Patient Experience Journal

Volume 1 | Issue 2 Article 7

2014

Beyond credentialing in physician selection: Application of an instrument that measures behavioral aptitude

Edgar Staren MD, PhD, MBA
Cancer Treatment Centers of America

Susan Hirt Ph.D.
Talent Plus, Inc.

Doug Rath M.A.
Talent Plus, Inc.

Follow this and additional works at: https://pxjournal.org/journal

 Part of the Health and Medical Administration Commons, Health Policy Commons, Health Services Administration Commons, and the Health Services Research Commons

Recommended Citation

Staren E, Hirt S, Rath D. Beyond credentialing in physician selection: Application of an instrument that measures behavioral aptitude. *Patient Experience Journal*. 2014; 1(2):26-35. doi: 10.35680/2372-0247.1023.

This Article is brought to you for free and open access by Patient Experience Journal. It has been accepted for inclusion in Patient Experience Journal by an authorized editor of Patient Experience Journal.

Beyond credentialing in physician selection: Application of an instrument that measures behavioral aptitude

Cover Page Footnote

ACKNOWLEDGEMENTS We recognize and express gratitude for the contributions of Scott Whiteford, Ph.D., former Chair of Research at Talent Plus, Inc. for the completion of this study. Additionally, the leaders and employees of Cancer Treatment Centers of America facilitated different steps of the process as did the Research Department of Talent Plus, Inc. At the time this study was completed Susan Hirt and Doug Rath were employees of Talent Plus, Inc., and both are still currently employed by Talent Plus, Inc. Talent Plus, Inc. has had a consulting engagement with Cancer Treatment Centers of America since 1991, and has received financial reimbursement for consulting services rendered, primarily the administration and analysis of structured interviews for the purpose of employee selection. This includes fees for the Physician Interviews utilized in this study. Talent Plus, Inc. received no financial reimbursement from Cancer Treatment Centers of America or any other person or organization for the analysis of the data necessary to complete the study on the Physician Interview described in this article, nor did Talent Plus receive financial reimbursement for the creation of the article being submitted. At the time this study was completed, Dr. Edgar Staren held the position of Chief Medical Officer for Cancer Treatment Centers of America. He currently holds the position of President and CEO for Cancer Treatment Centers of America at Western Regional Medical Center. Dr. Staren did not receive financial reimbursement from Talent Plus, Inc. or any other person or organization for his contribution to the Physician Interview study and the article being submitted which presents the Physician Interview study. Indeed, Dr. Staren has never received any financial reimbursement or services in kind from Talent Plus, Inc. I confirm that I had full access to all of the data in the study and I take responsibility for the integrity of the data and the accuracy of the data analysis. Susan C. Hirt, Ph.D. July 2014 Lincoln, Nebraska, USA

This article is available in Patient Experience Journal: https://pxjournal.org/journal/vol1/iss2/7

PXJ Patient Experience Journal
Volume 1, Issue 2 – Fall 2014, pp. 26-35

Patient Experience Practices

Beyond credentialing in physician selection: Application of an instrument that measures behavioral aptitude

Edgar Staren, MD, PhD, MBA, *Cancer Treatment Centers of America, edgar.staren@ctca-hope.com*
Susan Hirt, PhD, *Talent Plus, Inc., shirt@talentplus.com*
Doug Rath, MA, *Talent Plus, Inc., drath@talentplus.com*

Abstract
This article explores the idea that the assessment of candidates for the role of physician caregiver can be enhanced by evaluating their inter-personal and behavioral aptitude as well as their clinical skills. The objective of this work was to determine whether results of a structured interview correlate to performance ratings for physicians. Two data sets were collected: a structured aptitude assessment for physicians (the Physician Interview) and job performance data for physicians. Analysis of performance data allowed categorization of the physicians into three groups: top performers, contrast performers, and neither. The two data sets were then analyzed to assess the correlation between a physician's job performance and score on the Physician Interview. The research was conducted at a multi-site, cancer care hospital system. Sixty-three physicians were nominated for inclusion. Nineteen physicians met the criteria as top performers, twenty-three as contrast performers. Twenty-one physicians were excluded, as they did not meet the criteria. Results suggest that applying the structured Physician Interview as a standard step in the selection process can significantly increase the likelihood of identifying top-performing and contrast-performing physicians before they are hired.

Keywords
Selection, interview, assessment, healthcare, clinical, non-clinical, physician, structured interview, Cancer Treatment Centers Of America, Talent Plus, job performance

Introduction

The value of validated selection procedures such as structured interviews is consistently demonstrated in the pertinent literature. Companies that utilize structured interviews see an increase in overall employee productivity.[1] As the literature reveals, the type of structured interview and the selection criteria targeted by the interview are also important. With regard to selection criteria, the predictive validity for future success of an employee hinges more on natural aptitude that results in recurring behavioral and personality traits rather than on learned knowledge. That is, top performers differentiate themselves through their attitudes and behaviors, and less so through their demonstrated expertise.[2] In addition, a seminal meta-analysis quantifies the striking differences in measurable performance outcomes between top performers, average performers and low performers in a variety of jobs.[3,4] This meta-analysis further demonstrates that the performance advantage of top performers is substantially more pronounced when the complexity of the job (low, medium or high) is taken into account. The role of physician is included in the group of jobs with high complexity, and thus it is among the jobs for which the benefits of employing top performers are most pronounced. Because structured interviews have demonstrated reliability in selecting employees with higher productivity in other positions and because the potential performance advantage is highest for complex jobs such as a physician, this study seeks to evaluate the use of structured interviews to predict greater productivity and success for physician job candidates.

Methodology

Participants

Forty-two physicians currently or previously employed by Cancer Treatment Centers of America (CTCA) were included in the research sample on the basis of three criteria: the physician had to have completed the structured interview that measures behavioral aptitude (Physician Interview); the physician had to have been employed at CTCA for at least two years (to provide for adequate job performance assessment); and the physician had to qualify as either a "top" or "contrast" performer, as described below.

For the purposes of this study, top performers were described as "superstars — the best performers in your organization; these people represent the type of

© The Author(s), 2014. Published in association with The Beryl Institute and Patient Experience Institute
Downloaded from www.pxjournal.org

employees you would like to attract more of into the organization." Contrast performers were described as "struggling performers; they represent the type of employees your organization regrets hiring and does not wish to recruit more of into the organization." The process to select the 42 participants in this study had two stages, a nomination stage and a verification stage.

During the nomination stage of participant selection, a group of eight raters comprised of senior-most operational and executive leaders, including the chief medical officer, were instructed to review a list of physicians who had been or were presently employed by the organization for at least two years. They were asked to identify for inclusion in the study any physicians on the list whose performance they knew well enough to rate and that they would be willing to nominate as a top or a contrast performer. Sixty-three physicians were nominated by two or more of the raters.

During the subsequent verification stage of participant selection, performance evaluations for each of the 63 nominated physicians were captured from the same eight raters who had participated in the nomination stage using two methods. First, the raters were asked to assess whether they felt each of the 63 physicians was top, contrast or neither. Second, each rater completed a performance evaluation form for each physician, the Performance Rating Scale[SM].

The Performance Rating Scale is an evaluation of on-the-job performance from the perspective of a physician's direct manager or supervisor. It includes questions to which a manager responds on a scale from "strongly disagree" to "strongly agree." The physician is also rated on the basis of productivity and job performance compared with other physicians. It provides research analysts with an assessment of the managers' level of confidence in their ability to evaluate that physician's performance and whether they would hire more physicians like that physician. Adhering to strict criteria for sample selection helps make certain that the two samples (top and contrast) truly represent their respective groups. Sample questions from the Performance Rating Scale are provided below in Table 1, with the full questionnaire provided in Appendix 1, demonstrating that the questions address specific behaviors and attitudes common among physicians who perform successfully. The content of these evaluation questions does not merely focus on productivity as a measure of quantity of work or technical expertise, but on the qualitative elements of interaction with patients and colleagues, problem-solving attitude, communication skills and alignment with organizational values.

On the basis of the raters' evaluations of each of the 63 physicians' on-the-job performance, 19 top and 23 contrast performers were verified; twenty-one of the physicians did not fit clearly into either the top or contrast groups and were dropped from the study. Raters indicated their level of confidence in their ability to evaluate each physician's performance. If a rater did not feel that he or she knew a particular physician's work well enough to rate their performance, he or she did not complete a Performance Rating Scale form for that individual. Furthermore, a minimum of three raters was needed for a physician to qualify for inclusion in the study. To minimize bias during the rating process, the raters were not given access to the results of the Physician Interview for any physician in the study. Finally, due to his direct supervision of the physician population, the chief medical officer reviewed assignments to the two groups of top and contrast as an added safeguard against data reporting errors. No

Table 1. Sample Performance Rating Scale Questions

Sample items:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Effectively communicates with patients					
Shows pride in our organization					
Upsets fellow co-workers					
Does whatever it takes to "make a difference" in the lives of the patients they serve					

alterations were made to the data in this step, but his review confirmed the overall performance data reported for the physicians included in the study.

In order to determine the inter-rater reliability among the eight raters, effective reliabilities were calculated.[5] Three reliabilities were calculated, each of which indicated high levels of agreement among the raters. The effective reliability for the productivity rating was 0.92; for the average of the 39 rating scales it was 0.96; and for the question of whether the rater would hire more physicians like the individual being rated it was 0.77. Reliability scores range between -1.0 and 1.0, with 1.0 representing a perfect correlation, namely that two raters rated an individual exactly the same. In determining an acceptable threshold of reliability, there are no universally recognized standards among researchers, although 0.90 or greater has been considered as such based on previous work.[6] Below 0.80 there is disagreement, while 0.70 is "often used for exploratory research" as a "rule of thumb".[6]

The Physician Interview

The Physician Interview used by this hospital system is a standardized structured interview which measures six themes, or dimensions, of behavioral aptitude: Ego Drive, Focus, Intelligence, Conceptualization, Relationship and Persuasion. Definitions of each of these themes are included in Appendix 2. This interview instrument is not designed to evaluate a physician's clinical training, knowledge or skill. It is an assessment of natural aptitude or tendencies in the six themes that result in recurring behavior.

For this study, analysts with master's or doctoral degree training scored the responses to the open-ended questions that comprise the Physician Interview. To minimize bias, the analysts were not given information on the classification as top or contrast for any physician in the study. These analysts had each undergone more than 300 hours of initial training to learn the scoring of this particular interview, had received ongoing training and had passed subsequent rater reliability assessments. Analysis of the Physician Interview requires the analyst to code the interview from a transcript and recording of the interview. Once coding is complete, the analyst then writes a report detailing the interviewee's strengths and weaknesses. Referencing the topics and scenarios addressed in specific Physician Interview questions, the report describes the interviewees' attitudes and behaviors as expressed in their answers. The entire process typically requires five to eight hours per interview. Since the Physician Interview consists of structured, open-ended questions, the time needed to conduct an interview is fully dependent upon the length of answers given by the interviewee. Although interview length can range from thirty minutes to many hours, the typical duration is two to three hours. Data analysis and report completion requires three to five hours with the collaboration of the analyst, the transcriptionist and the editor/proofer. The trained analyst codes the response to each question on a five-point Likert-type scale (-1.00, -0.50, 0, 0.50, 1.00). A higher score demonstrates that the physician's response corresponds more closely to that of top performers whose responses are the archetype for the structured interview. That is, the analyst does not code a response based on his or her subjective opinion of that response, but rather codes the response based on the presence of specific concepts, feelings or behavioral descriptions provided by the interviewee that correspond to those expressed by the archetypal top-performing physicians. In this way, the analysis process is standardized and replicable: analysts can be trained to conduct the analysis and deliver consistent evaluations due to the existence of defined criteria for the evaluation of each interview question.

The proprietary questions that constitute the Physician Interview have not been included in this report in order to protect their efficacy. The interview methodology requires the interviewee to provide a spontaneous, unrehearsed answer. Yet it is possible that foreknowledge of the questions can change how an interviewee chooses to respond to them or may prompt the interviewee to prepare answers beforehand. Protecting the Physician Interview questions and scoring rubric from broad distribution is a primary safeguard against interviewees who may wish to gain an inappropriate advantage that is not a result of their natural aptitude, but is due to their knowledge of the interview content. Further protection of the interview's efficacy is provided by the ambiguous and open-ended nature of the questions. That is, it is not patently obvious what theme is being measured by a particular question. Thus, interviewees are prevented from deducing the most apt response even if they seek to provide socially desirable answers.

Every question in the Physician Interview corresponds to one of the six themes listed above (see also Appendix 2). Each theme score for a physician is an average of the scores given to all responses for questions corresponding to that theme. Similarly, the interview total score is an average of the scores given to all responses in the interview. Therefore, each theme score and the overall score also range from -1.00 to 1.00. The results of the structured Physician Interview for each physician provide an overall intensity score (total score) as well as intensity scores for each of the six behavioral themes. The total score of the interview is referenced as the primary assessment result for selection. Theme scores offer indications of specific behavioral traits that provide further insight into a

physician's aptitude to perform successfully in the hospital system.

The Physician Interview has been developed as a selection instrument. Its function is to provide a recommendation for hiring decisions, indicating whether a physician job candidate is likely to become a top performer after he or she has been selected. As indicated above, the total score is the primary assessment result, and is used to discern between candidates who would be recommended for selection and those who would not be recommended. The threshold for this selection recommendation, referred to as a *cut score*, was determined based on the analyses of the 42 physician interviews. When optimized, a cut score correctly classifies the maximum number of top performers at or above the selected threshold and the maximum number of contrast performers below the selected threshold. Here, the desired outcome for hiring decisions is to have top-performing physicians be recommended by the Physician Interview and contrast-performing physicians not be recommended, using the cut score as the threshold for the recommendation.

Results

In an analysis of total scores and themes scores for the 42 interviews, significant differences between top (n = 19) and contrast (n = 23) performers were determined. Tests permitted a comparison of top and contrast performers through a study of the mean scores to determine if there were statistically significant differences between the means of these two groups (see Table 2 and Figure 1). With the exception of Persuasion, the mean scores were significantly higher for top performers than for contrast performers. For Persuasion, top performers did score higher than contrast performers, but this difference was not statistically significant.

Based on the results of this study, a cut score of 0.56 was established. That is, when future candidates apply to the organization, hiring managers are recommended to move candidates forward in the selection process if their interview scores are 0.56 or greater. As may be seen in Table 3, applying a cut score of 0.56 to the performance of the 42 physicians included in this study resulted in a highly accurate classification of top and contrast performers. Using a total cut score of 0.56, the correct classification was 85.7 percent. A chi-square analysis indicates that this classification accuracy is statistically significant, chi-square (1) = 16.88, $p < 0.001$. Table 3 illustrates the frequency of top and contrast physicians who met and did not meet the cut score of 0.56.

A cut score of 0.56 presented the greatest number of physicians classified correctly as either top or contrast. In other words, a cut score of 0.56 kept to a minimum both the number of physicians who were originally identified as top but were not recommended for selection and those who were originally identified as contrast but were recommended for selection.

Table 2. Mean comparisons across top and contrast groups for the themes and total score from the Physician Interview

Theme	Group	Mean	Range	SD	t-value	p-value
Ego Drive	Top (n=19)	0.55	0.22 – 0.82	0.15	-2.09	0.04*
	Contrast (n=23)	0.44	-0.12 – 0.81	0.19		
Focus	Top (n=19)	0.67	0.50 – 0.85	0.10	-2.58	0.01*
	Contrast (n=23)	0.57	0.31 – 0.81	0.14		
Intelligence	Top (n=19)	0.63	0.26 – 0.91	0.16	-3.35	0.00*
	Contrast (n=23)	0.48	0.07 – 0.65	0.14		
Conceptualization	Top (n=19)	0.64	0.30 – 0.88	0.16	-3.10	0.00*
	Contrast (n=23)	0.49	0.06 – 0.69	0.16		
Relationship	Top (n=19)	0.53	0.12 – 0.83	0.18	-2.39	0.02*
	Contrast (n=23)	0.36	-0.10 – 0.79	0.26		
Persuasion	Top (n=19)	0.22	-0.18 – 0.69	0.21	-1.11	0.27
	Contrast (n=23)	0.14	-0.54 – 0.85	0.28		
Total Score	Top (n=19)	0.58	0.43 – 0.70	0.07	-4.80	0.00*
	Contrast (n=23)	0.46	0.22 – 0.58	0.09		

**significant difference*

Figure 1. Top performer results and cut score

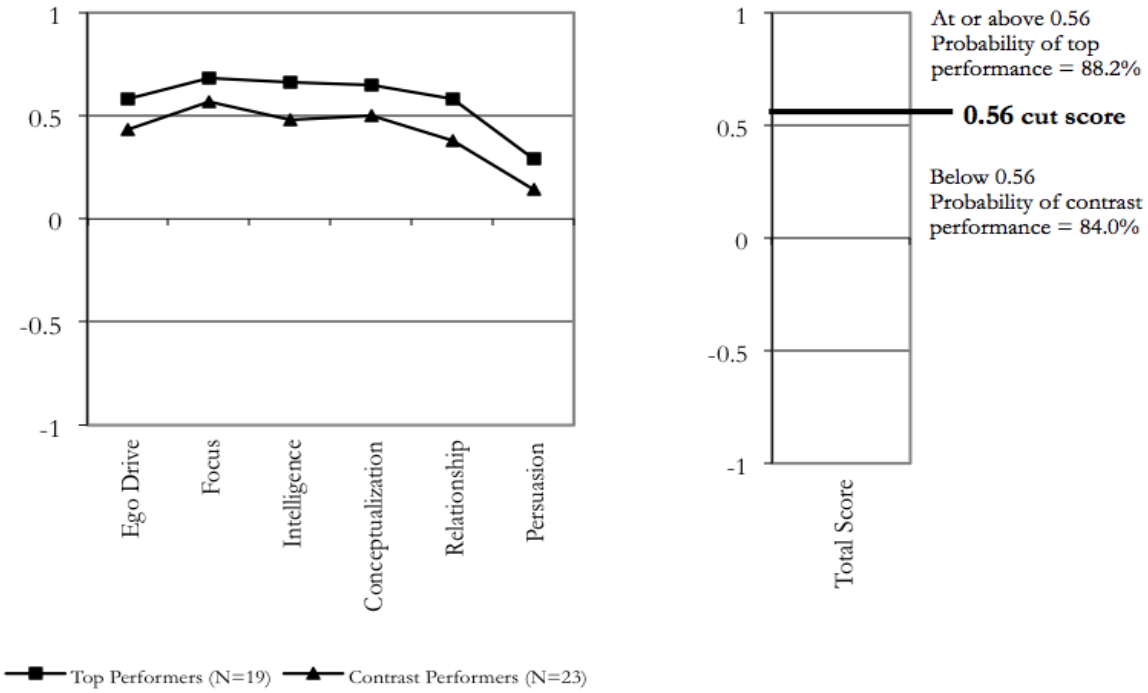


Table 3. Classification table indicating frequencies of those who did and did not meet the cut score of 0.56 and their designations as top or contrast performers

	Contrast	Top	Total
Met cut score	2 (11.8%)	15 (88.2%)	17
Did not meet cut score	21 (84.0%)	4 (16.0%)	25
Total	23	19	42

Discussion

Implications

The medical, organizational and financial ramifications of a physician selection decision are broad reaching within any hospital or hospital system. Some have estimated this selection decision to be in the range of $250,000 in hard costs (based on recruiting costs, compensation and expenses upon a physician's departure)[7] up to $500,000 for a more senior physician which may require multiple search committee meetings, relocation and reimbursement of personal expenses.[8] More recent discussions put the figure well above $1 million, addressing the soft costs which can include productivity gaps, opportunity costs, disrupted work flow and potential damage to a hospital's reputation.[9]

In light of these and other concerns, the assessment of physicians beyond their clinical abilities has been identified as a critical need within the broader health care industry. One ramification of physician selection that has been receiving attention is the physician's relational ability, and specifically the interpersonal relationship between patients and their physicians. Research suggests that certain early biographical and psychological patterns of a physician relate to that physician's outlook, relationships and even his or her own health later in life.[10] Management of the interpersonal relationship between physician and patient has been presented as one of eight attributes defining quality of care.[11] Furthermore, it has been proposed that a physician's ability to alleviate a patient's suffering by addressing concerns and offering

reassurance is clearly distinguished from the physician's ability to cure the patient's illness.[12]

As an illustration of this aspect, Malcolm Gladwell, in his study of decision-making and intuition, describes the relationship between physician-patient communication and medical malpractice suits. He underscores the need to ensure that clinical competence of a physician is supplemented by an ability to establish productive interaction and positive communication, which fall outside the clinical realm. It has been suggested that physicians who built better relationships with their patients were less likely to be sued for malpractice, regardless of whether patients suffered medical negligence.[13-15] "In other words, patients don't file lawsuits because they've been harmed by shoddy medical care. Patients file lawsuits because they've been harmed by shoddy medical care and *something else* happens to them"[13] — that "something else" being the personal treatment by their physicians.

In addition to the studies discussed by Gladwell, recent heightened focus on disruptive behavior among physicians reveals the significant impact of physicians' decisions and actions that are not directly related to their clinical expertise.[16-20] Examples of disruptive behavior include profane or disrespectful language, outbursts of anger and comments that undermine a patient's trust in other caregivers or the hospital.[16] Despite the mounting interest in physician behavior, traditional methods for physician selection do not systematically address behavioral criteria. Credentialing, based on peer review, board certification, and continuing medical education, is a common tool used to try to select the most competent physician staff.[11] However, credentialing cannot easily assess the other behaviors outlined above that fall outside of the strictly clinical realm but have a significant effect on the ability of a physician — and the professionals working with that physician — to deliver consistent, quality care.

Conclusions

As stated by Schmidt and Hunter,[21] one of the most important aspects of selection methods is predictive validity, that is, being able to predict future success on the job. However, a thorough review of the literature on physician selection has yielded no evidence of use of validated selection tools. One study does reveal a predictive correlation between an individual's performance in medical school — as represented through class ranking and research activities — and subsequent career achievement in academic medicine.[22] Still, no corresponding study has been found which assesses factors that predict career achievement among physicians in non-academic settings. Instead, hospitals rely on unstructured personal interviewing to assess a physician's self-presentation and behavior in a subjective and unverified manner. Health care administrators are then responsible for managing the physician population that results from these well-intentioned but non-standardized efforts.

As described above, structured interviews provide an opportunity for hospitals to augment their traditional selection process by using a validated selection interview to evaluate physician candidates before they join the organization. These instruments — already used successfully for other positions — are capable of evaluating a candidate for behavior patterns identified in top-performing employees. The results of this pilot study suggest that a structured interview instrument, when used as a screening tool, increases the likelihood of selecting candidates who experience success on the job as physicians.

That is to say, the Physician Interview could predict the performance success of physicians at CTCA, and conversely, could identify physicians who were not likely to perform well in the organization. The interview's total score and five of the six theme scores were found to differentiate significantly between top and contrast physician groups that were verified by hospital administrators. Going forward, by selecting those physicians who met the cut score of 0.56 on the Physician Interview, CTCA is more likely to hire additional physicians who perform like those that they identified as top performers for this study.

The theme of Persuasion was not shown to differentiate statistically between top and contrast physician, even though the data trend demonstrates a separation between the two groups. As is presented in Appendix A, strength in the theme of Persuasion is indicative of an ability to influence others "toward the acceptance of new ideas by the use of reason and emotion." When offering treatment options to a patient, some physicians advocate for what they consider to be the most beneficial course of action, whereas others characterize their role as one of educator: they provide options and discuss risks from a neutral perspective, leaving the decision firmly in the hands of the patient. The data indicate that top performing physicians as a group demonstrate stronger tendencies as advocates, but further study is warranted to better understand the communication style and intentions of highly successful physicians as compared with their less successful counterparts.

Another area that merits further examination is based on the relatively small sample size (n = 42). Despite this concern, those relationships which were found to be significant were indeed strongly correlated. Nevertheless, an examination addressing a larger sample size is warranted to confirm the findings in this

pilot study. The next phase of this study, already underway, includes the addition of other performance and business metrics to the raters' classification, such as patient satisfaction. This study will also address sub-specialties within medicine and the potential differences in behavioral profiles that can be discerned through the structured interview.

Finally, the 42 physicians included in this analysis were employed or are employed by CTCA. Before becoming employees, they were subject to a multi-step screening process involving preliminary interviews via telephone, scrutiny of job history and communication with references. The screening process also included in-person, unstructured interviews with multiple seasoned executives and medical professionals. Thus, this pilot study analyzes physicians who had met the criteria established in CTCA's earlier screening steps, whereas a broader study which includes physicians who have not undergone similar screening may affect the mean scores and cut score of 0.56 established in this analysis. Moreover, it is important to consider how the structured interview methodology correlates to the other screening steps in the selection process. It is possible that confidence in a structured interview methodology developed through demonstrated validity could diminish the need for time- and resource-intensive screening steps placed earlier in the selection process.

The number of contrast physicians (N = 23) among the original population considered for this study (N = 63) was greater than CTCA would have hoped. Nevertheless, this percentage distribution is not unlike that seen in other organizations that use a tiered model to identify their A, B and C players, with the intention of minimizing their C player population over time. This model has been most famously practiced by Jack Welsh at General Electric. Since the time when the results of this study were shared with the leadership of CTCA, the organization has continued to use the Physician Interview with the intended purpose of minimizing the number of contrast physicians it hires. Preliminary review of the physician population at the time of writing indeed indicates a decrease in the percentage of contrast players among physicians, as measured both by Physician Interview results and other performance metrics.

Providing patients with the highest quality care is increasingly seen by both medical professionals and researchers as an imperative.[23] It is also apparent that finding quality physicians is not simply a function of reviewing curricula vitae and other traditional qualifications, as physician behavior that directly affects quality of care is not necessarily identifiable in such a review. Though further analysis is needed to demonstrate that the Physician Interview results can be replicated across a broader population, the results presented here suggest that a structured interview can be an effective tool in selection processes for physicians.

References

1. Schmidt, F.L., Hunter, J.E., McKenzie, R.C., & Muldrow, T.W. Impact of Valid Selection Procedures on Work-Force Productivity. *J Appl Psychol.* 1979; 64 (6), 609-626.
2. Hunter, J.E., & Schmidt, F.L. Quantifying the effects of Psychological Interventions on Employee Job Performance and Work-Force Productivity. *Am Psychol*, April. 1983; 473-478.
3. Huffcutt, A.I., Conway, J.M., Roth, P.L., & Stone, N.J. Identification and Meta-Analytic Assessment of Psychological Constructs Measured in Employment Interviews. *J Appl Psychol.* 2001; 86 (5), 897-913.
4. Hunter, J.E., Schmidt, F.L., & Judiesch, M.K. Individual Differences in Output Variability as a Function of job Complexity. *J Appl Psychol.* 1990; 75 (1), 28-42.
5. Rosenthal, R., & Rosnow, R. *Essentials of Behavioral Research*. New York: McGraw-Hill; 1991.
6. Lombard, M., Snyder-Duch, J., & Bracken, C. Content Analysis in Mass Communication: Assessment and Reporting of Intercoder Reliability. *Hum Commun Res.* 2002; 28 (4), 587-604.
7. Buchbinder, S.B., Wilson, M., Melick, C.F. & Powe, N.R. Estimates of Costs of Primary Care Physician Turnover. *Am J Manag Care.* 2002; 5: 1431-1438. Accessed June 23, 2009. http://www.ajmc.com/issue/managed-care/1999/1999-11-vol5-n11
8. Waldman, J.D., Kelly, F., Arora, S., Smith, H.L. The Shocking Cost of Turnover in Health Care. *Health Care Manage R.* 2004; 29 (1), 2-3, 5.
9. Minich-Pourshadi, Karen Six Ways to Reduce Physician Turnover. *HealthLeaders Media.* Published December 12, 2011. http://www.healthleadersmedia.com/page-1/FIN-274224/6-Ways-to-Reduce-Physician-Turnover Accessed October 10, 2014.
10. Thomas, C.B. Stamina: the Thread of Human Life. *Psychother Psychosom*, 1982; 38, 74-80.
11. Wyszewianski, L. Basic Concepts of Healthcare Quality. *The Healthcare Quality Book: Vision, Strategy, and Tools*, Eds. Ransom, E.R., Joshi, M.S., Nash, D.B., & Ransom, S.B., American College of Healthcare Executives, 2008; Washington D.C., 25-42, 169-185.
12. Cassell, E.J. The Nature of Suffering and the Goals of Medicine. *N Engl J Med.*1982; 306 (11), 639-45.

13. Gladwell, M. *Blink: The Power of Thinking Without Thinking*. New York: Little, Brown and Company. 2005.
14. Levinson, W., Roter, D., Mullooly, J., Dull, V., & Frankel, R. Physician-patient communication: The relationship with malpractice claims among primary care physicians and surgeons. *J Am Med Assoc.* 1997; 277 (7), 553-559.
15. Ambady, N., LaPlante, D., Nguyen, T., Rosenthal, R., Chaumeton, N., & Levinson, W. Surgeons' Tone of Voice: A Clue to Malpractice History. *Surgery*. 2002; 132(1): 5-9.
16. Porto, G., & Lauve, R. 2006. Disruptive clinical behavior: A Persistent Threat to Patient Safety. *Patient Safety and Quality Health Care*. July/August 2006. http://www.psqh.com/julaug06/disruptive.html Accessed June 5, 2009.
17. Rosenstein, A.H., & O'Daniel, M. Disruptive Behavior and Clinical Outcomes: Perceptions of Nurses and Physicians. *Am J Nurs.* 2005; 105 (1), 54-64.
18. Rosenstein, A.H., & O'Daniel, M. A Survey of the Impact of Disruptive Behaviors and Communication Defects on Patient Safety. *The Joint Commission Journal on Quality and Patient Safety*. 2008; 34 (8), 464-471.
19. Weber, D.O. Poll Results: Doctors' Disruptive Behavior Disturbs Physician Leaders. *Physician Executive*. 2004; 30 (5), 6-14.
20. Leape, L.L., & Fromson, J.A. Problem Doctors: Is There a System-level Solution? *Ann Intern Med.* 2006; 144, 107-155.
21. Institute for Safe Medication Practices: *Survey on Workplace Intimidation* Published 2003. https://ismp.org/Survey/surveyresults/Survey0311.asp Accessed June 5, 2009.
22. Schmidt, Frank L., & Hunter, John E. (1998). The validity and utility of selection methods in personnel psychology: practical and theoretical implications of 85 years of research findings. *Psychol Bull*, 124, 262-274.
23. Brancati, F.L., Mead, L.A., Levine, D.M., Martin, D., Margolis, S., & Klag, M.J. (1992). Early Predictors of Career Achievement in Academic Medicine. *J Am Med Assoc.*, 267 (10), 1372-1376.
24. Talent Plus, Inc. (2006). Appendix 1: Talent Plus ® Physician Performance Rating Scale℠ (PRS), Lincoln, Nebraska
25. Talent Plus, Inc. (2008). Appendix 2: Physician Interview Theme Descriptions, Lincoln, Nebraska

Appendix 1: Talent Plus ® Physician Performance Rating Scale℠ (PRS)[24]

"Click" or mark the shaded areas to record your responses.

Organization – Location:
Physician's Name:
Physician's Position:
Physician's Time in Position (in months):

Today's Date:
Physician's Time with Company (in months):
Evaluator's Name:
How Long Have You Supervised this Physician (in months):

Please select ONE box per line that best describes the physician.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Is knowledgeable about their field of medicine	□	□	□	□	□
2. Cares about patients and is liked by them	□	□	□	□	□
3. Likes to work hard	□	□	□	□	□
4. Always keeps their promises	□	□	□	□	□
5. Is frequently asked for advice	□	□	□	□	□
6. Can get others to see beyond obstacles and move past them	□	□	□	□	□
7. Is confident in their ability to treat patients	□	□	□	□	□
8. Deals with others honestly	□	□	□	□	□
9. Communicates effectively with people at all levels of the organization	□	□	□	□	□
10. Likes to learn	□	□	□	□	□
11. Upsets fellow co-workers	□	□	□	□	□
12. Asks patients lots of questions	□	□	□	□	□
13. Will help the team only when it is necessary	□	□	□	□	□
14. Can easily convince others to help them	□	□	□	□	□
15. Effectively communicates with patients	□	□	□	□	□

16. Is able to persuade others	□	□	□	□	□
17. Is positive and optimistic	□	□	□	□	□
18. Shows pride in our organization	□	□	□	□	□
19. Gets more work done in less time than any other person	□	□	□	□	□
20. I have trusted this person to do a good job without my supervision	□	□	□	□	□
21. Has complained to me in the last week	□	□	□	□	□
22. Always wants to be the best at what they do	□	□	□	□	□
23. Is always making suggestions of how to improve work	□	□	□	□	□
24. Aggressively pursues knowledge about their profession	□	□	□	□	□
25. Has recruited successful people into the organization	□	□	□	□	□
26. Is stern with patients when appropriate	□	□	□	□	□
27. Is technically competent in their work	□	□	□	□	□
28. Carefully considers the plusses and minuses when making decisions	□	□	□	□	□
29. Frequently has excuses for poor outcomes	□	□	□	□	□
30. Always gets along well with others	□	□	□	□	□
31. Is passionate that our organization be the best	□	□	□	□	□
32. Forms trusting relationships with patients	□	□	□	□	□
33. Works harder to please patients than anyone I know	□	□	□	□	□
34. Frequently arrives to meetings unprepared	□	□	□	□	□
35. Easily adjusts to unexpected events	□	□	□	□	□
36. Knows about the personal lives of their patients	□	□	□	□	□
37. Is very effective at answering patients' questions	□	□	□	□	□
38. Wants recognition for work well done	□	□	□	□	□
39. Always provides treatment alternatives to patients	□	□	□	□	□
40. Matches a person's strengths to the right task	□	□	□	□	□
41. I have heard this person talk about the organization's values in the past month	□	□	□	□	□
42. Is orderly and exacting in whatever they do	□	□	□	□	□
43. People always want to work with this person	□	□	□	□	□

44. Among the people I know well, this person's productivity would be:
□ Below Average □ Average □ Above Average □ In the Top Then I Know □ The Top

45. Of all the people who do the same job as this person, how would you compare them?
□ Below Average □ Average □ Above Average □ In the Top Then I Know □ The Top

46. Of all the people I have worked with, I would consider this person to be a (on a 1-to-10 scale, with 10 high): __

47. Regarding this individual, I have answered these questions with:
□ No confidence □ Low confidence □ Moderate confidence □ 85 percent confidence
□ With confidence, no reservations

48. Would you hire more people like this person?
□ Yes □ No

49. Do you have measurable performance data on this person?
□ Yes □ No

We ask that you identify whether this physician is a top performer, contrast performer or neither.

+ Top performers must represent superstars – the best performers in your organization. These people represent the type of employees you would like to attract more of into the organization.
+ Contrast performers must represent struggling performers. These people represent the type of employees that your organization regrets hiring and does not wish to recruit more of into the organization.
+ If this physician is not clearly a top performer or a contrast performer, please select "neither" below.

Would you nominate this physician as a:
□ Top Performer □ Contrast Performer □ Neither Top nor Contrast Performer

Please provide any additional information on this individual that would help us better understand your nomination (i.e., any metrics or personal observations):

The following information is voluntary and to be used for research purposes only. In order to help ensure that the Physician Interview selects solely on talent and not demographics, we ask that you provide the following information on the physician you have nominated. If you are uncertain, please provide us with the best approximation of this information.

Please Provide Age (in years): __

Please Select Gender:
□ Male □ Female

Please Select Race/Ethnicity:
□ American Indian or Alaska Native
□ Asian
□ Black or African American
□ Hispanic or Latino
□ Native Hawaiian or Other Pacific Islander
□ White
□ Other

Employee's Name:
Evaluator's Name:

After completing this form, save the document with a new title by utilizing your computer's Save As function. You may e-mail the new document as an attachment to research@talentplus.com or fax the printed document to 402.489.4156 with attention to Talent Plus' Research Department.

Copyright © 2006 Talent Plus ®
Private and Confidential

Appendix 2: Physician Interview Theme Descriptions[25]

DRIVE captures a person's self-esteem, self-expression and capacity to channel their energy to achieve personal and professional goals in a balanced way.

+ **EGO DRIVE** explores a person's self-concept, self-reliance, adjustment to others and individual competitiveness.
+ **FOCUS** examines a person's energy level and how this energy has been and is channeled to achieve specific goals and outcomes. This theme also considers a person's future aspirations.

INTELLECTUAL ACUMEN reflects a person's inquisitiveness, wisdom and ability to articulate and illustrate key aspects of their business philosophy and personal values.

+ **INTELLIGENCE** is defined by a person's intellectual curiosity, innovation, social awareness and judgment.
+ **CONCEPTUALIZATION** is a theme in which professional and personal values, standards and the expression of ideals, desired outcomes or goals are considered. The ability to think in a multifaceted way is also included in this theme.

PEOPLE ACUMEN reveals the extent, depth and impact of a person's interactions in both positive and negative settings.

+ **RELATIONSHIP** is defined by the desire for and ease with which people establish rapport with others and the scope and intensity of their people interactions.
+ **PERSUASION** relates to a person's approach to influencing others and their ability to move others toward the acceptance of new ideas by the use of reason and emotion.

Copyright © 2008 Talent Plus ®
Private and Confidential