive statistics were calculated for risk scores and intervention characteristics. For each physician, a percentage change in risk score was calculated by comparing physicians' risk scores at their first and "final" interventions. Final scores were either the score associated with the last intervention the physician received during the study period or the score associated with the last intervention before a physician left the institution. *Improved* and *worsened* were defined, respectively, as an absolute decrease or increase in risk score of 15% or more; *unchanged* was defined as a score within 15% of the initial value. So, for example, physicians with initial risk scores of 80, 100, and 120 needed to achieve scores less than 68, 85, and 102, respectively, to be considered "improved."

The 15% value was chosen as a function of professional judgment on the basis of both statistical evidence and human concern for colleagues. First, the value represents an effect size of 0.4 standard deviations (SDs) in high-risk physicians' scores, generally considered a moderate but meaningful change in educational/behavioral interventions.³⁷⁻³⁹ In addition, on the basis of experience with many interventions before initiation of this study,⁷ we noted that the median annual improvement of all those physicians whose risk scores eventually fell below the intervention threshold was 18%; also, the median increase for those who progressed to Level 2 was 15% (unpublished data). Therefore, the authors' consensus was that a 15% decrease or increase likely reflects a nonrandom change that signals movement worthy of commendation/reinforcement or an alternative "heads-up" message on follow-up.

For purposes of analysis, *Responders* were defined as physicians whose risk scores improved. A subset of Responders, termed *Successes*, were defined as those whose risk scores improved for two years in succession and fell below the intervention threshold.

Nonresponders were defined as physicians whose risk scores remained unchanged or worsened. A subset of Nonresponders—whose risk scores remained high or worsened over two years or more and whose committee chair deemed escalation appropriate—progressed to an intervention guided by an appropriate physician authority such as a chief of staff, department chair, or other medical group leader. In "Level 2 interventions,"^{7,32,34}

Table 1. Characteristics of 178 Messenger Physicians and 373 High-Risk Physicians*

| | All N (%) | Surgeons n (%) | Medicine n (%) | Emergency Medicine n (%) |
|-----------------------------|---------------|----------------|----------------|--------------------------|
| Messengers | | | | |
| Men | 146 (82) | 69 (90) | 67 (77) | 10 (71) |
| Women | 32 (18) | 8 (10) | 20 (23) | 4 (29) |
| Totals | 178 | 77 | 87 | 14 |
| High-Risk Physicians | | | | |
| Men | 312 (84) | 163 (92) | 104 (76) | 45 (78) |
| Women | 61 (16) | 15 (8) | 33 (24) | 13 (22) |
| Totals | 373 | 178 | 137 | 58 |
| Years at Institution | M (SD) | M (SD) | M (SD) | M (SD) |
| High-Risk Physicians | 10.1 (7.3) | 10.5 (7.0) | 10.2 (7.9) | 8.5 (6.6) |
| Messengers | 15.6 (8.9) | 14.7 (8.7) | 16.7 (9.1) | 16.0 (9.2) |

* M, mean; SD, standard deviation.

which are not addressed in this article, the authority figure develops a plan tailored to the issues identified by patients and families. The plan may include practice management consultation, physical or mental health assessment, mandatory training, clinical coaching, or other help.

Chi-square and Kruskal-Wallis tests were used to test the independence of (a) intervention characteristics (predictors) and responder status, and (b) specific complaint types and responder status. Pearson product-moment correlations were computed to describe relationships between predictor variables and years to achieve responder status.⁴⁰

Results

DESCRIPTIVE DATA

Recruiting and Retaining Messengers. Before and during the study period, 178 physicians—14 emergency medicine physicians, 87 medical generalists or specialists, and 77 surgeons—(Table 1, above) agreed to be messengers. The organizational leaders who recruited messengers told these physicians they were identified as being widely respected and known for their commitment to professionalism, confidentiality, and fairness. Anecdotally, the leaders told us that all who were approached reported feeling honored and appreciated and that all but a very few agreed to serve pending their training experience. All who agreed to complete messenger training subsequently conducted one or more first-time interventions during the target period. These messengers were asked to complete 1,371 first-time or follow-up Awareness interventions. Committee chairs assigned messengers to high-risk physicians in similar practice areas in 59% of the interventions. Four messengers chose to discontinue participation during the study interval, yielding a 98% messenger retention rate. Two messengers reported discontinuing because

they were just too personally uncomfortable sharing the data. The other two provided no reason.

Interventions. During the target period 373 physicians qualified for first-time interventions. Follow-up interventions totaled 998; a physician could receive multiple follow-up interventions (Table 2, page 441). For 125 (34%)—14 emergency medicine physicians, 55 medical generalists or specialists, and 56 surgeons—of the 373 physicians, visits were terminated after two consecutive years of improvement and follow-up risk scores below the intervention threshold. We term these interventions for formerly high-risk physicians “Successes.” Messengers sent Successes a congratulatory feedback letter and offered an optional meeting to learn what was done that resulted in the change. No debriefing form was expected.

For the remaining 1,246 interventions, 1,223 debriefing forms were completed (98% return rate); 18 (1.5%) of the 1,223 indicated the physician refused a visit; in 20 (1.6%) other cases, the Messenger Committee Chair indicated the physician’s recent or imminent departure from the institution so chose not to intervene. Twenty four (2.0%) forms reported that no meeting was held but provided no reasons. In 23 (1.9%) other cases, messengers anecdotally reported completing interventions but, despite multiple prompts, returned no debriefing forms.

All analyses are based on the 1,161 debriefing forms containing data. Tables 1 and 2 present descriptive data (frequencies or means and SDs) for first-intervention-related characteristics.

The 373 first-time intervention visits averaged 32.7 minutes (median, 30 minutes; range, 5–90 minutes). Follow-up visits were somewhat shorter (mean, 30.5 minutes; median, 28 minutes; range, 2–120 minutes). With respect to conducting predefined elements of the intervention process (Appendix 1, Figure 6, item 6), messengers self-reported 92% adherence.

Table 2. Characteristics of Interventions*

| | All n (%) | Surgeons n (%) | Medicine n (%) | Emergency Medicine n (%) |
|--|-----------|----------------|----------------|--------------------------|
| High-Risk Physician Reactions to Intervention† | | | | |
| Positive | 286 (81) | 137 (80) | 104 (79) | 45 (85) |
| Negative | 8 (2) | 4 (2) | 3 (2) | 1 (2) |
| Neutral | 61 (17) | 30 (18) | 24 (18) | 7 (13) |
| High-Risk Physician and Messenger Specialty-Type Match† | | | | |
| Matched | 221 (59) | 108 (61) | 99 (72) | 14 (24) |
| Not Matched | 152 (41) | 70 (39) | 38 (28) | 44 (76) |
| | Mean (SD) | Mean (SD) | Mean (SD) | Mean (SD) |
| Length of First-Time Meeting (minutes)† | | | | |
| | 32 (13) | 33 (14) | 32 (13) | 30 (11) |

* SD, standard deviation.

† Numbers do not include missing data or unreturned debriefing forms.

How did messengers describe high-risk physicians' reactions to the data? They reported 10 (3%) of the 373 high-risk physicians' responses to first-time interventions as showing anger or hostility, but most reports ($n = 284$ [76%]) characterized the physician's response as positive, meaning "receptive" or "interested in the information." Of the remaining 79 physicians, 74 (20%) were deemed "neutral/moderate" ("indifferent," "reserved," or "frustrated/defensive"). No response was recorded for 5 others (1%).

Messengers were taught simply to encourage physicians to take time to reflect on what might cause them to be associated with patient complaints. Debriefing reports asked messengers whether physicians offered any explanations (Appendix 1, Figure 6, item 4), and most physicians (81%) did. These physicians attributed their high-risk status at the first intervention visit to multiple causes: systems or logistics problems (48%), their personality and/or communication style (41%), "uniqueness" of their patients or practice type (33%), high patient volume (21%), the nature of medical practice and feeling helpless to make changes (5%), and cultural differences between them and many of their patients (2%).

Characteristics and Associations with Response (Responders Versus Nonresponders). Change was not random (Table 3, right). The majority of physicians' risk scores improved (64% Responders), 17% worsened, and 19% were unchanged during the target interval ($p < .001$). Overall, the mean and median percentages of reductions in numbers of specific complaints from first to last intervention were 50% and 80%, respectively, similar to previously reported changes.³⁴ The mean and median percentage reductions were 80% and 90% for Responders and 0% and 30%, respectively, for Nonresponders.

The number of meetings with physicians in both groups is shown in Table 4 (page 442). Greater proportions of Nonrespon-

Table 3. Intervention Outcomes: Responders ($n = 238$) Versus Nonresponders ($n = 135$)*

| | First-Time Intervention | Last Intervention | Difference (Percent Change from First Intervention)† |
|----------------|-------------------------|-------------------|--|
| Risk Scores† | Mean (SD) | Mean (SD) | Mean (SD) |
| Responders | 96.8 (43.5) | 50.8 (26.4) | -48% |
| Nonresponders | 82.8 (29.5) | 102.4 (41.8) | +24% |
| All Physicians | 91.7 (39.5) | 69.4 (41.1) | -24% |

* SD, standard deviation.

† Lower risk scores indicate relatively less risk.

‡ The percentage change means are shown to reveal the gross differences between Responders and Nonresponders.

ders received more interventions. Factors associated with response (responder versus nonresponder status) follow.

High-Risk Physician Characteristics. Proportions of Responders and Nonresponders differed by specialty type ($\chi^2 (2) = 8.42$, $p < .05$). Greater proportions of physicians practicing medicine and surgery were likely to improve (72% and 61%, respectively) than emergency physicians (52%). Response was independent of physician gender, reported receptivity to the first-time visit ("initial receptivity"), and number of years affiliated with their organization (all $p > .05$).

Messenger Characteristics. Response was independent of messenger specialty, gender, and number of years at their organization (all $p > .05$).

Intervention-Related Characteristics. Physicians in matched pairs (high-risk physician and messenger in the same general types of practice) were somewhat more likely to produce Responders (68%) than unmatched pairs (58%) ($\chi^2 (1) = 3.88$, $p < .05$). Meeting length was not associated with response ($p >$

Table 4. Total Number of Intervention Meetings for Responders and Nonresponders*

| Responder Status | Interventions per Physician in This Study [†] | | | | | |
|-------------------------|--|-----------|----------|----------|----------|---------|
| | 2 | 3 | 4 | 5 | 6 | 7 |
| Responders (n = 238) | 9 (4%) | 100 (42%) | 54 (23%) | 32 (13%) | 34 (14%) | 9 (4%) |
| Nonresponders (n = 135) | 2 (1%) | 46 (34%) | 25 (19%) | 14 (10%) | 44 (33%) | 4 (3%) |
| Totals (N = 373) | 11 (3%) | 146 (39%) | 79 (21%) | 46 (12%) | 78 (21%) | 13 (3%) |

* For example, among the 238 Responders, 54 physicians (23%) had an initial meeting and three follow-up meetings, resulting in a total of four interventions.

[†] Reasons for drop-off in the number of interventions for physicians: Among Responders, success was achieved and meetings suspended; for all physicians, later entry into the seven-year study period, thereby limiting the number of intervention meetings possible; physician departed or was about to depart the organization and was exempted from further meetings by the committee chair.

.05). Seventy-three messengers conducted one intervention and the rest conducted more, but messenger “experience” was unrelated to response ($p > .05$).

High-risk physician receptivity was associated with response only at the second follow-up visit ($\chi^2 (2) = 6.04, p < .05$), which may be an artifact of small sample sizes in some cells. Nevertheless, the perceived receptivity at the second follow-up meeting of those who ultimately improved was less positive than at the initial intervention meeting.

Of the physicians’ self-attributions of high-risk status, only a mention of patient volume was significantly associated with response: Those claiming volume challenges (18% of the cohort) were less likely to be Responders than those who did not cite volume ($\chi^2 (1) = 6.10, p < .05$). Surgeons were less likely, and physicians practicing in medicine were more likely, to cite patient volume than would be expected by chance; volume-related attributions by emergency medicine physicians did not differ from chance.

Responders had higher overall initial risk scores than Nonresponders, ($\chi^2 (1) = 7.33, p < .01$), and Responders spent more time with messengers during first-time meetings, ($\chi^2 (1) = 4.11, p < .05$). Years to achieve responder status correlated positively with initial numbers of communication-related complaints ($r = .32, p < .001$).

Successes. Of the 373 physicians, 135 (36%) achieved our predefined “Success” status: 10 in one year (cases in which committee chairs awarded responder status in circumstances such as when initial complaint scores were at or just above threshold for intervention and complaints disappeared in the year following), 115 in two to four years, and 10 in five to six years. Rates differed by physician specialty ($\chi^2 (2) = 9.38, p < .001$): Emergency physicians were less likely to achieve Success status than colleagues in medicine (24% versus 45%), and the rate for surgeons (33%) fell between.

Physicians Who Progressed to Level 2 Interventions. Some 59 other physicians (16%) progressed to a Level 2 Authority-

Guided intervention. Emergency medicine physicians (29%) were more likely than physicians in surgery (15%) or medicine (12%) to be referred for Level 2 interventions ($\chi^2 (2) = 9.89, p < .01$). Level 2 status was independent of physician gender, specialty, length of time at the organization, first-time risk scores, and specific categories or types of coded complaints (all $p > .05$).

Physicians Who Left the Organization During the Study Period. Of the 373 physicians, 71 (19%) departed: 10 during the year following first-time intervention, 18 in Year 2, 18 in Year 3, 20 in Years 4–5, and 5 in Years 6–7. Of the 61 physicians who departed and for whom we had at least one year of follow-up data, 41 (67%) had improved risk scores, 20% showed no change, and 13% had worsened.

Specific Types of Complaints. Responders did not differ from Nonresponders on initial numbers of complaints in any of the 6 complaint type categories or any of the 34 specific complaint types (all $p > .05$). Complaints in all categories and all types were equally likely to change during the study period (all $p > .05$).

Discussion

Peer physicians can be recruited and, fortified with training and good data, effectively and successfully provide feedback to colleagues who stand out with respect to patient complaints, a proxy for risk of lawsuits. In this study, an intervention process that makes high-risk physicians aware of their standing with respect to peers was implemented with high self-reported fidelity by volunteer peer messengers who were part of the same medical group. A majority of physicians receiving the intervention responded professionally and were associated with substantially fewer unsolicited patient/family complaints over time. Our first conclusion is that peers will agree to serve, participate in training, deliver data, and continue participating as messengers over an extended period of time. Our second conclusion is that the process of peers delivering comparative, evidence-based data is effective, consistent with other efforts to promote physician behavior and performance change.^{21–26}

What factors contributed to the outcomes? First, we speculate that general specialty match between messengers and high-risk physicians (for example, surgeons with surgeons, regardless of subspecialty) helped somewhat. Matches were not made randomly, however. Although some attention to matching general practice types is reasonable, probably equally important are committee chairs' professional judgments in making messenger assignments and messengers' commitment to deliver feedback consistent with their training. We also speculate that leadership endorsement and committee chairs' commitments to the process were critical. Every organization's leaders requested and funded involvement in the process, providing a supportive organizational infrastructure.

We believe that recruitment and training were critical to achieving high messenger fidelity to the intended intervention. High fidelity is key to future dissemination of the process. Anecdotally, many messengers reported having little or no prior training on the communication skills required for the messenger role. Training must affirm and interventions must confirm that feedback is evidence-based, will be repeated over time, is delivered in a just/fair manner consistent with professional self-regulation,^{6,35,41,42} is shared in ways that promote insight and action, and has leadership's commitment to hold high-risk physicians accountable.³⁶ Equally critical, we believe, was arming messengers with high-quality, local and multisite peer-comparative data that showed the peer to be associated with high risk of lawsuits.⁷ Finally, we speculate that change occurred in part because feedback was repeated over the course of several years. Repeated visits permitted messengers to see positive changes firsthand, they occasionally received thanks (for example, "Dr. ___ told me he was gratified, and I think relieved—as was I—to see improvement, and he thanked me for helping him realize how he had been perceived"), and those receiving interventions realized the process was not going to disappear.

As in other studies,^{43,44} apparent receptivity during the first-time meeting and first follow-up meetings did not predict subsequent change. Therefore, messengers and group leaders should not conclude anything with respect to eventual outcomes on the basis of early reactions. However, high-risk physicians who seemed less positive during a second follow-up visit were more likely to subsequently experience fewer complaints. Perhaps those qualifying for a third intervention finally understood that the process was going to continue, that they were being held accountable, and that if change did not occur they might be subject to an authority figure's requirements.

The number of interventions varied for physicians in this study group. More than a third of the Nonresponders received

six or seven interventions; only half as many Responders continued receiving that many. We conclude that a persistent, respectfully presented message that "you differ from peers and are at elevated risk" may be required for some physicians to take the data (and potential repercussions) seriously and act to address underlying individual or practice issues.

Does responder status persist? Eleven (3%) of the 373 physicians who in some prior year had achieved "Success" status "re-qualified" for interventions during the study period. Of these 11 physicians, 6 (55%) were surgeons, 3 (27%) practiced medicine, and 2 (18%) were in emergency medicine. These small numbers precluded identifying correlates, but we conclude that while "recidivism" was relatively rare, the process should include continuous monitoring of all physicians within the medical group.

All complaint types were equally likely to change. No categories or specific complaint types were associated with responder status, but initial numbers of communication-related complaints correlated with years to achieve responder status. Previous studies found specific types of communication-related complaints significantly associated with lawsuit risk,⁴⁵⁻⁴⁸ but no more predictive than other types of patient complaints.^{14,15} We conclude that messengers should call high-risk physicians' attention to all complaint types on which they stand out relative to peers.

This descriptive study had several limitations. First, it employed a retrospective, pre-post design in which high-risk physicians served as their own controls. Pre-post designs may overestimate the magnitude of effects, and the results may not generalize. Potential generalizability is supported, however, by inclusion of varied organizations: Group sizes ranged from 70 to more than 1,200, and organizations (and high-risk physicians) included academic and employed groups, voluntary medical groups, and mixed-staffing models.

Second, the study time frame was too short for some high-risk physicians to demonstrate that they would ultimately respond following intervention, progress to Level 2, or depart. For example, 10 physicians (3% of those with an intervention) had fewer than 24 months of follow-up data. If interventions conducted before 2005 (before use of the debriefing form employed in this study) are included—thereby providing more time for physician change to become manifest—77% of all physicians achieve responder status, about 6% depart with unimproved or worsened risk scores, and the rest (17%) continue to receive Level 1 or Level 2 feedback until such time as they respond or the next level of intervention is warranted (unpublished observations).

Data on physicians' volume of service were not available, so

were not used in the analysis. Previous studies demonstrate that service volumes and complaints are independent predictors of lawsuit risk, but unsolicited complaints explain a greater proportion of the variance.^{14,15} Complaints therefore merit attention for purposes of promoting overall quality of care and as a proxy for communicating with physicians about risks.¹⁴⁻¹⁹ Although individual complaints may not be predictive, aggregated complaint profiles may suggest personal and/or systems-related issues for physicians to consider for improvement.¹⁴⁻¹⁵ In addition, because many persons fear lodging a complaint about their physician's practice, unsolicited complaints surely represent the tip of an iceberg that may be 20 to 50 times the number of reports.^{49,50} As a result, even small changes in a particular physician's risk score (in either direction) represent potentially important impacts over many patients. We recognize that success may not happen overnight, so the intervention process gives physicians repeated opportunities. For example, physicians with high risk scores may initially improve by a modest 15%–20% yet still carry significant risk. For these physicians, messengers are trained to acknowledge the improvement, yet reinforce the need for continuation by sharing that local and national rankings remain high. In this study, the overall mean and median percentage reductions in complaints were 50% and 80%, respectively, and even more impressive for Responders, whose mean and median reductions were 80% and 90%.

Messenger factors and local contexts (for example, organizational culture, concurrent programs) may have influenced the findings. Some messengers might have had prior knowledge, opinions, or impressions that might have influenced their interaction with high-risk physicians they visited. The messenger's prior awareness of follow-up results may also have influenced the tenor of the intervention. With respect to local context and culture, messengers have varied experiences and longevity at their institutions; patients have varied health care needs and/or procedures; messenger behavior and reputation varies; high-risk physicians' patient- and case-related factors vary, and congruity of intervention messages with an organization's concurrent quality/safety/risk programs may affect high-risk physicians' receptivity and outcomes.⁵¹

Although messengers may not be equally adept in their native intervention-related skills, their fidelity to the intervention model's elements suggests that similar interventions may be utilized for other behavior and performance change initiatives. Messages contained in the standard letter and complaint-related data likely facilitated fidelity. Meetings were not recorded, so validity of self-reported fidelity was not assessed, but messengers demonstrated willingness to self-report deviations from the intervention

protocol, so we find their self-reported rates of adherence to the process credible. Qualitative assessments of local contexts and culture will be important for identifying contributors to both the intervention process and outcome. Perhaps most importantly, the academic detailing literature suggests that the visit itself probably makes the greatest impression for motivating change.^{26,52-54}

The distinction between Responders and Nonresponders is important, given, as stated earlier, the status of persistent complaints over time as a proxy for lawsuit risk.¹⁴⁻¹⁹ Responders, whose median complaint reduction was 90%, appear to identify and address personal, team, and systems issues once they are aware of the data. They likely possess (or reflect to the point that they develop) sufficient self-awareness⁵⁵⁻⁵⁷ to adopt new skills, manage their teams, and/or modify systems. Or, for those lacking in self-awareness, feedback can make a difference for some.⁵⁵⁻⁵⁷ We did not interview physicians after the interventions, so we do not have systematically collected qualitative data describing their planning or strategic thinking. Many messengers reported physicians' surprise that patients sometimes perceived them as rushed or uncaring, and the Awareness-level feedback motivated changes. Anecdotally, while messengers reported that some Responders asserted, "I made no changes," other Responders volunteered that they selected one or two specific issues or skills to address, then took thoughtful action such as asking a colleague or coach to shadow them, seeking resources to improve their practice, reorganizing their service, or addressing systems failures with those responsible.^{7,27,34}

We can hypothesize several reasons why Nonresponders did not experience reduced complaints. Some Nonresponders may overestimate their abilities, despite feedback to the contrary, and lack sufficient insight, urgency, and/or skill to identify and address the underlying cause(s) for complaints.⁵⁶⁻⁵⁸ Other Nonresponders may simply be unwilling to make changes, at least initially, or until the potential for personally meaningful repercussions becomes apparent.³⁶ Still other Nonresponders may have mental or physical health issues that pose barriers to responding. Perhaps Responders "own" the data and make changes. In contrast, Nonresponders may make no effort because they incorrectly conclude, "I have no control over the system or the patients I see," or are unwilling to go further than to declare, "that's just who I am."

This study adds to the "physician behavior change" literature by virtue of spelling out a specific process and tiered intervention model; that is, a plan for addressing unnecessary variations in behaviors/performance that undermine a culture of safety. Future development of the intervention process includes qualitative

assessments of high-risk physicians' responses to interventions, perhaps via postintervention interviews or standard questions asked by messengers.

Another important issue is how the plan can be adapted to address variations in clinical processes and outcomes. The PARS process has been applied successfully to improving hand hygiene rates⁵⁶ and should be assessed for impacts on Universal Protocol for Preventing Wrong Site, Wrong Procedure, Wrong Person SurgeryTM nonadherence, and outcomes such as surgical complications,²⁰ safety culture survey results,^{59–62} and core clinical measures.^{1–3} Such studies may help identify prognostic indicators, improve messenger training, and tailor feedback to colleagues whose data suggest they stand out from peers.

Finally, overall success of an intervention process depends not only on peer willingness and skill to provide feedback but also on leaders who will hold others accountable; clear and widely disseminated project goals; appropriate metrics and measures; routine monitoring and data reviews; effective training for leaders and others who conduct interventions; and adequate support.^{6,63} With investments in this overall infrastructure for promoting accountability, the return could be substantial. ■

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Online-Only Content

See the online version of this article for Appendix 1. Case Studies

References

1. VanLare JM, Conway PH. Value-based purchasing—National programs to move from volume to value. *New Engl J Med*. 2012 Jul 26;367(4):292–295.
2. US Department of Health & Human Services. Press Release. Administration Implements Affordable Care Act Provision to Improve Care, Lower Costs: Value-Based Purchasing Will Reward Hospitals Based on Quality of Care for Patients. Apr 29, 2011. Accessed Aug 23, 2013. <http://www.hhs.gov/news/press/2011pres/04/20110429a.html>.
3. Tompkins CP, Higgins AR, Ritter GA. Measuring outcomes and efficiency in Medicare value-based purchasing. *Health Aff (Millwood)*. 2009;28(2):w251–261.
4. Hickson GB, et al. A complementary approach to promoting professionalism: Identifying, measuring, and addressing unprofessional behaviors. *Acad Med*. 2007;82(11):1040–1048.
5. The Joint Commission. Behaviors that undermine a culture of safety. *Sentinel Event Alert* No. 40. Jul 9, 2008. Accessed Aug 23, 2013. http://www.jointcommission.org/sentinel_event_alert_issue_40_behaviors_that_undermine_a_culture_of_safety/.
6. Hickson GB, et al. Balancing systems and individual accountability in a safety culture. In *From Front Office to Front Line: Essential Issues for Health Care Leaders*, 2nd ed. Oak Brook, IL: Joint Commission Resources, 2011, 1–35.
7. Hickson GB, Pichert JW. Identifying and addressing physicians at high risk for medical malpractice claims. In Youngberg BJ, editor. *The Patient Safety Handbook*, 2nd ed. Burlington, MA: Jones & Bartlett Learning, 2012, 347–368.
8. Daniels JP, et al. Identification by families of pediatric adverse events and near misses overlooked by health care providers. *CMAJ*. 2012 Jan 10;184(1):29–34.
9. Christiaans-Dingelhoff I, et al. To what extent are adverse events found in patient records reported by patients and healthcare professionals via complaints, claims and incident reports? *BMC Health Serv Res*. 2011 Feb 28;11:49.
10. de Feijter JM, et al. A comprehensive overview of medical error in hospitals using incident-reporting systems, patient complaints and chart review of inpatient deaths. *PLoS One*. Epub 2012 Feb 16.
11. Centers for Medicare & Medicaid Services. Revisions to interpretive Guidelines for Centers for Medicare & Medicaid Services Hospital Conditions of Participation 42 CFR §§482.12, 482.13, 482.27 and 482.28. Aug 18, 2005. Accessed Aug 23, 2013. <http://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/SCLetter05-42.pdf>.
12. Bendall-Lyon D, Powers TL. The role of complaint management in the service recovery process. *Jt Comm J Qual Improv*. 2001;27(5):278–286.
13. Hayden AC, et al. Best practices for basic and advanced skills in service recovery: A case study of a re-admitted patient. *Jt Comm J Qual Patient Saf*. 2010;36(7):310–318.
14. Hickson GB, et al. Patient complaints and malpractice risk. *JAMA*. 2002 Jun 12;287(22):2951–2957.
15. Hickson GB, et al. Patient complaints and malpractice risk in a regional healthcare center. *South Med J*. 2007;100(8):791–796.
16. Fullam F, et al. The use of patient satisfaction surveys and alternative coding procedures to predict malpractice risk. *Med Care*. 2009;47(5):553–559.
17. Stelfox HT, et al. The relation of patient satisfaction with complaints against physicians and malpractice lawsuits. *Am J Med*. 2005;118(10):1126–1133.
18. Levtzion-Korach O, et al. Integrating incident data from five reporting systems to assess patient safety: Making sense of the elephant. *Jt Comm J Qual Patient Saf*. 2010;36(9):402–410.
19. Cydulka RK, et al. Association of patient satisfaction with complaints and risk management among emergency physicians. *J Emerg Med*. 2011;41(4):405–411.
20. Murff HJ, et al. Relationship between patient complaints and surgical complications. *Qual Saf Health Care*. 2006;15(1):13–16.
21. Schaffner W, et al. Improving antibiotic prescribing in office practice. A controlled trial of three educational methods. *JAMA*. 1983 Oct 7;250(13):1728–1732.

22. Ray WA, et al. Reducing antipsychotic drug prescribing for nursing home patients: A controlled trial of the effect of an educational visit. *Am J Public Health*. 1987;77(11):1448–1450.
23. Greco PJ, Eisenberg JM. Changing physicians' practices. *N Engl J Med*. 1993 Oct 21;329(17):1271–1273.
24. Soumerai SB, Avorn J. Principles for educational outreach ('academic detailing') to improve clinical decision making. *JAMA*. 1990 Jan 26;263(4):549–556.
25. Davis CR. Infection-free surgery: How to improve hand-hygiene compliance and eradicate methicillin-resistant *Staphylococcus aureus* from surgical wards. *Ann R Coll Surg Engl*. 2010;92(4):316–319.
26. Eisenberg JM. *Doctors' Decisions and the Cost of Medical Care: The Reasons for Doctors' Practice Patterns and Ways to Change Them*. Ann Arbor, MI: Health Administration Press, 1986.
27. Moore IN, et al. Rethinking peer review: Detecting and addressing medical malpractice claims risk. *Vanderbilt Law Review*. 2006 May 1;59:1175–1206.
28. Hickson GB, et al. Development of an early identification and response model of malpractice prevention. *Law and Contemporary Problems*. 1997;60(1–2):7–29.
29. Stimson CJ, et al. Medical malpractice claims risk in urology: An empirical analysis of patient complaint data. *J Urol*. 2010;183(5):1971–1976.
30. Mukherjee K, et al. All trauma surgeons are not created equal: Asymmetric distribution of malpractice claims risk. *J Trauma*. 2010;69(3):549–554.
31. US Department of Health & Human Services. Health Information Privacy: Business Associates. Dec 3, 2002. (Updated: Apr 3, 2003.) Accessed Aug 23, 2013. <http://www.hhs.gov/ocr/privacy/hipaa/understanding/coveredentities/businessassociates.html>.
32. Pichert JW, Johns JA, Hickson GB. Professionalism in support of pediatric cardio-thoracic surgery: A case of a bright young surgeon. *Prog Pediatr Cardio*. 2011;32(2):89–96.
33. Pichert JW, et al. Identifying medical center units with disproportionate shares of patient complaints. *Jt Comm J Qual Improv*. 1999;25(6):288–299.
34. Pichert JW, Hickson GB, Moore IN. Using patient complaints to promote patient safety: The Patient Advocacy Reporting System (PARS). In Henriksen K, et al., editors. *Advances in Patient Safety: New Directions and Alternative Approaches*, vol. 2. Rockville, MD: Agency for Healthcare Research and Quality, Aug 2008, 421–430.
35. Hickson GB, Entman SS. Physicians influence the malpractice problem. *Obstet Gynecol*. 2010;115(4):682–686.
36. Reiter CE, Pichert JW, Hickson GB. Addressing behavior and performance issues that threaten quality and patient safety: What your attorneys want you to know. *Prog Pediatr Cardio*. 2012;33(1):37–45.
37. Slavin RE. IBM's Writing to Read: Is it right for reading? *Phi Delta Kappan*. 1990;72(3):214–216.
38. Cohen J. *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed. Hillsdale, NJ: Lawrence Erlbaum Associates, 1988.
39. Ferguson CJ. An effect size primer: A guide for clinicians and researchers. *Professional Psychology: Research and Practice*. 2009;40(5):532–538.
40. Zar JH. *Biostatistical Analysis*, 4th ed. Upper Saddle River, NJ: Prentice Hall, 1999.
41. Dane AV, Schneider BH. Integrity in primary and early secondary prevention: Are implementation effects out of control? *Clin Psychol Rev*. 1998;18(1):23–45.
42. Marx D. *Patient Safety and the "Just Culture": A Primer for Health Care Executives. Medical Event Reporting System—Transfusion Medicine (MERS-TM)*. New York City: Trustees of Columbia University, Apr 17, 2001. Accessed Aug 23, 2013. <http://www.safer.healthcare.ucla.edu/safer/archive/ahrq/FinalPrimerDoc.pdf>.
43. Ray WA, et al. Improving antibiotic prescribing in outpatient practice: Nonassociation of outcome with prescriber characteristics and measures of receptivity. *Med Care*. 1985;23(11):1307–1313.
44. Soumerai SB, Avorn J. Predictors of physician prescribing change in an educational experiment to improve medication use. *Med Care*. 1987;25(3):210–221.
45. Hickson GB, et al. Factors that prompted families to file malpractice claims following perinatal injuries. *JAMA*. 1992 Mar 11;267(10):1359–1363.
46. Hickson GB, et al. Obstetricians' prior malpractice experience and patients' satisfaction with care. *JAMA*. 1994 Nov 23–30;272(20):1583–1587.
47. Vincent C, Young M, Phillips A. Why do people sue doctors? A study of patients and relatives taking legal action. *Lancet*. 1994 Jun 25;343(8913):1609–1613.
48. Levinson W, et al. Physician-patient communication: The relationship with malpractice claims among primary care physicians and surgeons. *JAMA*. 1997 Feb 19;277(7):553–559.
49. Annandale E, Hunt K. Accounts of disagreements with doctors. *Soc Sci Med*. 1998;46(1): 119–129.
50. Carroll KN, et al. Characteristics of families that complain following pediatric emergency visits. *Ambul Pediatr*. 2005;5(6):326–331.
51. Kynes JM, et al. An analysis of risk factors for patient complaints about ambulatory anesthesiology care. *Anesth Analg*. 2013;116(6):1325–1332.
52. Kitay A. Medical education: Peer feedback. *Virtual Mentor*. 2005;7(4). Accessed Aug 23, 2013. <http://virtualmentor.ama-assn.org/2005/04/medu1-0504.html>.
53. Soumerai SB. Principles and uses of academic detailing to improve the management of psychiatric disorders. *Int J Psychiatry Med*. 1998;28(1):81–96.
54. Honigfeld L, Chandhok L, Spiegelman K. Engaging pediatricians in developmental screening: The effectiveness of academic detailing. *J Autism Dev Disord*. 2012;42(6):1175–1182.
55. Frankel AS, Leonard MW, Denham CR. Fair and just culture, team behavior, and leadership engagement: The tools to achieve high reliability. *Health Serv Res*. 2006;41(4 pt. 2):1690–1709.
56. Kruger J, Dunning D. Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *J Pers Soc Psychol*. 1999;77(6):1121–1134.
57. Ehrlinger J, et al. Why the unskilled are unaware: Further explorations of (absent) self-insight among the incompetent. *Organ Behav Hum Decis Process*. 2008 Jan 1;105(1):98–121.
58. Talbot TR, et al. Sustained improvement in hand hygiene adherence: Utilizing shared accountability and financial incentives. *Infect Control Hosp Epidemiol*, forthcoming.
59. Pronovost P, Sexton B. Assessing safety culture: Guidelines and recommendations. *Qual Saf Health Care*. 2005;14(4):231–233.
60. Colla JB, et al. Measuring patient safety climate: A review of surveys. *Qual Saf Health Care*. 2005;14(5):364–366.
61. Sexton JB, et al. A check-up for safety culture in "my patient care area." *Jt Comm J Qual Patient Saf*. 2007;33(11):699–703.
62. Paine LA, et al. Assessing and improving safety culture throughout an academic medical centre: A prospective cohort study. *Qual Saf Health Care*. 2010;19(6):547–554.
63. Pichert JW, Hickson GB. Patients as observers and reporters in support of safety. In Barach PR, et al., editors. *Pediatric and Congenital Cardiac Disease: Outcomes Analysis, Quality Improvement, and Patient Safety*, forthcoming.

Appendix 1. Case Studies

Case Study 1. A Responder (A General Surgeon)

Patient complaints have resulted in a high risk score for Dr. Gensurge, MD, FACS. Dr. Gensurge (a hypothetical composite), is a mid-career general surgeon at XYZ Hospital, the flagship facility of a multihospital health system with 762 affiliated physicians. The chair of the Patient Complaints Monitoring Committee (PCMC) examines Dr. Gensurge's complaint-related data and agrees to have a committee member deliver the materials, saying, "If these were my data, I would want to know." The chair asks one of the well-respected committee members, an otolaryngologist, to be the messenger. The otolaryngologist denies any conflicts of interest, agrees that the data suggest a pattern, and sends Dr. Gensurge a letter, excerpts of which are provided.

The day after receiving the letter, Dr. Gensurge makes an appointment with the messenger. The data shared during the meeting include the letter (to reinforce the main messages [Figure 1]) and the materials in Figures 2–5. According to the messenger, Dr. Gensurge seemed defensive at first, challenging the data and blaming systems issues. The messenger responds as trained, simply asking Dr. Gensurge to consider the data and reflect on the reason(s) underlying any common complaints and how they might be addressed. Figure 6 shows the debriefing form used in this study.

(continued on page AP2)

Figure 1. Excerpts from the Letter from the Peer Messenger to the High-Risk Colleague

[Date]

To: _____ Gensurge, MD

From: Patient Complaints Monitoring Committee, XYZ Health System

Re: Patient Complaints

Dr. ____, Chair of the Patient Complaints Monitoring Committee, has asked me to provide feedback to physicians who have been associated with relatively high numbers of patient complaints. A recent analysis of XYZ Medical Center patient complaints places you among this group of physicians. I would like to share with you the complaint data . . . be assured I am coming to you as a peer in a spirit of confidential, collegial awareness.

Patient complaints are monitored for several reasons . . .

The complaint report analysis was performed by the Center for Patient and Professional Advocacy (CPPA) at Vanderbilt, utilizing CPPA's Patient Advocacy Reporting System® (PARS®). During the four-year audit period from Date 1–Date 2, you were associated with __ complaint reports. Risk scores were calculated for every physician and then compared to national and local peer group scores . . . your risk score . . . was higher than that of 98% of all surgeons in the national PARS database. Compared with other XYZ Health System physicians, your risk score is 7th highest of all staff.

Let me assure you of several important points regarding this program:

- Only Dr. __ (committee chair), select CPPA personnel, and I know your data.
- This review process has the full support of XYZ Health System leadership who . . . have chosen to allow the results to be administered by clinical colleagues . . .
- The purpose is not to debate the merits of individual complaints, but rather to view them in aggregate in order to better understand why they occur, reduce their number, and improve patients' experiences.
- Some complaints may be based in part on problems involving policies, ancillary services, environment, or equipment.
- This review process is part of an ongoing quality improvement effort, and you will be provided follow-up data when they become available.

Based on the Vanderbilt CPPA experience . . . most colleagues need only to be made aware of the data in order to reduce complaints associated with their practice.

I will call to schedule an appointment, or if you prefer, you may contact me to set up a time. When we meet, I will share your data and related information. I look forward to our meeting.

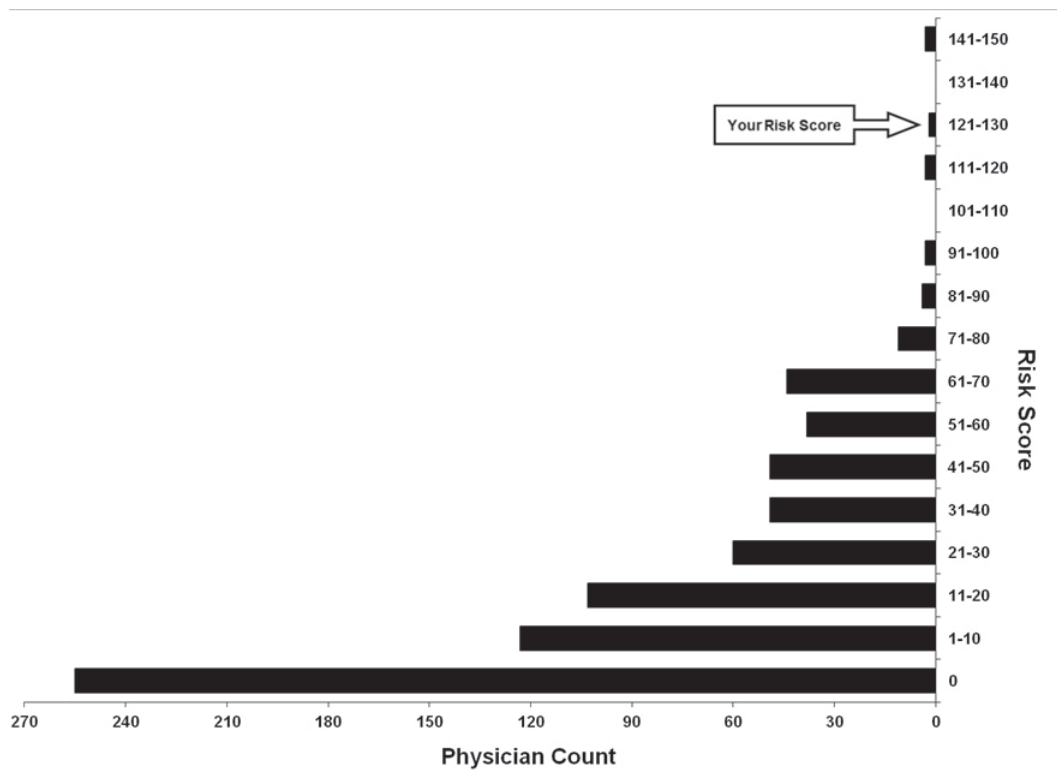
Appendix 1. Case Studies (continued)

Following the Awareness intervention, Dr. Gensurge visits the director of XYZ's Office of Patient Relations (Ombudsman service), and asks her to do some shadowing on hospital rounds and in the clinic. Dr. Gensurge respects the director; considers her "safe"; knows her commitment to confidentiality; and knows that she gives frank but kind feedback. Dr. Gensurge actually expects to hear nothing but compliments regarding the interaction skills demonstrated during the shadowing experiences. Instead, the director shares several observations—that Dr. Gensurge never once sat down during rounds; routinely talked fast; often asked whether patients had questions with a hand on the doorknob; and routinely used technical language without defining the terms. Dr. Gensurge's response: "I'm just trying to be efficient." The director agrees that efficiency is important but adds that ineffective communication is never efficient. Dr. Gensurge agrees to reflect on the feedback.

Dr. Gensurge's risk score improves about 20% over the course of the following year, so the messenger provides positive feedback and encourages continuation. Dr. Gensurge's practice thereafter continued to be associated with declining numbers of patient complaints. The messenger's visits with Dr. Gensurge were suspended in the fourth round of interventions because Dr. Gensurge's risk score had steadily fallen to a point below the threshold for intervention. When the messenger asked what Dr. Gensurge thought had led to the improvements in the risk score, Dr. Gensurge responded, "Well, I sit down more often when I talk with patients, but I don't spend any more time because we're so busy. I continue to remind the outpatient leadership about proper patient scheduling and maybe that has helped." Of course, not all high-risk physicians are as willing or able

(continued on page AP3)

Figure 2. Frequency of Risk Scores for XYZ Health System Physicians (Four-Year Audit Period: Date 1–Date 2, Data for Dr. Gensurge)



Appendix 1. Case Studies (continued)

as Dr. Gensurge to address the issues underlying the complaints with which they are associated (see Case Study 2). Other examples are presented elsewhere.*

Sample Intervention Materials

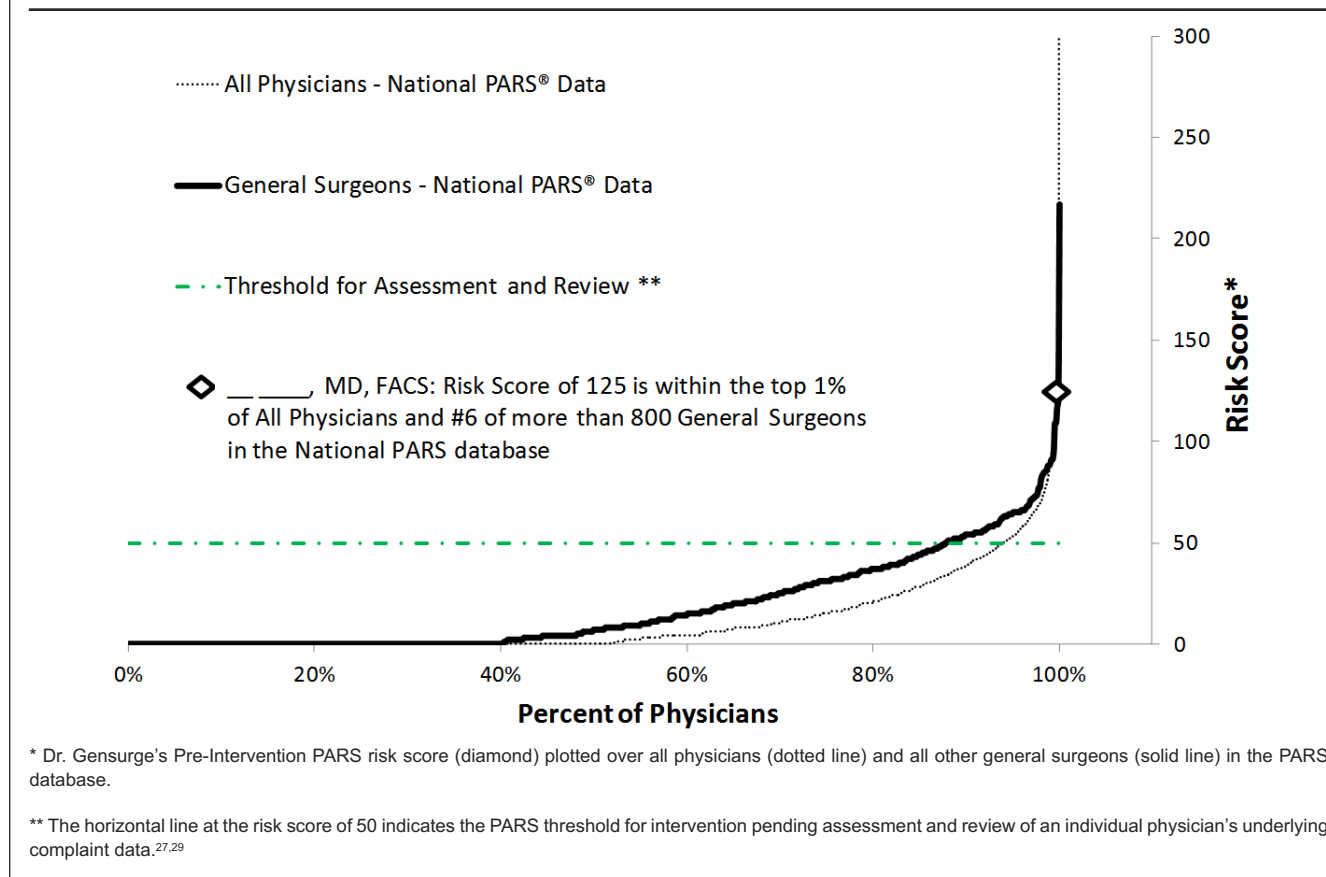
All materials included in intervention folders are marked as privileged and confidential pursuant to applicable state statutes. Intervention folders contain the following:

* Hickson GB, et al. Balancing systems and individual accountability in a safety culture. In *From Front Office to Front Line: Essential Issues for Health Care Leaders*, 2nd ed. Oak Brook, IL: Joint Commission Resources, 2011, 1–35; Reiter CE, Pichert JW, Hickson GB. Addressing behavior and performance issues that threaten quality and patient safety: What your attorneys want you to know. *Prog Pediatr Cardio*. 2012;33(1):37–45.

- A letter from the peer messenger to the high-risk colleague, “Dr. Gensurge” (Figure 1). The letter presents the purpose and process, local leadership endorsement, the individual’s numerical ranking among all group members, assurances about confidentiality, and a request for a meeting to deliver and review the contents of the intervention folder.
- “You Are Here” information to portray local and multisite data (Figures 2 and 3)
- A table that portrays the types of complaints voiced by patients (Figure 4),
- Specific complaints organized by types and excerpted from patients’ narratives (Figure 5)
- All de-identified complaint narratives (not shown)

(continued on page AP4)

Figure 3. Chart of the Frequency of Risk Scores for All Physicians and All General Surgeons (Four-Year Audit Period, Data Point for Dr. Gensurge Is Highlighted)



Appendix 1. Case Studies (continued)

Figure 4. Distribution of Types of Patient Complaints Associated with Dr. Gensurge

| | | |
|---|------------------------------------|----------------------------|
| XYZ Health System | | |
| Complaint Type Summary | | |
| Audit Period for Data in this Table | | |
| Date 1 - Date 2 | | |
| _____, MD, FACS | | |
| Complaint Type Categories | Distribution of Complaints* | |
| | Your Complaints | Average for Surgery |
| Care & Treatment | 49% | 48% |
| Communication | 33% | 21% |
| Concern for Patient & Family | 5% | 9% |
| Accessibility & Availability | 8% | 14% |
| Money or Payment Issues Associated with Concerns About Care | 5% | 8% |
| *Complaint distribution figures are rounded to the nearest percent; therefore, totals may not equal precisely 100%. | | |

(continued on page AP5)

Appendix 1. Case Studies (continued)

Figure 5. Selected Complaints Associated with Dr. Gensurge's Practice, Organized by Types and Excerpted from Patients' Narratives

A. Gensurge, MD, FACS

Complaints with Which You Were Associated Date 1–Date 2

The specific patient/family complaints with which you were associated over the audit period . . . were gathered from unsolicited complaints brought to the Office of Patient Relations. . . . A list of excerpted complaints is included. . . . Other individuals' identifying information has been removed from the reports.

Your review of these reports will likely identify some issues related to systems, . . . ancillary services . . . If so, please help us . . . seek ways to solve them. . . . The intent . . . is to assist in problem solving. . . . The most important goal is . . . delivery of the best possible combination of technical and interpersonal care to patients.

. . . experience has shown that many colleagues need only be made aware of the data in order to institute corrective measures. We appreciate your willingness to review these data.

Care and Treatment

- I needed to be examined . . . Dr. Gensurge never touched me except to shake hands.
- I feel Dr. Gensurge has put off my surgery too long with no good reason.
- Dr. Gensurge put the wrong drug on my prescription . . . pharmacy caught it, but . . .

Communication

- I tried asking questions . . . Dr. Gensurge doesn't explain well . . . gives short answers.
- Dr. Gensurge did a very poor job of communicating . . . raced through an explanation of what to expect, then left without giving me a chance to get clarification.
- Dr. Gensurge talks over us . . . isn't very patient-friendly.

Concern for Patient/Family

- Dr. Gensurge was rude. I was 7 minutes late and apologized. Dr. Gensurge looked at the clock and said, "That's 7 minutes I won't be spending with you."

Access and Availability

- I had to wait 2 hours to be seen. My time is valuable, too.

Payment Issues Associated with Care and Treatment Complaints

- Dr. Gensurge made no diagnosis so I went to a good doctor in [another town] who did exploratory surgery and found my trouble . . . I should not be responsible for the bill for my visit to Dr. Gensurge.

(continued on page AP6)

Appendix 1. Case Studies (continued)

Figure 6. Debriefing Form Used in This Study*

Confidential

CONFIDENTIAL: This material is confidential and privileged information under the provisions set forth in [Governing State Statutes] and shall not be disclosed to unauthorized persons.

Date: XXX

To: [Messenger]
From: Vanderbilt PARS Group
Re: Debriefing Form for Dr. _____

Please complete this form following your meeting with Dr. _____.

1. Date of meeting: D/M/Y Meeting start time: 7:45a End time: 8:15a

2. Including this meeting, how many visits have you had with this person related to delivering an intervention folder (including follow-up, if any)?
(1) 2 3 4 5 or more

3. How would you characterize the physician's receptivity to this meeting? (Circle best answer)

- A. Eager / Willing to make changes
- (B) Receptive / Interested in the information - CORDIAL
- C. Reserved
- D. Indifferent
- E. Frustrated / (Defensive) (at first)
- F. Angry / Hostile

Additional comments/concerns:

SAID, "I am embarrassed"

4. Did the physician offer an explanation of the problem(s) addressed in the meeting? (Yes) No
If yes, please summarize

— said high volume likely a factor. also said people get appointments, but ^{are} not candidates for surgery, so not happy. I believe communication style is a factor — Dr — does not.

(continued on page AP7)

Appendix 1. Case Studies (continued)

Figure 6. Debriefing Form Used in This Study* (continued)

5. Do you agree with the physician's view of the problems addressed? Yes No Uncertain

Please explain:

- Agree that appointment system could contribute, but communications will also need to be addressed

6. Please check all of the basic elements of the intervention that were completed:

- Reviewed contents of the letter
- Discussed physician's view of her/his ranking
- Asked physician to consider patient complaints, identify any patterns
- Asked physician to identify potential ways to address patient concerns
- Expressed appreciation for physician's consideration and contributions
- Explained that follow-up data will be provided in ~12 months
- N/A Identified anything that changed since the last visit (For follow-up visits only)

Please explain why any of the basic intervention elements were NOT completed
(Use back of sheet for extra space):

_____, MD
Print Name

Signature/Date D/M/Y

Thank you for completing this debriefing form.

* Added comments are a composite drawn from several debriefing forms returned following similar initial intervention visits.

(continued on page AP8)

Appendix 1. Case Studies (continued)

**Case Study 2.
A Nonresponder (A Gastroenterologist)**

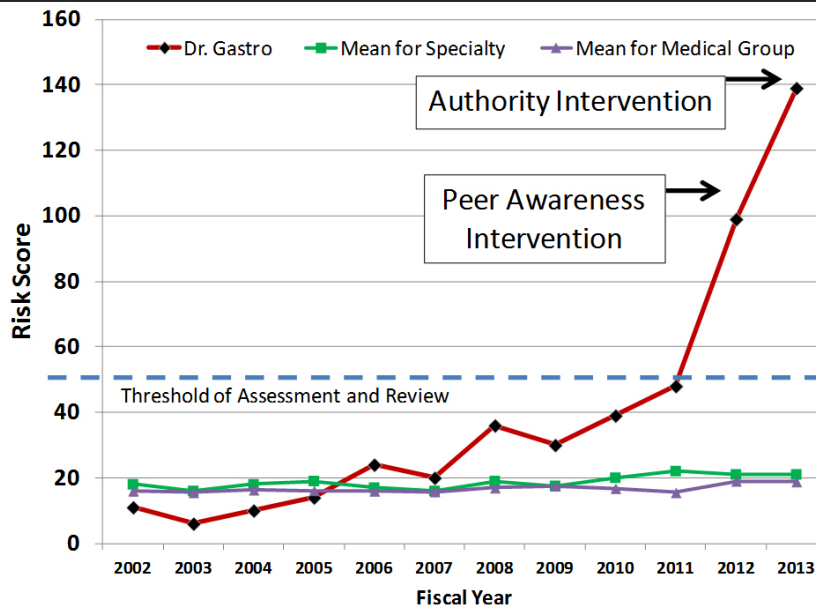
Dr. Gastro's risk scores from fiscal year 2002 (FY2002; the ABC organization's first year of PARS interventions) through FY2007 were increasing but remained within the range of colleagues' mean scores (Figure 7). Dr. Gastro's risk scores continued to increase, rising to 99 in FY2012. This score qualified for an initial Awareness intervention, and it placed Dr. Gastro among the top 2% of gastroenterologists in the PARS database. Dr. Gastro's messenger shared the data and described Dr. Gastro as "somewhat concerned," and the messenger added a note on the debriefing form predicting that Dr. Gastro's risk score would probably improve. Instead, Dr. Gastro's FY2013 risk score was 139 (ranking among the top 10 of more than 600 gastroenterologists in the PARS database). The data included assertions of two prescription-related errors, but the most common patient complaints appeared to revolve around long waits and communication failures, some of which were significant. Based on the quantitative data and qualitative nature of the complaints, the PCMC cochairs and messenger decided an Authority intervention was indi-

cated, and took the data to Dr. Gastro's department chair. The chair decided to direct—following the organization's required processes*—Dr. Gastro to a recognized Physician Wellness Program for screening. The screening exam prompted a referral, which ultimately resulted in a diagnosis of a profound sensorineural hearing loss. Dr. Gastro has been under the care of an otolaryngologist and is receiving appropriate audiologic support. Dr. Gastro will be reassessed for ability to return to clinical duties and any safety-related limitations. Dr. Gastro's hearing impairment was likely noticed by professional staff and colleagues, but it was patients who brought their concerns forward. Patients' observations, then, ultimately contributed to patient safety, and learning their complaints will help with ongoing monitoring.†

* Reiter CE, Hickson GB, Pichert JW. Addressing behavior and performance issues that threaten quality and patient safety: What your attorneys want you to know. *Prog Pediatr Cardio.* 2012;33(1):37–45.

† Pichert JW, Hickson GB. Patients as observers and reporters in support of safety. In Barach PR, et al., editors. *Pediatric and Congenital Cardiac Disease: Outcomes Analysis, Quality Improvement, and Patient Safety*, in press.

Figure 7. Dr. Gastro's Risk Scores Over Time



The horizontal line at the risk score of 50 indicates the PARS threshold for intervention pending assessment and review of an individual physician's underlying complaint data. (Moore IN, et al. *Rethinking peer review: Detecting and addressing medical malpractice claims risk*. *Vanderbilt Law Review.* 2006 May 1;59:1175–1206; Stimson CJ, et al. *Medical malpractice claims risk in urology: An empirical analysis of patient complaint data*. *J Urol.* 2010;183(5):1971–1976.)