AN ABSTRACT OF THE DISSERTATION OF

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This research sought to identify the reasons physicians attributed for practicing in Oregon, the reasons for relocating out of Oregon, and the reasons for failures in recruiting physicians to Oregon. A random sample survey of 494 Oregon physicians identified the presence of economic and non-economic factors related to the recruitment and retention of physicians in Oregon. The research indicated that non-economic factors are overwhelmingly selected by physicians as reasons for locating their practices in Oregon, while economic factors are strongly selected as reasons for relocating out of Oregon, and as reasons for candidates not accepting positions. The data and research design do not provide the information needed to explain these divergent findings. The non-economic factor of Oregon lifestyle would appear to be a substantial recruitment asset as 93% of respondents selected "Oregon lifestyle" as an influential reason for locating their practice in

Oregon. 86% of influential reasons to locate a practice in Oregon were non-economic factors. Economic factors were identified in 16% of respondents who reported planning to relocate out of Oregon within five years. The OHSU (2002) Workforce Assessment obtained a figure of 4% for this variable. This suggests future recruitment needs may be larger than anticipated. Physicians commonly contend with recruitment activities as 80% of respondents reported attempting to recruit physicians in the last five years. Of respondents reporting recruitment attempts, 69% reported at least one recruitment failure. Most of these failures were due to economic factors. While non-economic factors dominated the findings for reasons to locate in Oregon, economic factors dominated the findings for reasons to relocate and for recruitment failures. A full range of economic factors such as salary, reimbursement, liability premium costs, Oregon's economy were considered influential. Non-economic factors including lifestyle, collegiality, and family living in Oregon were influential factors identified in this survey. Much of recruitment theory is 'low-level', which appears as the ordinary organizing constructs for recruitment practices. As recruitment is largely an applied endeavor, recruitment theory is little developed and examined and is fertile ground for development and testing.

Recruiting Physicians in Oregon: Recruitment Theory and Practical Strategies

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Nancy L. Seifert

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I understand that my dissertation will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my dissertation to any reader upon request.

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Nancy L. Seifert, Author

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CHAPTER 1

INTRODUCTION

In my current position as Director of an Independent Physicians Association in western Oregon, I have listened to physicians as they share their recruitment and replacement problems. Are my experiences weak signals of an advancing problem that will impact far more Oregonians in the near future? These personal experiences have compelled me to research and explore the issue of physician recruitment in Oregon.

The ability to recruit, select, and retain physicians who share common interests, characteristics, and practice goals is a hallmark of successful medical practices (Freeman, 2002). Effective recruiting allows for growth of the practice, replacement of retiring physicians, and the securing of diverse capabilities to meet patients' needs. What then are the pivotal factors of physician recruitment?

Matters of physician supply, distribution, and specialization constitute the structural background for local issues pertaining to physician recruitment. We will briefly consider these matters at the national and Oregon state levels, and then point out additional factors initially identified as related to recruitment. The discussion moves next to an outline of the research project, the specific research questions at

hand, and the significance of the study. A synopsis of study limitations and delimitations, and a set of working definitions, complete the introduction.

The national situation

The per capita supply of non-federal physicians has steadily increased for some years in the United States, and in 2002-3 stood at 281 physicians per 100,000 population (Kaiser, 2004). New physicians enter practice as graduates from US training programs, and as foreign medical graduates immigrating to the US. The number of physicians graduating from U.S. medical schools and entering practice in the US has been estimated at 15,000 to 16,000 a year, a figure that has been fairly stable since 1980 (Elliott, 2004). The increase of physicians appears to be due to the increasing hiring of foreign medical school graduates (Mullan, 2002).

Meanwhile, the number leaving the market annually was estimated at 9% (AMGA, 2004). At the national level, this indicates a gross loss of 73,000 physicians, and a net decrease of 57,000 physicians annually. U.S. medical schools are currently graduating 5,000 fewer doctors per year than we employ as first-year residents. This gap is closed by hiring physicians educated elsewhere in the world and putting them to work in our hospitals (Mullan, 2002). Aging is one factor contributing to physicians leaving the market. The aging of physicians mirrors the aging trend in the general population (US Census Bureau, 2004). This factor will increase in significance, and may lead to further per capita decreases in physician

work force over the next fifteen years. Other factors identified as of potential importance include malpractice insurance rates, the risk of litigation in high-risk procedures, and declining physician incomes (Cooper, 2003; Huntington, 2003; OMA, 2003; Rabinowitz, 1999). Lifestyle issues may also be a factor, as when being on call at all hours is not accepted by younger physicians as an inevitable part of the physician's job (Kolars, 2001; Barlow, 2003; OHSU, 2002).

Aside from leaving the market entirely, there is also evidence that physicians are changing practice profiles. Besides declining high-risk procedures, some are leaving states that do not have liability reform measures, or do not have adequate Medicare and Medicaid reimbursement (AHA, 2003; Smits, 2004; Bernardo, 2004).

The overall national supply of physicians is currently thought to be sufficient, or even excessive (McBride, 1996; Broxterman, 1999). Excess physicians may be one factor in driving up total health care costs (Tierney, 1980). However, it is very difficult to define what constitutes an optimal supply of physicians (Cooper, 2003). Furthermore, supply alone does not accurately represent workforce availability, as distribution and specialization are potent modifiers (Friedman, 1988).

Whatever the supply, the distribution of physicians is now well recognized as uneven. Rural regions and poorer urban areas tend to be underserved (Kaiser, 2002; Ong, 2003; Whitaker, 2005). In response to this problem, the federal government has underwritten medical education costs for some physicians-in-training in return for a

period of service in underserved areas (Oregon Office of Rural Health, 2004). However, as Whitaker (2005) pointed out during the "Healthcare Workforce Crisis in Oregon" panel discussion at Willamette University, federal payments programs are limited, and Oregon's rural underserved loan payment program budget is being cut again this legislative session.

The specialization of physicians also is skewed when compared with population needs (Kolars, 2001). Primary care physicians and specialists in areas such as obstetrics, anesthesiology, and surgery have been in short supply (Cooper, 2003). Eighty-nine percent of medical school deans who responded to a survey cited shortages of physicians in at least one specialty. Cooper (2003) identified shortages in anesthesiology, radiology, primary care physicians. In response, medical schools have concentrated on educating and incentivizing primary care physicians (JAMA, 2003; Rabinowitz, 1999).

The Oregon situation

Table 1 compares Oregon and national physician supply in 1998, 2002, and as estimated for 2003/2004 (Kaiser, 2002). Per 100,000 population, Oregon had 269 physicians in 2002, and 232 in 2003/2004 (Kaiser 2002). This is the first time since 1950 (when records were initiated) that Oregon's per capita supply of physicians has decreased (Whitaker, 2005; Office of Rural Health, 2004). In terms of training new physicians, Oregon ranked 44th among the 46 states with medical schools in medical

school graduates per capita (Bureau of Health Professions, 2000; Council on Graduate Medical Education, 2001).

Table 1. Active physicians per 100,000 population

	1998			2002			2004	
	Total # physicians	Number MDs per 100K	Rank	Total # physicians	Number MDs per 100K	Rank	Total # physicians	Number MDs per 100K
Oregon	6,305	192	19	8,169	269	27	8,292	232
United States	678,649	198		814,909	281		Not yet available	

The majority of Oregon's 2004 population of 3.5 million resides in urban areas in the Willamette Valley. A substantial proportion (about 26%) resides in rural areas, including the vast landscape of Eastern Oregon (Office Rural Health, 2002). The national issues of supply, distribution, and specialization all apply in Oregon's situation.

A plausible hypothesis is that physicians are leaving Oregon to practice elsewhere, and that many of those staying are changing practice profiles to eliminate

high risk or low-reimbursement cases (OMA, 2003; Saultz, 2002; Elliott, 2004). Although several studies have attempted to measure changes in physician practice patterns, the evidence remain inconclusive (Danzon, 1991; Campbell, 1998; OMA, 2003).

Table 1 does indicate a slowing in the growth of the number or physicians after a burst of rapid increase. An alternate to the exodus hypothesis is that we are experiencing a temporary market correction. Table 1 shows a recent per capita decline but with the number of physicians still slightly increasing. From our current vantage point it is difficult to determine the long term direction of Oregon's physician supply.

An OHSU (2000) workforce survey found that 13% of responding physicians reported planning to exit Oregon's physician workforce by 2005. More specifically, 6% were planning to retire, 4% to leave Oregon, 2% to change careers, and 1% to take a temporary leave of absence. It is unclear how these figures have changed over time, and how many of those reporting plans to exit in a given time period actually did so. No recent studies documenting the reasons physicians depart from practice in Oregon were located.

Ong (2003) pointed out that many areas in rural and urban Oregon are having trouble recruiting and retaining physicians in sufficient numbers to meet the demand for medical care. Barr (2003) indicated difficulty with recruiting anesthesiologists

and surgeons. There is evidence of the decrease in the number of OB/GYN practitioners, with rural patients driving long distances to deliver a baby (Smits, 2004; Kronenberg, 2003). There are indications of a lack of trained neurosurgeons in rural Oregon, with patients needing air-lifts out for neurosurgical care (Oregon Workforce Assessment, 2003; Oregon Office of Rural Health Underserved Areas, 2004).

One metropolitan area in Oregon had 13 general surgeons in 2004, a net loss of five since 1992, while the population rose 25 percent. This translated into increased delays for patients seeking surgical appointments, and culminated with many patients being referred out of town due to limited local capacity (Bernardo, 2004).

Recruitment is not only difficult at times, but also costly for Oregon's hospitals and physicians. The average cost to hire a new attending physician was $36,000. Physician hiring costs amounted to two thirds of the total hiring costs in Oregon medical practices (Waldman, 2004).

As the above discussion brings out, recruitment is an issue in both rural and urban areas of Oregon. It impacts more stakeholders than just hospitals or physicians who are seeking physicians to employ. Oregonians' access to the broad spectrum of medical services rests on the availability, distribution, and skill sets of medical practitioners. The enduring structural problems of physician supply, distribution, and specialization are a reflection of a market in disequilibrium (Wennberg, 1993).

The discussion indicates that recruitment is part of a network of interlinked problems. There are diverse factors including public policy, insurance reimbursement, medical school funding, aging population, technology shifts, the changing social status of physicians, and physician attrition. A network of problems constitutes a mess in a system (Ackoff, 1999; Gharajedaghi, 1999). Approaching messy situations should begin with sorting it out, framing problems and their contexts. This helps one identify actionable issues and some of their ramifications. It also helps one avoid blindly solving the wrong problems (King, 1999). In framing, I have indicated that the situation has multiple inputs and outputs on different levels. No single intervention will be sufficient to resolve all the problems contributing to physician recruitment.

Policy level interventions, while called for here due to the long term failure of market forces, are difficult to enact and may be slow to take effect. There may also be remedies accessible at the local level in the recruitment process. This study draws on recruitment theory and practice to address local level strategies of particular interest to physician practices. Strategies of particular interest to hospitals will be addressed in a subsequent study. This study acknowledges the systemic aspect of physician recruitment difficulties, but its scope is delimited to one part of the system.

Initial Factors influencing recruitment

Aside from the structural issues, the above discussion identifies some factors that may influence recruitment. One set of factors relates to perceptions of liability insurance costs and favorable tort limitations. Oregon has been declared at a crisis level for medical malpractice premiums by the AMA (2004). This finding should not be accepted uncritically as the AMA does have a vested interest in pursuing remedies such as tort reform. Nevertheless, there is little doubt that the cost of premiums has had an impact on access to OB/GYN services (Smits, 2004). In one recent physician recruitment in Oregon, the hiring physician stated that job candidates all expressed concern about the medical malpractice climate (Englander, 2004).

Besides these liability issues, pay (or more broadly, reimbursement for services rendered) is a perennial factor in hiring. How does Oregon's physician reimbursement stack up against the nation as a whole? On average, Oregon's Internal Medicine, Family Practice, and Neurosurgery physicians are just above the 25th percentile for income nationally (MGMA, 2003). Oregon's OB/GYN, Cardiology, and Critical Care specialists are below the 25th percentile. Oregon specialists as a whole receive 20-35% below national averages (Englander, 2004; MGMA, 2003). Even aside from cost of living increases in Oregon, the math may prove problematic for physicians being recruited to Oregon.

Reimbursement rates influence hiring and how medicine is practiced. Physicians, in response to marked reductions in income, were shown by Weeks (2002) to have responded by increasing the volume of their services. Yip (1998) demonstrated an increased number of coronary artery bypass graft surgeries as reimbursors extended fuller coverage for this service. Weeks (2002) has hypothesized that the Medicare Fee Schedule alone does not influence a physician's choice to practice in a state. He also suggests that physicians engage in cost shifting, accommodating lower Medicare fees by raising the fees charged to other payors.

In addition to the structural issues of supply, distribution, and specialization, liability and reimbursement are high profile factors influencing recruitment. We hope to draw out additional and perhaps less obvious factors in the course of this research.

Research questions

The research seeks to clarify the pivotal reasons physicians attributed for practicing in Oregon, the reasons for relocating out of Oregon and the reasons for failures in recruiting physicians to Oregon.

Responses to the specific descriptive research questions will be tested for differences by gender and by duration of practice in Oregon. The research questions are as follows:

1-A. What reasons do survey respondents select most frequently as influencing their decision to practice in Oregon?

1-B. Which reasons do survey respondents select as being most influential in their

decision to practice in Oregon?

2-A. What percentage of survey respondents report planning to relocate their practice out of Oregon within five years?

2-B. What reasons are selected most frequently by those reporting that they are planning to relocate out of Oregon?

2-C. Which reasons are selected as being most influential for relocation out of Oregon?

3-A. What percentage of survey respondents who have recruited in the last five years report unsuccessful recruitments of physicians?

3-B. What reasons are selected most frequently for physician recruitment failures?

3-C. Which reasons are selected as being most influential for recruitment failures?

Subsidiary questions of interest

While the research questions are closely bounded, there are also four subsidiary questions of interest. The subsidiary questions are not closely bounded and there is also a marginal understanding of their relevant factors. Therefore I will address only preliminary evidence for these subsidiary questions.

I wish to explore and address evidence in relation to several broad questions. I am proceeding with the understanding that while I can more completely respond to a set of closely drawn research questions, it is not possible to statistically test for significance a set of hypotheses.

Subsidiary Question #1: Does the Oregon lifestyle positively affect physician recruitment efforts. Six findings will be related to this question as follows:

A. Percentage of survey respondents selecting *I or my family like the Oregon lifestyle* as a reason for deciding to practice in Oregon.

B. Percentage of survey respondents selecting *I or my family like the Oregon lifestyle* as one of the three most influential reasons for deciding to practice in Oregon.

C. Percentage of survey respondents planning to relocate out of Oregon in the next 5 years selecting *I or my family do not like the Oregon lifestyle* as a reason for relocating.

D. Percentage of survey respondents planning to relocate out of Oregon in the next 5 years selecting *I or my family do not like the Oregon lifestyle* as one of the three most influential reasons for relocating.

E. Percentage of survey respondents who have unsuccessfully attempted to recruit a physician in the last five years selecting *The recruit did not like the area / community* as a reason for physician recruitment failures.

F. Percentage of survey respondents who have unsuccessfully attempted to recruit a physician in the last five years selecting *The recruit did not like the area / community* as one of the three most influential reasons for physician recruitment failures.

Subsidiary Question #2: Does Oregon's high liability premiums hinder recruitment and retention of physicians. Six findings will be related to this question as follows:

A. Percentage of survey respondents selecting satisfactory liability premiums as a reason for deciding to practice in Oregon.

B. Percentage of survey respondents selecting satisfactory liability premiums as one of the three most influential reasons for deciding to practice in Oregon.

C. Percentage of survey respondents planning to relocate out of Oregon in the next 5 years selecting high liability premiums as a reason to relocate.

D. Percentage of survey respondents planning to relocate out of Oregon in the next 5 years selecting high liability premiums as one of the three most influential reasons to relocate.

E. Percentage of survey respondents who have attempted to recruit a physician in the last five years selecting high liability premiums as a reason for a physician recruitment failure.

F. Percentage of survey respondents who have attempted to recruit a physician in the last five years selecting high liability premiums as one of the three most influential reasons for a recruitment failure.

Subsidiary Question #3: Are physician recruitment and retention efforts negatively affected by low reimbursement rates for Medicare and Medicaid. Six findings will be related to this question as follows:

A. Percentage of survey respondents selecting adequate Medicare and Medicaid

reimbursement as a reason for deciding to practice in Oregon.

B. Percentage of survey respondents selecting adequate Medicare and Medicaid reimbursement as one of the three most influential reasons for deciding to practice in Oregon.

C. Percentage of survey respondents planning to relocate out of Oregon in the next five years selecting more adequate Medicare and Medicaid reimbursement elsewhere as a reason to relocate.

D. Percentage of survey respondents planning to relocate out of Oregon in the next five years selecting more adequate Medicare and Medicaid reimbursement elsewhere as one of the three most influential reasons to relocate.

E. Percentage of survey respondents who have attempted to recruit a physician in the last five years selecting low Medicare and Medicaid reimbursement as a reason for a physician recruitment failure.

F. Percentage of survey respondents who have attempted to recruit a physician in the last five years selecting low Medicare and Medicaid reimbursement as a reason for a physician recruitment failure.

Subsidiary Question #4: Are Oregon physicians who have attempted to recruit physicians experience difficulty in doing so. The relevant finding will be the percentage of those survey respondents who have attempted to recruit a physician in the last five years who report unsuccessful recruitment attempts.

Significance of the study

By exploring and clarifying physician recruitment factors, this study contributes to more effective (and efficient) recruitment processes. This may directly serve those Oregon medical practices seeking to recruit physicians. The study also can be seen as indirectly serving Oregonians to the extent that effective recruitment of physicians increases the availability of medical services. The academic and institutional health care administration community is served by bringing to light and critically assessing theories of recruitment. The relative merits and weaknesses of recruitment theory indicate areas in need of further research. Finally, this study provides policymakers with an overview of market conditions related to physician recruitment, and suggests the need for policy interventions.

Definitions

Evaluating: Providing periodic performance review and feedback.

Hiring: Contracting with selected candidates.

Lifestyle Factors: Non-monetary benefits and costs associated with a job and its location (i.e. commute times, air quality, water quality, recreational opportunities, opportunities in the community).

Market analysis: Ascertaining financial favorability of the market for new practitioners.

Needs assessment: Ascertaining manpower needs from the broader community and organizational perspectives.

Placing: Assigning new hires to suitable work units and positions.

Recruiting: Gathering a pool of suitable applicants.

Recruitment strategy: A coherent set of recruitment functions crafted to attain common ends.

Recruitment theory: Conceptual frameworks that serve to guide the activities of recruiters.

Screening: Differentiating among the applicants' merits.

Selecting: Choosing candidates to make offers to.

Training: Educating new hires in organizational performance expectations.

CHAPTER 2

LITERATURE REVIEW

The review of literature addresses recruitment theory, and physician expectations. Recruitment theory provides the major theoretic structure of interest. Recruitment practice refers to the activities that are structured by recruitment theory, and that in turn also have contributed to recruitment theory. Physician expectations (studied to some extent in terms of physician satisfaction) is a crucial factor in physician recruitment.

Recruitment theory

Schein (1992) in his classic text on organizational culture presented a multilevel analysis for examining the involvement of researcher and subject for his concept of 'espoused theory' and 'theory in use'. In this analysis, he defined multiple categories of research theory beginning with a 'minimal, low to medium-quantitative level of theory' and what I will refer to as low-level theory (theory in use), and ending with a 'maximal, high-qualitative level', (espoused theory) which I referred to as high level theory. The low-level of research theory involves minimal effort of subject and researcher involvement, while in contrast, the high-level theory include a maximal level of researcher and subject participation in clinical research, action research, and organizational development endeavors.

Recruitment has little in the way of dedicated high level theory. Such high level theories as are adapted to recruitment pertain to utility and social science theories. A comprehensive search for recruitment theory turned up two basic philosophies, that of utility and social science theories. These well developed 'high level theories' of recruitment are scarce in the form of explicit abstract statements subjected to rigorous testing.

The sole reference to economic and social science theories comes from an article on military recruitment (Sackett & Mayor, 2005). In this context, Sacket & Mayor referred to perceived utility to explain the basis for an applicant's decision to accept or decline a recruitment offer. A comparison may be made between the perceived utility a candidate expects to receive from one source's offer with the utility she expects to receive from a competing source. Utility consists of the financial and non-financial aspects of the offer. If perceived benefits of acceptance outweigh costs (and the offer is better than competing offers), then a rational actor would choose acceptance. The first limitation of this approach is that not all benefits and costs are explicit and calculable. The second limitation is that humans are not purely rational actors maximizing utility. We operate with a bounded rationality, and may act to satisfice our utility rather than to uniformly optimize it (March, 1994). Then again, who has not had the experience of making choices that minimize personal utility on occasion?

Sackett & Mayor (2005) further discuss the social-psychological theories of enlistment behavior that emphasize the individual decision-making processes. There was no single correct level of theorizing identified. Stepping back two generations we find Herzberg (1959), who pointed out positive and negative factors influencing satisfaction. Satisfiers and dis-satisfiers are roughly equivalent to benefits and costs, placed in a psychological rather than an economic frame. Randolph (2005) makes a distinction between satisfiers and motivators. A satisfier may (or may not) be a sufficient stimulus to action. The top two motivators for physician retention and satisfaction have been identified as meaningful work and collegiality among co-workers (Barney, 2002a; Barney, 2002b; Cordeniz, 2002). The closely related topic of physician expectations and their relative influence on recruitment will be visited in the third section of this review.

Current theoretic models of human behavior from the social sciences include the health-belief model (Hochbaum, 1958; Rosenstock, 1960; Glanz, 1997); the theory of reasoned action (Ajzen and Fishbein, 1980); social cognitive theory (Bandura, 1991); and the theory of planned behavior (Glanz 1997). The strength of these highly abstract theories perhaps resides less in their predictive power and testability than in their indication of the complex interplay of multiple variables at multiple levels. For example, social cognitive theory includes a range of intra-personal and inter-personal variables acting as inputs to behavior. Applying a similar insight to the career satisfaction of health care professionals, Randolph (2005) notes that pay is an extrinsic factor weighed along with intrinsic factors such as

professional growth, flexible schedules, realistic workload, stable environment, and collegiality. There is no reason to presume that all these variables are uniformly valued. Nor should we presume that they stand in neat linear relationship with each other, at the ready for calculation.

Recruitment is primarily a practical endeavor in which 'low level theory' resides close to practice. This kind of theory is commonly implicit, untested, and little developed. One example of low level theory is found in Lewitt's (1982) conceptual framework of recruitment. In developing recruitment strategy (a coherent set of recruitment functions crafted to attain common ends), Lewitt organizes recruitment as a sequential personnel process. Steps of that process are:

- Needs assessment (ascertaining the need to hire from community and organizational perspectives)
- Market analysis (ascertaining financial favorability of the market for new practitioners)
- Recruiting (gathering a pool of suitable applicants)
- Screening (differentiating among the applicants' merits)
- Selecting (choosing candidates to make offers to)
- Hiring (contracting with selected candidates)
- Training (educating new hires in organizational performance expectations)
- Placing (assigning new hires to suitable work units and positions)
- Evaluating (providing periodic performance review and feedback)

The value of this framework is in its highlighting of functions which otherwise might be glossed over. To this point, we have spoken of recruitment in a naïve way, only having distinguished it from supply and demand concerns, policy issues, and other higher level factors. Now we can frame the set of concerns from market analysis to hiring as being our focal interest with an eye toward developing a coherent recruitment strategy. We will use the term *recruitment* to encompass this set, and use the term *recruiting* to refer to the process of gathering a pool of candidates. Needs assessment is a theoretically and practically well developed function residing at least partially on the higher level of community interests. We will not attend to this body of literature. To be certain, the functions of training, placing, and evaluating employees are relevant to employee retention, and therefore they impact the need to hire again. We will also set those concerns aside for another occasion.

A finer grained example of low level theory as organizing constructs is found in the categorization of recruiting sources. The National Health Service Corps Recruitment Program for Physicians (1991) which was created to assist communities in assessing the need for physicians, published a checklist to follow in recruiting physicians and, provided three categories of sources of job candidates: internal; external; and media sources. Internal sources primarily are potential transfers from within the organization. External sources are residency programs, medical schools, professional journals, medical meetings, licensing boards, foreign medical graduates,

and competitors' physician employees. Media sources uncover candidates who respond to advertisements, articles, and stories carried by the media. This conceptual organization of recruiting sources is a theoretic structure that serves to guide the activities of recruiters. It may also serve as a weak predictor of outcomes by implying that use of this categorization leads to more effective or efficient recruiting than use of other categorizations.

We will now briefly summarize low level theory as the organizing constructs for market analysis, screening, selecting, and hiring, drawing on Freeman (2002), Olson (2002), and Lewitt (1982). The principle thrust of market analysis (in contrast with community needs assessment) is determination of the income potential for new physician hires. As such, market analysis is a marketing tool used to convince candidates of the financial advantages of practicing in a given location. Evidence of income potential is developed through:

- Boundaries and demographics of the service area
- Number of physician in the recruited physician's specialty in the service area
- Associated and referring medical services and facilitates in the service area
- Demand (case load and backlog) for a particular medical service over time in the service area
- Market share
- Procedure reimbursement rates
- Gross and net incomes in a physician specialty in the service area.

Screening is the process of differentiating among applicants. Differentiation may be made on the basis of qualifications, malpractice claims history, character, knowledge, skills, temperament, and/or organizational fit. Review for qualifications (at some point verified through the credentialing process) is commonly the first cut. References often provide the next screening clues, with testimony to character and skill winnowing the field further. For many organizations, background checks and interviews are the final screening methods. Additional (and often overlooked) screening methods include psychological tests of temperament, skills tests, and knowledge tests (Chambers, 1995). All screening presumes explicit identification of valued qualities. Yet there is an undeniable aspect of relational chemistry, a gut level assessment of fit, also at work in the selection process (Denning, 2004).

Selection and hiring are each two-way streets. Employing organizations select and contract with candidates they prefer or deem acceptable. Candidates select and contract with employers they prefer or deem acceptable. Each party considers the prospective relative benefits and costs from their own perspective. In the selection process (as in screening) many of the factors are subjective, qualitative, and emotionally nuanced. It would be a mistake to imagine that the process should (or could) be devoid of these human factors.

In contracting, a number of benefits and costs (or satisfiers and dis-satisfiers) are spelled out explicitly. Developing a match, a mutual acceptance, is of the

essence. Incentives of various kinds may be influential in reaching acceptance. These may include:

- loan repayment (Pathman, 2002)
- moving expenses (Lewitt, 1982)
- medical malpractice premium payment assistance (Whitaker, 2005)
- guaranteed base income (Grant,1979; American Journal of Public Health,1991)
- flexible schedules and accommodating call coverage (Barney, 2002)
- office overhead assistance and lease arrangements (Grant, 1979)
- assistance with mortgage loans (Oppenheim, 2003)
- retirement plans (Runy, 2003)

We have spoken in the terminology of satisfaction theory and economic theory here, but lower level theory is also present. It concerns the kinds of factors relied on in selection and contracting, as well as their relative importance. As with screening, many factors and their relative weights are individual and neither general nor explicit. That said, there are generally recognized factors of some importance to candidates (a topic we will re-visit in part three of this review). A body of evidence based in research and theory supports the inclusion of the following factors:

- Income (Mullan, 2002; Randolph, 2005; Grant, 1979; Coffman, 2002)
- Facilities (Randolph, 2005)

- Organizational culture (Schein, 1992; Scott, 2005; AMGA, 2004; Cordeniz, 2002; Barlow, 2003)
- Rapport with direct supervisors and colleagues (Hoff, 2002; Horowitz, 2003; Barney, 2002a/b; Wetterneck, 2002; Landon, 2004)
- Quality of clinical practice (Goldsmith, 2004; Duncan, 1994; Hankins, 2002; Scott, 1998)
- Perceived stability of the practice (Scott, 2005; Moody, 2004)
- Geographical, environmental, and lifestyle aspects of location (Curran, 2004; Colwill, 2003; Pathman, 2000; Coffman, 2002; Blumenthal, 2003; Letourneau, 2004)
- Expectations and time commitments (Barney, 2002; Letourneau, 2004)

In summary, recruitment is short on high level theory and long on low level theory. If the strength of low level theory comes through being closely informed by practice, then its weakness comes through being implicit and rarely tested in a scientific manner. The situation of recruitment theory is rich with opportunities for theoretic development and testing.

Recruitment Practice

Where theory indicates the kinds of actions to be done, in practice we grapple with performing those actions. Appendix D contains the review of recruitment

practices that will identify the difficulties and thornier decisions that inundate recruiters. A sense of best practices or viable solutions (as available) will be provided for market analysis, recruiting, screening, selecting, and hiring. Theory and practice enjoy a close relationship; practice shapes the theory as much as theory shapes the practice however, we will leave this for a subsequent study.

Physician Expectations

Successful recruitment relies on identifying the interests of candidates. What are the benefits, the satisfiers and positive motivators, and what are the costs, the dis-satisfiers and negative motivators, for physicians? Simply put, what do physicians want? Satisfaction studies and generational theories each provide a theoretic basis for understanding physician expectations.

The question can be approached in its negative form: what don't physicians want? Most physician departures from practices occur within the first five years of initial employment. Pathman (2002a) found that younger physicians were more dissatisfied than older more established physicians. A physician retention survey conducted by the American Medical Group Association determined these top five reasons a physician will leave, in order of frequency (MGMA, 2004):

- Practice issues
- Compensation

- Community Support
- Spouse's career
- Pressures of clinical practice

Many practicing physicians today believe that what they experience is not what medicine promised them. However, as Letourneau (2004) points out, many feel hassled, criticized, worked more for less money, and not trusted by patients. She reports that physicians perceive a general lack of respect for their profession. This loss of status is combined with a loss of autonomy (Hoff, 1998). The social historian Paul Starr (1984) attributes this to the coming of the corporation into the health care marketplace. Economic discontent is present as well, with an inability to shape reimbursement conditions (Morrison 2000). Fear of the future, demanding patients, formularies, IPAs, utilization reviewer's second-guessing, third party administrators, and medical malpractice suits all lead toward dissatisfaction (Versel, 2003; Castillo, 2003; Englander, 2003; Saultz, 2003).

Recent studies demonstrate a significant level of physician stress and dissatisfaction nationwide. This raises the possibility that physicians may be leaving clinical practice prematurely, and highlights the need for research in this area (Rittenhouse, 2004; Landon, 2002; Mass. Med. Society, 2002). The most complete source of information on physician practice status nationwide is the AMA Physician Masterfile. However, problems with updating the Masterfile have raised concerns

about the validity of the data (Kletke, 2000; Rittenhouse, 2004; OHF, 2005). The gold standard for measuring physicians' exit from clinical practice would be a prospective cohort study (Rittenhouse, 2004).

Satisfaction studies demonstrate the positive side of the coin. In an OHSU (2002) survey, Oregon physicians reported an overall career satisfaction rating of 7.5 on a scale of 10.0 scale. Table 2 indicates physicians' satisfaction ratings for multiple factors, permitting us to rank them in importance. It is not surprising that the least satisfaction is with regulatory requirements and changes that have taken place in doing clinical business. At a finer level of detail, the survey found that physicians who work in urban areas scored higher than physicians who work in rural areas on 7 of the 12 career satisfaction measures. These were overall career satisfaction, satisfaction with primary position, income, number of hours worked, reimbursement for services provided, regulatory requirements of the profession, and changes in business/practice of health care. Specialty care physicians scored higher than primary care physicians on 4 of the 12 career satisfaction measures: overall career satisfaction, income, regulatory requirements of the profession, and level of professional autonomy.

Table 2. Oregon physicians' career satisfaction, 2002

Overall Career Satisfaction	7.5
Satisfaction with primary position	7.5
Relationships with co-workers/colleagues	8.3
Relationships with patients	8.2
Relationships with management	7.0
Level of professional autonomy	7.0
Income	6.7
Number of hours worked	6.6
Practice options available	6.5
Reimbursement for services provided	5.2
Regulatory requirements of the profession	4.5
Changes in business/practice of health care	3.9

Information was compiled from Physician Workforce 2002: A Sourcebook, Northwest Health Foundation, OHSU Area Health Education Centers Program

Different generational cohorts of physicians have different expectations. Three generations of current interest are the silent generation (born 1925-1942), the baby boomers (born 1943-1960), and the thirteenth generation (born 1961-1981) (Strauss & Howe, 1991).

Physicians of the silent generation, now heading toward retirement, are characterized as having a strong work ethic, strong belief in the value of teamwork,

and a higher level of trust in organizations and their stability (Moskowitz, 2005). This is an adaptive and conformist generation (Strauss & Howe, 1991). Boomer physicians (now serving at the helm of many organizations) are from an idealist generation, far more self oriented and inner directed than their silent generation colleagues. Meaningful work is particularly important to boomer physicians.

The thirteenth generation is characterized as reactive, less trustful than the silent generation, and less internally driven than the boomer generation. The thirteenth generation has a greater concern for personal lifestyle benefits, along with noticeably less organizational loyalty. These younger physicians have seen their parents lose long-time jobs through downsizing, and have witnessed the radical organizational change and re-engineering of the 80's and 90's. They tend to be flexible, techno-literate, and entrepreneurial (Moody, 2004; Moskowitz, 2005; Cordeniz, 2002; Barney, 2002a).

While generational characteristics provide suggestions, what physicians want is (at its core) a question that must be explored with and answered for each applicant. Amidst major social, market, and organizational changes, this is arguably a difficult time to be a physician. Recognition of individual satisfiers and dis-satisfiers can help recruiters craft competitive offers and attractive work conditions.

Summary

This literature review has laid a basic theoretical foundation in high and low-level theory, and highlighted physician expectations. This foundation can be used for the implementation of a sound recruitment strategy. As the environment is in constant evolution, so must the strategy and process evolve. Continual awareness and reaction to changing market forces, patients demands, physician expectations will continually inform and constrain the process, and thereby create an adaptive recruitment strategy (Down, 2000).

CHAPTER 3

METHODOLOGY

The research consisted of a descriptive (versus analytical) random sample survey of Oregon physicians, supplemented by several qualitative interviews. This section describes survey development, the selection of subjects, human subjects protections, particulars of the survey and interview procedures, and the data analysis plan.

Survey development

A mailed survey was used instead of an e-mailed or internet based survey as several physicians responding to a pilot test suggested a reluctance to respond to electronic surveys. The survey design was influenced by three sources: (a) the Massachusetts Medical Society Physician Satisfaction Survey (Mass. Med. Society, 2001); (b) Smit's (2004) "Factors Influencing Cessation of Maternity Care in Oregon" survey; and (c) OHSU's (2002) Physician Workforce 2002: A Sourcebook.

The survey questions were augmented by written comments provided voluntarily by some survey respondents, and by interviews with six non-randomly selected physicians who had not previously completed the survey. These interviews pursued the same set of questions in an open-ended conversational format. Extensive written notes were taken of the interviews. In one case, the interview was tape

recorded and transcribed. Key factors relating to each of the three questions were identified from the interview notes. This qualitative format enriched the findings. The Oregon State University Survey Research Center assisted the author in the final design of the instrument. An extensive pilot test of the survey instrument indicated several problems and led to revisions incorporated in the full survey.

The four-page survey instrument contained 45 questions, with 36 being yes/no questions and 9 fill in the blank questions. At the end an area was indicated for comments (Appendix C). In addition to practice characteristics and demographic items, the survey posed three broad questions. The first inquired about the physician's reasons for locating their practice in Oregon, and then requested a ranking of the three most influential reasons. The second inquired about plans to relocate out of Oregon, with reasons and ranking of the most influential reasons. The third inquired about unsuccessful physician recruitment experiences, with reasons and ranking of the most influential reasons. A copy of the survey is in Appendix B. Survey instrument reliability and validity were not tested.

Selection of subjects

All physicians holding an active Oregon medical license and with an Oregon mailing address were eligible for the study. The Oregon Medical Association (OMA) provided a random sample of 1,000 names, drawn from all practicing physicians in Oregon and not just members of the OMA. The survey was mailed to all 1,000

physicians. Six physicians known to the author served as a convenience sample for interviews. While results from the randomly sampled survey subjects may be generalized to all Oregon physicians, the qualitative findings cannot be similarly generalized.

Human subjects protections

Institutional Review Board (IRB) approval was obtained through the Oregon State University IRB. Survey subjects were provided with a cover letter informing them of the nature and purposes of the study and providing assurances of confidentiality. The survey forms and the mailing list were linked via a unique number on the survey forms. Mailing labels, after cross-checking, were separated from the survey, and then a tracking number was used to identify the survey. To assure respondent anonymity, no connection was made between the mailing list and the tracking number. No survey or interview subjects have been referred to by their real names in the text of this report. The tape recording of one interview was personally transcribed to assure confidentiality. The tape and the interview notes are in locked storage and will be physically destroyed after three years. No subjects have reported human subjects concerns to date. See Appendix A for copies of the IRB approval and the survey cover letter.

To provide greater value to interested research subjects, a pre-addressed postcard was included with the mailings by means of which subjects could request an executive summary of the study.

Survey and interview procedures

After pilot testing and revisions, the survey instrument was mailed in August, 2004 to the 1,000 name list provided by OMA. A second mailing of the survey was sent four weeks later to those physicians who had not returned the first survey.

Interviews of one to two hours duration were conducted with six Oregon physicians. The first interview commenced in July, 2004, and the final interview concluded in March, 2005. The medical specialties of the subjects were Ophthalmology, Internal Medicine, Family Medicine, Surgery, Orthopedics, and Gastroenterology. Five of the physicians were interviewed face-to-face, and one by telephone. Subjects chose whether they preferred to have the interview tape recorded or summarized in notes. All but one chose the latter.

Interview subjects received a list of three questions from the survey prior to the interview. After discussing these questions, interviewees were asked to expand on any area they were interested in. The three questions were:

1. Why did you decide to practice in Oregon?
2. Are you considering moving out of Oregon to practice, and if so, why?

3. Have you recruited for a physician in the past five years, and if so, what was the result of the recruitment effort?

Interview subjects did not receive a mailed survey. After each interview, the typed notes were validated by being sent to the interview subject for a check of accuracy, and suggested corrections were made.

Data Analysis

Prior to data entry, completed surveys were compared with the mailing list to confirm gender, specialty, and urban or rural location. The criteria for determining if a practice was urban or rural came from the Oregon Office of Rural Health's classification system. Data were entered into the Statistical Program for the Social Sciences (SPSS) version 11.5, and then screened and analyzed. One hundred randomly selected surveys (of 494 completed surveys) were examined for data accuracy. Of 4,600 possible entries from the 100 surveys, 10 data entry errors were located, a 0.2% data entry error rate.

The survey questionnaire asked respondents to circle answers "yes" or "no". Several respondents circled "yes" responses only, leaving unmarked other yes-no questions in the same list. Upon discussion with academic consultants of what could be construed as the respondents' intent, it was decided that "no" was reasonably implied for the remaining unmarked questions in the list in such instances. A non-

response was entered for other missing data. Calculations were based on non-missing data.

Data were analyzed using frequency analysis followed by Pearson's χ^2 (α = 0.05). Statistically significant χ^2 values are evidence of a relationship between variables. The strength of the relationship for significant χ^2 values was tested by calculating the Cramer's V statistic (range = 0-1), which is also called a fourfold point correlation coefficient when applied to variables each having two levels. A low (<0.30) Cramer's V statistic indicates the presence of influential disturbance variables (Healey, 1996; Jaccard & Becker, 1997). A low Cramer's V statistic would lead one to doubt the practical significance of a statistically significant χ^2 value.

Interview notes were carefully read, and responses pertaining to three main subject areas were compiled. Those three subject areas were:

1. Reasons for deciding to practice in Oregon.
2. Reasons for relocating out of Oregon to practice elsewhere.
3. Reasons for physician recruitment difficulties.

CHAPTER 4

RESULTS

Of 1,000 surveys mailed, 510 responses were received by the cutoff date of January 17, 2005. Sixteen of the responses consisted of surveys that had not been completed. These were marked as "retired", "returned to sender", or "moved out of state". The adjusted return was 494 surveys, a response rate of 49.4%.

Demographics

Demographic data on respondents are located in Tables 4.1 and 4.2. The percentage of rural physicians and urban physician respondents in Table 4.1 is consistent with Oregon and national distribution statistics. Nationally, approximately 20% of physicians are located in rural areas, while approximately 80% are in urban areas (Center Of Graduate Medical Education, 2001).

The percentage of female and male physician respondents (Table 4.2) is also consistent with current Oregon and national statistics. Oregon's physician population is 27% female and 73% male (OHSU, 2002).

Table 4.1 Respondents by locale

	FREQUENCY	PERCENT
Rural	107	21.9
Urban	381	78.1
Total	488	100.0
Missing Data	6	
Total	494	

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Table 4.2 Respondents by gender

	Frequency	Percent
Male	360	72.9
Female	134	27.1
Total	494	100.0

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Table 4.3 Respondents by medical specialty

Specialty	*Frequency*	*Percent*	*Oregon state comparative percentages of specialties*
Allergy & Immunology	3	0.6	0.4%
Anesthesiology	20	4.1	5.5%
Cardiology	10	2.0	1.4%
Cardiothoracic Surgery	3	0.6	0.4%
Dermatology	13	2.6	1.4%
Emergency Medicine	36	7.3	5.6%
Endocrinology	2	0.4	0.5%
Family Medicine	82	16.6	15.3%
Gastroenterology	11	2.2	1.2%
Internal Medicine	59	12.0	16.3%
Infectious Disease	2	0.4	0.2%
Nephrology	1	0.2	0.6%
Neurology	8	1.6	1.9%
Neurosurgery	7	1.4	1.1%
Nuclear Medicine	2	0.4	0.1%
OB/GYN	38	7.7	5.0%
Oncology	5	1.0	0.8%
Ophthalmology	16	3.2	2.7%
Orthopedic Surgery	21	4.3	3.9%
Otolaryngology	5	1.0	1.5%
Pathology	3	0.6	1.0%
Pediatrics	33	6.7	15.0%
Physical Med. & Rehab.	11	2.2	0.8%
Plastic Surgery	2	0.4	0.7%
Psychiatry	23	4.7	4.7%
Public Health	2	0.4	0.1%
Radiology	14	2.8	2.1%
Surgery	26	5.3	2.1%
Thoracic Surgery	2	0.4	0.1%
Urology	8	1.6	1.5%
Other	25	5.1	
Total	493	100	
Missing	1		
Total	494		

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Oregon statistics from March 5, 2005 Board of Medical Examiners
www.bme.state.or.usTotalActiveBySpecialty.html

Table 4.3 indicates the medical specialties of respondents. Most responses were from Family Medicine and Internal Medicine (28.6%). This is slightly under the 35% percent figure given by a recent Oregon physician workforce assessment survey (OHSU, 2002). That survey also stated that 62% of physicians were of other

specialties, and 3% were not involved in patient care. The low number of respondents in some of the specialties does not provide the basis for robust comparisons with Oregon statistics.

Research question results

Research question 1-A: What reasons do survey respondents select most frequently as influencing their decision to practice in Oregon?

Respondents selected one or more choices from a list of seven reasons that may have been influential in deciding to locate their practice in Oregon. They also had an option to select "other" and then write in a reason. Table 4.4 indicates the single reason selected with the greatest frequency. *I or my family liked the Oregon lifestyle* was selected by 93.1 % as a reason for setting up a practice in Oregon.

Table 4.4 Most frequent reason to locate practice in Oregon

I OR MY FAMILY LIKED THE OREGON LIFESTYLE	FREQUENCY	PERCENT
YES	460	93.1
NO	34	6.9
Total	494	100.0

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Research Question 1-B: Which reasons do survey respondents select as being most influential in their decision to practice in Oregon?

Respondents then categorized their top three selections for the most influential, second most influential, and third most influential reasons to practice in Oregon. These results are presented in Table 4.5.

Table 4.5 Most influential reasons for locating medical practice in Oregon

	Most influential reason		**Second influential reason**		**Third influential reason**	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
I or my family like the Oregon Lifestyle	**275**	**56.8**	**134**	**30.9**	**36**	**12.8**
I have family who lives in Oregon	**84**	**17.4**	**68**	**15.7**	**20**	**7.1**
Participation in Ambulatory Surgical Center			4	0.9	14	5.0
Reimbursement from Medicare/Medicaid was adequate			1	0.2	3	1.1
Reimbursement from insurance was adequate	1	0.2	12	2.8	31	11.0
The medical malpractice premiums were satisfactory	1	0.2	7	1.6	40	14.2
I liked the colleagues I would be associated with	**57**	**11.8**	**165**	**38.1**	**113**	**40.2**
Other	66	13.6	38	8.8	24	8.5
Total	484		429		281	

All percentages reported will be based on non-missing data SPSS "Valid Percent".

The most frequent among the top three influential reasons were *I or my family like the Oregon lifestyle, I liked the colleagues I would be associated with,* and *I have family who lives in Oregon. I or my family like the Oregon lifestyle* was the most

frequent first choice (56.8%), received 30.9% for second choice reason, and 12.8% for third choice reason. *I liked the colleagues I would be associated with* was the leading second most influential reason (38.1%) and also the leading third most influential reason (40.2%).

One of the options was "other" where the respondent filled in their own words. The responses for "other" ranged from the most often stated *my spouse practiced/worked/schooled in Oregon*, to *I was born here/Oregon native,* and on to a single response of *thoughtless decision.*

The selection of practicing in Oregon because *I or my family like the Oregon lifestyle* did not vary by number of years in practice ($\chi^2 = 0.763$, $p = 0.858$), as presented in Table 4.6, or by gender ($\chi^2 = 0.505$, $p = 0.477$), as presented in Table 4.7.

Table 4.6 Years in practice and *"I or my family like the Oregon lifestyle"*

How long practiced	Yes responses	No responses	Total
Less than 2 years	19 90.5%	2 9.5%	21 100%
2-5 years	105 92.9%	8 7.1%	113 100%
More than 5 years	63 91.3%	6 8.7%	69 100%
10 years or more	270 93.8%	18 6.2%	288 100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Table 4.7 Gender and *"I or my family liked the Oregon lifestyle"*

Gender of Respondent	Yes responses	No responses	Total
Male	337 93.6%	23 6.4%	360 100%
Female	123 91.8%	11 8.2%	134 100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

The selection of *Liked the colleagues I would be associated with* did not vary by either number of years in practice ($\chi^2 = 4.539$, $p = 0.209$), as presented in Table 4.8, or by gender ($\chi^2 = 0.168$, $p = 0.682$), as presented in Table 4.9.

Table 4.8 Years in practice and *"Liked colleagues I would be associated with"*

How long practiced	Yes responses	No responses	Total
Less than 2 years	16 76.2%	5 23.8%	21 100%
2-5 years	89 78.8%	24 21.2%	113 100%
More than 5 years	62 89.9%	7 10.1%	69 100%
10 years or more	241 83.7%	47 16.3%	288 100%

Table 4.9 Gender and *"Liked colleagues I would be associated with"*

Gender of Respondent	Yes responses	No responses	Total
Male	298 82.8%	62 17.2%	360 100%
Female	113 84.3%	21 15.7%	134 100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

The selection of *Family close by* did not vary by number of years in practice ($\chi^2 = 1.415$, $p = 0.702$), as presented in Table 4.10, or by gender ($\chi^2 = 0.007$, $p = 0.935$), as presented in Table 4.11.

Table 4.10 Years in practice and *"Family close by"*

How long practiced	Yes responses	No responses	Total
Less than 2 years	9 42.9%	12 57.1%	21 100%
2-5 years	37 32.7%	76 67.3%	113 100%
More than 5 years	21 30.4%	48 69.6%	69 100%
10 years or more	102 35.4%	186 64.6%	288 100%

Table 4.11 Gender and *"Family close by"*

Gender of Respondent	Yes responses	No responses	Total
Male	125 34.7%	235 65.3%	360 100%
Female	46 34.3%	88 65.7%	134 100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

The selection of *Medical malpractice premiums were satisfactory* as a reason for locating in Oregon varied by number of years in practice ($\chi^2 = 19.97$, $p = 0.000$), as presented in Table 4.12. A Cramer's V statistic of 0.202 indicated that this was not of practical significance.

Table 4.12 Years in practice and *"Malpractice premiums were satisfactory"*

How long practiced	Yes responses	No responses	Total
Less than 2 years	2	19	21
	9.5%	90.5%	100%
2-5 years	15	98	113
	13.3%	86.7%	100%
More than 5 years	19	50	69
	27.5%	72.5%	100%
10 years or more	96	192	288
	33.3%	66.7%	100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

The selection of *Medical malpractice premiums were satisfactory* as a reason for locating in Oregon also varied significantly by gender ($\chi^2 = 9.23$, $p = 0.002$), as presented in Table 4.13. However, again the Cramer's V statistic of 0.137 showed no practical significance.

Table 4.13 Gender and *"Malpractice premiums were satisfactory"*

Gender of Respondent	Yes responses	No responses	Total
Male	111 30.8%	249 69.2%	360 100%
Female	23 17.2%	111 82.8%	134 100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Research Question 2-A: What percentage of survey respondents report planning to relocate their practice out of Oregon within five years?

Table 4.14 indicates that 15.6% of respondents report planning to move their practices out of Oregon in the next five years. This finding contrasts with the OHSU (2002) Workforce Assessment, which obtained a figure of 4% for this variable.

Research Question 2-B: What reasons are selected most frequently by those reporting that they are planning to relocate out of Oregon?

Respondents reporting planning to relocate then selected one or more choices from a list of seven reasons that may have been influential in deciding to relocate a practice out of Oregon. They also had an option to select "other" and then write in a reason. Table 4.15 indicates the reason selected with the greatest frequency (by 72.6%) was *Medical malpractice premiums are more satisfactory in the new location.*

Table 4.14 Planning to relocate out of Oregon within 5 years?

PLANS TO MOVE PRACTICE OUT OF OREGON IN THE NEXT 5 YEARS	FREQUENCY	PERCENT
YES	74	15.6
NO	399	84.4
Missing	21	
Total	494	100.0

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Table 4.15 Most frequent reason to relocate out of Oregon

MEDICAL MALPRACTICE PREMIUMS MORE SATISFATORY IN NEW LOCATION	FREQUENCY	PERCENT
YES	53	72.6
NO	20	27.4
Total	73	100.0

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Research Question 2-C: Which reasons are selected as being most influential for relocation out of Oregon?

Respondents reporting planning to relocate then categorized their top three selections: most influential, second most influential, and third most influential reasons to relocate out of Oregon. These results are presented in Table 4.16. The most

frequent responses for the first most influential reason were *The medical malpractice premiums are more satisfactory in new location* (34.3%) and *I have family who lives outside Oregon and I would like to stay close to them* (14.3%). The most frequent responses for the second most influential reason were *Medical malpractice premiums* (26.8%) followed by *Reimbursement from Medicare/Medicaid* (23.2%) and *I have family who lives outside Oregon* (14.3%). The most frequent responses for the third most influential reason were *More adequate insurance reimbursement* (36.8%) and *Reimbursement from Medicare/Medicaid* (23.7%). Only three respondents (4.7%) selected *I or my family do not like the Oregon lifestyle.*

The results indicate a strong overall influence of financial aspects of practice when one combines the responses of *More adequate insurance reimbursement* and *Reimbursement from Medicare/Medicaid.* An even stronger influence is revealed by adding in *Medical malpractice premiums.*

The selection of *Medical malpractice premiums are more satisfactory in new location* as a reason for relocation did not vary by number of years in practice ($\chi^2 = 5.839, p = 0.120$), as presented in Table 4.17, or by gender ($\chi^2 = 0.056, p = 0.812$), as presented in Table 4.18.

Table 4.16 Most influential reasons for relocating out of Oregon

Survey responses	**Most influential reason**		**Second influential reason**		**Third influential reason**	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
I or my family do not like the Oregon Lifestyle	2	2.9	1	1.8		
I have family who lives outside Oregon and I would like to stay close to them	**10**	**14.3**	**8**	**14.3**	1	2.6
Participation in Ambulatory Surgical Center in the new location	1	1.4				
Reimbursement from Medicare/Medicaid is more adequate at new location	7	10.0	**13**	**23.2**	9	**23.7**
Reimbursement from insurance is more adequate at new location	9	12.9	10	17.9	14	**36.8**
The medical malpractice premiums are more satisfactory in new location	**24**	**34.3**	**15**	**26.8**	6	15.8
I liked the colleagues I would be associated with	2	2.9	6	10.7	6	15.8
Other	15	21.4	3	5.4	2	5.3
Total	70		56		38	
Missing	424		438		456	
Total	494		494		494	

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Table 4.17 Years in practice and *"Malpractice premiums are more satisfactory in the new location"*

How long practiced	Yes responses	No responses	Total
Less than 2 years	1	2	3
	33.3%	66.7%	100%
2-5 years	21	3	24
	87.5%	12.5%	100%
More than 5 years	8	3	11
	72.7%	27.3%	100%
10 years or more	23	12	35
	65.7%	34.3%	100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Table 4.18 Gender and *"Malpractice premiums are more satisfactory in new location"*

Gender of Respondent	Yes responses	No responses	Total
Male	36	13	49
	73.5%	26.5%	100%
Female	17	7	24
	70.8%	29.2%	100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

The selection of *Family outside Oregon and I would like to stay close to them* as a reason for relocation varied by number of years in practice ($\chi^2 = 8.501$, $p =$

0.037), as presented in Table 4.19, and by gender ($\chi^2 = 5.082$, $p = 0.024$), as presented in Table 4.20. However, the Cramer's V statistics (0.037 for number of years in practice, and 0.024 for gender) showed no practical significance for either statistically significant finding.

Table 4.19 Years in practice and *"I have family who lives outside Oregon and I want to be closer to them"*

How long practiced	Yes responses	No responses	Total
Less than 2 years	3 100.%	0 0.0%	3 100%
2-5 years	6 25.0%	18 75.0%	24 100%
More than 5 years	4 36.4%	7 63.6.3%	11 100%
10 years or more	8 22.9%	27 77.1%	35 100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Table 4.20 Gender and *"I have family who lives outside Oregon and I want to be closer to them"*

Gender of Respondent	Yes responses	No responses	Total
Male	10 20.4%	39 79.6%	49 100%
Female	11 45.8%	13 54.2%	24 100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

The selections of *Reimbursement from insurance more adequate in new location* as a reason for relocation did not vary by number of years in practice ($\chi^2 = 2.226$, $p = 0.527$), as presented in Table 4.21, or by gender ($\chi^2 = 2.487$, $p = 0.115$), as presented in Table 4.22.

Research Question 3-A: What percentage of survey respondents who have recruited in the last five years report unsuccessful recruitments of physicians?

Eighty percent of the respondents reported having tried to recruit physicians in the last five years (Table 4.23). Of those who reported attempting to recruit physicians in the last five years, 69.2% reported at least one unsuccessful attempt (Table 4.24).

Table 4.21 Years in practice and *"Reimbursement from Medicare/Medicaid more adequate in new location"*

How long practiced	Yes responses	no responses	Total
Less than 2 years	1	2	3
	33.3%	66.6%	100%
2-5 years	12	12	24
	50.0%	50.0%	100%
More than 5 years	8	3	11
	72.7%	27.3%	100%
10 years or more	16	19	35
	45.7%	54.3%	100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Table 4.22 Gender and *"Reimbursement from insurance more adequate in new location"*

Gender of Respondent	Yes responses	No responses	Total
Male	36 73.5%	13 26.5%	49 100%
Female	17 70.8%	7 29.2%	24 100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Table 4.23 Have you attempted to recruit physicians in the last five years?

	FREQUENCY	PERCENT
YES	392	80.0
NO	98	20.0
Total	490	100.0

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Table 4.24 Were any recruitment attempts unsuccessful?

WERE ANY OF THESE RECRUITMENT ATTEMPTS UNSUCCESSFUL ?	FREQUENCY	PERCENT
YES	269	69.2
NO	120	30.8
Total	389	100.0

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Responses to *Have you or your practice attempted to recruit one or more new physicians in the last 5 years* did not vary by number of years of practice ($\chi^2 = 3.410$, $p = 0.333$), as presented in Table 4.25 or by gender ($\chi^2 = 0.003$, $p = 0.960$), as presented in Table 4.26.

Table 4.25 Years in practice and *"Have you or your practice attempted to recruit one or more new physicians in the last 5 years?"*

How long practiced	Yes responses	No responses	Total
Less than 2 years	14	7	21
	66.7%	33.3%	100%
2-5 years	93	18	111
	83.8.%	16.2%	100%
More than 5 years	56	13	69
	81.2%	18.8%	100%
10 years or more	228	58	286
	79.7%	20.3%	100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Table 4.26 Gender and *"Have you or your practice attempted to recruit one or more new physicians in the last 5 years?"*

Gender of Respondent	Yes responses	No responses	Total
Male	285 80.1%	71 19.9%	356 100%
Female	107 79.9%	27 20.1%	134 100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Research question 3-B: What reasons are selected most frequently for physician recruitment failures?

Respondents reporting unsuccessful recruitment attempts selected one or more choices from a list of ten reasons that may have been influential in unsuccessful recruitments. They also had an option to select "other" and then write in a reason. Table 4.27 indicates the reason selected with the greatest frequency (by 68.8%) was *They did not like the salary or proposal offered.*

Table 4.27 Most frequent reason for physician recruitment failures

THEY DID NOT LIKE THE SALARY OR PROPOSAL OFFERED	FREQUENCY	PERCENT
YES	181	68.8
NO	82	31.2
Total	263	100.0

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Research question 3-C: Which reasons are selected as being most influential for recruitment failures?

Respondents reporting recruitment failures then categorized their top three selections as the most influential, second most influential, and third most influential reasons for recruitment failures. These results are presented in Table 4.28. The most frequent first influential reason reported for unsuccessful recruitments was *They did not like the salary or proposal offered* (35.7%). This was reported as the second most influential reason by 14.5%, and the third most influential reason by 19.3% of respondents. The next most frequent among most influential reasons was *The recruit did not like the area/community* (14.3%). A cluster of five factors were reported with similar frequencies for the second most influential reason for unsuccessful recruitments. These were *Medical malpractice premiums were too high* (20.1%), *They did not have family close by* (18.7%), *Oregon's economy was unfavorable* (16.8%), *They did not like the salary or proposal offered* (14.5%), and *Medicare/Medicaid fee schedules were too low* (14.0%). Three factors were reported

with similar frequencies as the third most influential reason for recruitment failures. These were *They did not like the salary or proposal offered* (19.3%), *Oregon's economy was unfavorable* (17.5%), and *Medicare/Medicaid fee schedules were too low* (16.3%). The overall impression is of the dominance of economic factors attributed as leading to recruitment failures.

The selection *Recruit did not like salary or proposal offered* did not vary by number of years in practice ($\chi^2 = 3.44$, $p = 0.328$), as presented in Table 4.29, but did vary by gender ($\chi^2 = 4.079$, $p = 0.043$) at a level of statistical significance, as presented in Table 4.30. However, a Cramer's V statistic of 0.043 indicated no practical significance of this finding.

Table 4.28 Most influential reasons for unsuccessful recruitment efforts

T	Most influential reason		Second influential reason		Third influential reason	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
The recruit did not like the area/community	**35**	**14.3**	9	4.2	7	4.2
They did not have family close by	20	8.2	**40**	**18.7**	20	12.0
Schools were unfavorable	3	1.2	11	5.1	15	9.0
Medical malpractice premiums were too high	21	8.6	**43**	**20.1**	19	11.4
Oregon's economy was unfavorable	29	11.9	**36**	**16.8**	29	**17.5**
They did not like the salary or proposal offered	**87**	**35.7**	**31**	**14.5**	32	**19.3**
Medicare/Medicaid fee schedules were too low	19	7.8	**30**	**14.0**	27	**16.3**
They felt there was little opportunity for additional income through ASC's	7	2.9	2	0.9	6	3.6
Personality conflict	3	1.2	4	1.9	5	3.0
Lack of technology	1	0.4	3	1.4	5	3.0
Other	19	7.8	4	1.9	1	0.2
Total	244		213		166	
Missing	250		281		328	
Total	494		494		494	

All percentages reported will be based on non-missing data SPSS "Valid Percent".

The selection *Recruit did not like area/community* did not vary by number of years in practice ($\chi^2 = 2.726$, $p = 0.436$), as presented in Table 4.31, and did not vary by gender ($\chi^2 = 2.814$, $p = 0.093$), as presented in Table 4.32.

Table 4.29 Years in practice and *"Recruit did not like salary or proposal offered"*

How long practiced	Yes responses	No responses	Total
Less than 2 years	5 71.4%	2 28.6%	7 100%
2-5 years	34 60.7.%	22 39.3%	56 100%
More than 5 years	26 63.4%	15 36.6%	41 100%
10 years or more	115 72.8%	43 27.2%	158 100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Table 4.30 Gender and *"Recruit did not like salary or proposal offered"*

Gender of Respondent	Yes responses	No responses	Total
Male	129 65.5%	68 34.5%	197 100%
Female	52 78.8%	14 21.2%	66 100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Table 4.31 Years in practice and *"Recruit did not like area or community"*

How long practiced	Yes responses	No responses	Total
Less than 2 years	2	5	7
	28.6%	71.4%	100%
2-5 years	17	39	56
	30.4%	69.6%	100%
More than 5 years	12	29	41
	29.3%	70.7%	100%
10 years or more	33	125	158
	20.9%	79.1%	100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Table 4.32 Gender and *"Recruit did not like area/community"*

Gender of Respondent	Yes responses	No responses	Total
Male	53	144	197
	26.9%	73.1%	100%
Female	11	55	66
	16.7%	83.3%	100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

The selection *Medical malpractice premium too high* as a reason for recruitment failures did not vary by number of years in practice ($\chi^2 = 1.00$, $p = 0.801$), as presented in Table 4.33, or by gender ($\chi^2 = 0.013$, $p = 0.911$), as presented in Table 4.34.

Table 4.33 Years in practice and *"Malpractice premiums too high"*

How long practiced	Yes responses	No responses	Total
Less than 2 years	3	4	7
	42.9%	57.1%	100%
2-5 years	27	29	56
	48.2%	51.8%	100%
More than 5 years	19	22	41
	46.3%	53.7%	100%
10 years or more	65	93	158
	41.1%	58.9%	100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Table 4.34 Gender and *"Malpractice premiums too high"*

Gender of Respondent	Yes responses	No responses	Total
Male	53 26.9%	144 73.1%	197 100%
Female	11 16.7%	55 83.3%	66 100%

All percentages reported will be based on non-missing data SPSS "Valid Percent".

Survey results related to research questions

In reporting results related to the research questions, percentages have been calculated based on the total numbers who were in an eligible category to respond, rather than the total numbers who actually responded, when this affords a more comparable perspective of magnitude. In those instances, the total N for the calculation is indicated. This is the reason for some discrepancies between figures reported here and those found in related Tables.

Subsidiary Question #1: Does the Oregon lifestyle positively affect physician recruitment efforts. Six findings were related to this question as follows:

- 93.1% of all survey respondents selected *I or my family like the Oregon lifestyle* as a reason for deciding to practice in Oregon (Table 4.4).

- 90.1% of all survey respondents (445 of 494) selected *I or my family like the Oregon lifestyle* as one of the top three most influential reasons for deciding to practice in Oregon. Of these 445 respondents, 61.8% selected *I or my family like the Oregon lifestyle* as the first most influential reason, while 30.1% ranked it as the second most influential reason, and 8.1% as the third most influential reason for deciding to practice in Oregon (Table 4.5).
- 4.0% of survey respondents planning to relocate out of Oregon in the next 5 years selected *I or my family did not like the Oregon lifestyle* from a list of seven reasons for relocating.
- 4.0% of all those survey respondents (3 of 74) reporting planning to relocate out of Oregon in the next 5 years selected *I or my family did not like the Oregon lifestyle* as one of the three most influential reasons for relocating (Table 4.16).
- 24.3% of survey respondents who reported unsuccessful attempts to recruit a physician in the last five years selected *The recruit did not like the area/community* from a list of ten reasons that may have been influential in unsuccessful recruitments.
- 19.0% of all those survey respondents who reported unsuccessful attempts to recruit a physician in the last five years (51 of 269) selected *The recruit did not like the area/community* as one of the three most influential reasons for a recruitment failure. Of these 51 respondents, 35 (68.6%) selected *The recruit did not like the area/community* as the first most influential reason, 9 (17.6%)

selected it as the second most influential reason, and 7 (13.7%) selected it as the third most influential reason for physician recruitment failures (Table 4.28).

Subsidiary Question #2: Does Oregon's high liability premiums hinder recruitment and retention of physicians. Six findings were related to this question as follows:

- 27.1% of all survey respondents selected satisfactory liability premiums as a reason for deciding to practice in Oregon. The majority of these responses were from those who reported being in practice 10 years or more.
- 9.7% of all survey respondents (48 of 494) selected satisfactory liability premiums as one of the three most influential reasons for deciding to practice in Oregon. Of these 48 respondents, 1 (2.1%) selected satisfactory liability premiums as the most influential reason, 7 (14.6%) selected it as the second most influential reasons, and 40 (83.3%) selected it as the third most influential reason for deciding to practice in Oregon (Table 4.5).
- 72.6% of all those survey respondents (53 of 74) reporting planning to relocate out of Oregon in the next 5 years selected high liability premiums as one reason for relocation (Table 4.15).
- 60.8% of all those survey respondents (45 of 74) reporting planning to relocate out of Oregon in the next 5 years selected lower liability premiums elsewhere as one of the three most influential reasons. Of these 45, 24

(53.3%) selected lower liability premiums elsewhere as the most influential reason, 15 (33.3%) as the second most influential reason, and 6 (13.3%) as the third most influential reason for relocating (Table 4.16).

- 36.6% of survey respondents who reported unsuccessful attempts to recruit a physician in the last five years selected high liability premiums as a reason for physician recruitment failures.
- 30.9% of survey respondents (83 of 269) who reported unsuccessful attempts to recruit a physician in the last five years selected high liability premiums as one of the three most influential reasons for a recruitment failure. Of these 83, 21 (25.3%) selected high liability premiums as the most influential reason, 43 (51.8%) as the second most influential reason, and 19 (22.9%) as the third most influential reason for a recruitment failure (Table 4.28).

Subsidiary Question #3: Are physician recruitment and retention efforts negatively affected by low reimbursement rates for Medicare and Medicaid. Six findings were related to this question as follows:

- 4.9% of survey respondents selected adequate Medicare and Medicaid reimbursement as a reason for deciding to practice in Oregon.
- 0.8% of survey respondents (4 of 494) selected adequate Medicare and Medicaid reimbursement as one of the three most influential reasons for deciding to practice in Oregon (Table 4.5). None selected this as the first

most influential reason.

- 50.0% of all survey respondents (37 of 74) reporting planning to relocate out of Oregon in the next five years selected more adequate Medicare and Medicaid reimbursement elsewhere as one reason for relocating.
- 39.2% of survey respondents (29 of 74) reporting planning to relocate out of Oregon in the next five years selected better Medicare and Medicaid reimbursement elsewhere as one of the most influential reasons for relocation. Of these 29, 7 (24.1%) selected better Medicare and Medicaid reimbursement elsewhere as the most influential reason, 13 (44.8%) as the second most influential reason, and 9 (31.0%) as the third most influential reason for relocating (Table 4.16).
- 43.3% of survey respondents who reported unsuccessful attempts to recruit a physician in the last five years selected low Medicare and Medicaid reimbursement as a reason for physician recruitment failures.
- 28.2% of all survey respondents (76 of 269) who reported unsuccessful attempts to recruit a physician in the last five years selected low Medicare and Medicaid reimbursement as one of the three most influential reasons for physician recruitment failures. Of these 76, 19 (25.0%) selected low Medicare and Medicaid reimbursement as the most influential reason, 30 (39.5%) as the second most influential reason, and 27 (35.5%) as the third most influential reason for physician recruitment failures (Table 4.28).

Subsidiary Question #4: Oregon physicians who have attempted to recruit physicians experience difficulty in doing so. The key finding was that 69.2% of survey respondents (269 of 389) who reported attempting to recruit a physician in the last five years reported at least one unsuccessful recruitment attempt (Table 4.24).

Interview results

Notes from interviews with six physicians contained material that was related to three central concerns of this research: reasons for deciding to practice in Oregon; reasons for relocating out of Oregon; and reasons for physician recruitment difficulties. The interview material is presented to indicate the range of reasons and some of the flavor of their expression. Interview subjects are referred to only by number. Comments are stated in paraphrase when verbatim quotes were unavailable. Only the most pertinent comments have been reported below.

Reasons for deciding to practice in Oregon

Dr. 1 I came to Oregon because my family lives here. I grew up on a small farm in the country and wanted to come back to this area where friends and family live. We are very close to our church and we came back to the same church I grew up in. I had a good opportunity to join a group who practiced medicine the way I hoped to. The practice had growth opportunities.

Dr. 2 My wife and I came to Oregon after our residencies back in the Midwest. We found the opportunity here and fell in love with the community and Oregon. The clinic I work in now allowed me to practice medicine without having the hassles of administration. It allowed us to find a place to bring up our family, and we are both avid bike riders and outdoor enthusiasts. It was the perfect match for us.

Dr. 3 I really liked the community, a larger city, with lots to offer. I've been here for many years, and can't see myself anywhere else.

Dr. 4 I have been here so long it's hard to remember. We came here as this is our home originally. I trained back east, but wanted to get back to the west coast. I also had the opportunity to buy property reasonably and have been very pleased with how things have worked out.

Dr. 5 We wanted to move back to be closer to our parents who are aging. We wanted our child to grow up in the same type of community my wife grew up in and to have grandparents around to dote on him. We also wanted to take advantage of skiing, fishing, which I truly enjoy, and other activities that Oregon offers. What we liked most is that we can live in the valley and be one hour from the coast, and one hour from the lakes, and one hour (ok a little more maybe) to the mountain.

Dr. 6 I had an opportunity to come here after getting out of the military and to be closer to our family. The area was what we wanted for our kids, and the schools in the area were good. There are so many fun things to do, we ski both snow and water, and this state has it all. My wife really liked the place and so here we are.

Reasons for relocating out of Oregon

None of the physicians interviewed reported plans to relocate out of Oregon to practice, but both economic and non-economic factors were raised in relations to the topics of practice location and remaining in practice. **Dr. 1** wanted to make a change in his current practice situation, though stay in the area, as he did not want to leave his family. **Dr. 5** said she was probably going to have to work longer and not retire as soon as she wanted due to the increasing costs for medical malpractice.

Reasons for physician recruitment difficulties

DR. 1 I do not have any plans to recruit again as the practice won't support it. The declining reimbursement from everyone has not allowed us to grow the way we hoped. Our past recruitment effort was successful in obtaining our "newest" physician. We actually recruited more than 5 years ago, and didn't really have that much of a problem. He knew one of the senior partners and wanted to practice as an independent. There are not that many independent physicians in our area, so we were happy to have him join us. So far, things have worked out pretty good.

DR. 2 Boy oh boy, yes have we had troubles. We have been trying to recruit for several years. The information I personally heard was that he didn't like the medical malpractice premiums we are having to pay here in Oregon recently and resulting lower salary we were proposing. I did know the one candidate eventually went to another state because of the lower rates there. I guess the salary is really tied to not only med mal premiums, but the Medicare and Medicaid reimbursement as well. You know, it is strange that Oregon is penalized for doing a good job at managing, and we get paid less on the Medicare fee schedule than other states. It is really difficult to compete financially.

DR. 3 Most of the recruits we have interviewed for our group have been very aware of the medical malpractice climate and our high premiums. We have had so much in the news lately and with the upcoming election will see even more editorials and columns in the papers. Another factor has been the contentious relationship we have had with the hospital. Recruits in the Midwest even know about the difficulties we are experiencing and do not want to come to be in the middle of our disagreements. It has been extremely challenging to find someone, and then to convince them to come here.

DR. 4 I am currently on my third new physician. The first just didn't work out, there was much his wife didn't like about the area, and he left to go practice in a larger city. It was disappointing but I was able to find another to replace him. Things seemed to

be working well, but after working for about a year he decided to leave to go back to missionary work. It was a blow to the practice again, and I am now on my third physician. I am worried that this doctor will not stay. It is imperative that I allow him the opportunity to participate in an outpatient surgical center. My specialty in Oregon has a very large percentage of physicians who own and operate out of an ASC (ambulatory surgical center). If I am not able to do this in my area, I am sure I will lose him and frankly, I do not know if the practice can survive after this.

DR. 5 We have been short one partner for over a year now, and with our latest problem with medical malpractice premium costs, cannot offer a salary that can compete with other areas in Oregon let alone outside of Oregon. Our medical malpractice premiums have jumped sky-high and the reimbursement from our insurance carriers and Medicare haven't kept pace. My previous partner left to go to Idaho, and his main reason was the difference in bottom line financials due to lower medical malpractice costs and higher Medicare reimbursement levels. I'm worried now as the remaining partners and myself may not be able to continue to cover the excess call and responsibilities. I'm also afraid that the more we stretch ourselves, the more we open ourselves to malpractice because we are tired.

DR. 6 It's funny, I just received a call from ____ wanting to know if anyone in my group knew of someone to come down to ____ to interview. I worry they might try to take some of our ancillary people as well, we are so short handed, and not only in Oregon but nationwide there is a shortage in my specialty.

CHAPTER 5

DISCUSSION

The discussion begins with a section on the meaning of the findings with respect to the research questions. The following section notes implications for recruitment. Then the limitations of the study are explored to capture lessons learned for future guidance. The chapter will discuss the summary of the conclusions and will finish with directions for future research.

Meaning of the findings with respect to research questions

The 494 survey respondents (drawn from a random sample list of 1000 Oregon physicians) were representative of Oregon physicians in terms of location (urban 78% / rural 22%, Table 4.1) and gender (73% male / 23% female, Table 4.2). The respondents slightly under-represented (at 28.6%) family practice and internal medicine specialties (Table 4.3). These data have a bearing on external validity, suggesting that the survey findings are generalizable across Oregon physicians.

1-A. What reasons do survey respondents select most frequently as influencing their decision to practice in Oregon?

1-B. Which reasons do survey respondents select as being most influential in their decision to practice in Oregon?

Research questions 1-A and 1-B addressed why physicians located their practices in Oregon. Table 4.4 indicated that 93% of respondents selected "Oregon lifestyle" as an influential reason. Table 4.5 indicated that 86% of the first most influential reasons to locate a practice in Oregon were non-economic factors. These reasons were *Oregon lifestyle* (57%), *Family in Oregon* (17%) and *Collegiality* (12%).

These findings support research by Curran (2004), Colwill and Cultice (2003), and Pathman (2000), who identified lifestyle and geographic preferences as leading motivators for recruitment and retention of physicians. These findings similarly support research by Cordeniz (2002), and Barney (2002b), who identified collegiality as a significant factor in recruitment and retention of physicians. Collegiality was also presented in Table 2 as one of the highest sources of physician satisfaction, as reported in *Physician Workforce 2002.*

2-A. What percentage of survey respondents report planning to relocate their practice out of Oregon within five years?

2-B. What reasons are selected most frequently by those reporting that they are planning to relocate out of Oregon?

2-C. Which reasons are selected as being most influential for relocation out of Oregon?

Research questions 2-A, 2-B, and 2-C addressed plans to relocate out of Oregon, and the most frequent and influential reasons for that decision. Table 4.14 indicated 16% of respondents reported planning to relocate out of Oregon within five years. The OHSU (2002) Workforce Assessment obtained a figure of 4% for this variable. This suggests future recruitment needs may be larger than anticipated.

Table 4.15 indicated the reason selected most frequently (by 73% of respondents planning to relocate) was *Medical malpractice premiums more satisfactory in new location.* Table 4.16 indicated a strong overall influence of economic factors as the most influential reasons selected: Medicare/Medicaid reimbursement adequacy, insurance reimbursement rates, and malpractice costs. 57% of respondents selected one of these economic factors for the most influential reason for relocation. 68% selected economic factors for the second most influential reason, and 76% for the third most influential reason.

The selection of economic factors comes as no surprise in and of itself, as increasing malpractice insurance rates, the risk of litigation in high-risk procedures, and declining physician incomes have all been well attested to as high profile physician concerns (Cooper, 2003; Huntington, 2003; OMA, 2003; Rabinowitz, 1999). What is surprising is the contrast between finding a preponderance of non-economic factors selected as reasons for locating in Oregon in research question 1, and then finding the emphasis on economic factors selected as reasons for relocating out of Oregon in research question 2.

3-A. What percentage of survey respondents who have recruited in the last five years report unsuccessful recruitments of physicians?

3-B. What reasons are selected most frequently for physician recruitment failures?

3-C. Which reasons are selected as being most influential for recruitment failures?

Research questions 3-A, 3-B, and 3-C addressed physician recruitment failures, and the most frequent and influential reasons for that outcome. 80% of respondents reported attempting to recruit physicians in the last five years (Table 4.23). This figure supports the contention that physicians commonly contend with recruitment activities. It leaves open the question of physicians' roles and general level of training in the performance of recruitment activities. Of respondents reporting recruitment attempts, 69% reported at least one recruitment failure, a recruitment process that did not lead to a hire (Table 4.24). While this figure suggests the existence of recruitment difficulties, the survey question could not sufficiently gauge the full extent of such difficulties.

Table 4.27 indicated the most frequent reason selected (by 69% of respondents) for physician recruitment failures as *They did not like the salary or proposal offered.* The item was intended to convey an economic factor (salary), but was muddied by the inclusion of 'or proposal' which could include non-economic factors. Table 4.28 strongly indicated the preponderance of economic factors selected as influencing recruitment failures. About two thirds of all selections for the most

influential reasons were economic. A closely similar majority of selections for economic factors dominated among the second and third most influential reasons.

We are left with a conundrum: non-economic factors are overwhelmingly selected by physicians as reasons for locating their practices in Oregon, while economic factors are strongly selected as reasons for relocating out of Oregon, and as reasons for physician job candidates not accepting Oregon positions. Do those physicians candidates who accept Oregon job offers know and value the Oregon lifestyle, at least enough to offset any economic downsides? Do physician candidates most strongly motivated by economic factors select job offers elsewhere? Does the relative importance of economic factors increase in importance over the life of a medical career, leading to a desire to relocate? Does the relative importance of economic factors vary by job satisfaction? Do physicians look back on locating in Oregon and in the theatre of memory assign non-economic factors to the decision, while in the near term future they admit to the pursuit of economic benefits? Are physicians conceptualizing the new location, as "the grass is greener on the other side of the fence"? As we lack the information to conclude these matters, we must place such questions among those inviting further research.

Subsidiary Question #1: Does the Oregon lifestyle positively affect physician recruitment efforts.

The first two (of six) findings strongly supported a favorable answer to the question. 93% of all survey respondents selected *I or my family like the Oregon lifestyle* as a reason for deciding to practice in Oregon (Table 4.4), and 90% selected it as one of the three most influential reasons (Table 4.5). The next two findings also strongly supported the question, revealing that only 4% selected *I or my family did not like the Oregon lifestyle* as a reason (or one of three most influential reasons) for relocating out of Oregon (Table 4.16). The final two findings are more equivocal. 24% of survey respondents who reported unsuccessful attempts to recruit a physician in the last five years selected *The recruit did not like the area/community* from a list of ten reasons that may have been influential in unsuccessful recruitments, and 19% selected it as one of the three most influential reasons for a recruitment failure (Table 4.28). *Did not like the area/community* may not convey the same meaning as *Did not like the Oregon lifestyle*, and so interpretation of this result is problematic.

Subsidiary Question #2: Do Oregon's high liability premiums hinder recruitment and retention of physicians.

The first two (of six) findings indicated that 27% of all survey respondents selected satisfactory liability premiums as a reason for deciding to practice in Oregon, and 10% selected this as one of the three most influential reasons for deciding to

practice in Oregon (Table 4.5). These findings lean in the direction of not supporting a positive response to the question, while the next two findings clearly weigh in favor of it. 72% of survey respondents reporting planning to relocate out of Oregon in the next 5 years selected high liability premiums as one reason for relocation (Table 4.15), and 61% selected it as one of the three most influential reasons (Table 4.16). The final two findings lend somewhat stronger positive support to the question than the initial two. 37% of survey respondents who reported unsuccessful attempts to recruit a physician in the last five years selected high liability premiums as a reason for physician recruitment failures, and 31% selected it as one of the three most influential choices (Table 4.28).

Subsidiary Question #3: Are physician recruitment and retention efforts negatively affected by low reimbursement rates for Medicare and Medicaid.

The first two (of six) findings did not favorably answer the question, as only 5% of survey respondents selected adequate Medicare and Medicaid reimbursement as a reason for deciding to practice in Oregon, and a meager 0.8% selected it as one of the three most influential reasons (Table 4.5). The next two findings indicated that 50% of those reporting planning to relocate out of Oregon in the next five years selected more adequate Medicare and Medicaid reimbursement elsewhere as one reason for relocating, and 39% selected it as one of the most influential reasons for relocation (Table 4.16). This suggests that Medicare and Medicaid reimbursement rates influence physician retention, favorably supporting the question. The last two

findings indicated that 43% of survey respondents who reported unsuccessful attempts to recruit a physician in the last five years selected low Medicare and Medicaid reimbursement as a reason for physician recruitment failures, and 28% selected this as one of the three most influential reasons (Table 4.28). These findings tend toward favorably answering the question.

Subsidiary Question #4: Oregon physicians who have attempted to recruit physicians experience difficulty in doing so.

The key finding was that 69% of survey respondents who reported attempting to recruit a physician in the last five years reported at least one unsuccessful recruitment attempt (Table 4.24). This finding imprecisely suggests the existence of recruitment difficulty, and begs a more fine grained inquiry.

Implications for recruitment

If we take at face value the finding that physician as job candidates are overwhelmingly influenced by non-economic factors in decisions to locate their practices in Oregon, then recruitment should emphasize those factors. In particular the Oregon lifestyle would appear to be a substantial recruitment asset. Images of Oregon's scenic beauty, recreational areas, and cultural opportunities could be showcased for candidates.

Other important non-economic factors include housing options, schools, professional colleagues, and social contacts. A considerable body of research and theory points to the importance of non-economic factors such as organizational culture (Schein, 1992; Scott, 2005; AMGA, 2004; Cordeniz, 2002; Barlow, 2003), rapport with direct supervisors and colleagues (Horowitz, 2003; Barney, 2002a; Barney, 2000b; Wetterneck, 2002; Landon, 2004), and quality of clinical practice (Goldsmith, 2004; Duncan, 1994; Hankins, 2002; Scott, 1998).

If the Oregon lifestyle is a potent motivator for those physician candidates eventually choosing to practice in Oregon, then the recruiting process could be focused to seek such lifestyle motivated candidates. If recruiting for a rural area, then consider targeting medical students from rural areas, and those with rural clinical experience as part of their medical educational program (Rabinowitz, 1999; Colwill, 1992). Looking within the local area and within Oregon is also suggested by Kaiser's locally focused recruitment practices (Goldsmith, 2004).

The interview portion of the screening process could be structured to develop the non-economic factors of personal and professional relationships. This translates in practice as providing adequate time for face-to-face encounters in professional and more relaxed social settings. Similar attention should be given to the spouse, as acceptance of an offer often hinges on the spouse's perspectives (Scott, 2005; Settles, 2005).

It is imperative to recognize the dynamic balance of financial and non-financial factors in the recruitment process. While non-economic factors dominated the findings for reasons to locate in Oregon, economic factors dominated the findings for reasons to relocate and for recruitment failures. Economic compensation is recognized one of the most important decision factors for applicants (Curran, 2004; Colwill, 2003; Pathman, 2000; Coffman, 2002). Consider a full range of incentives including loan repayment (Pathman, 2002); moving expenses (Lewitt, 1982); medical malpractice premium payment assistance (Whitaker, 2005); guaranteed base income (Grant,1979; JAMA,1991); flexible schedules and accommodating call coverage (Barney, 2002); office overhead assistance and lease arrangements (Grant, 1979); assistance with mortgage loans (Oppenheim, 2003); and retirement plans (Runy, 2003).

Generational characteristics should not be overlooked in assessing candidates' expectations (Strauss & Howe, 1991; Moody, 2004; Moskowitz, 2005; Cordeniz, 2002; Barney, 2002a). The *knowledge* and *acceptance* of different generational expectations helps in smoothing the process of mutual adjustment. Yet each candidate also presents an individualized (and potentially modifiable) set of economic and non-economic satisfiers and dis-satisfiers that should be elicited in the screening process to enable the crafting of mutually satisfactory offers.

Limitations of the study

The survey instrument was the source of several limitations of the study. By offering respondents predominantly closed-end lists of choices to select from, the researcher inadvertently overshadowed the range and character of responses that respondents may have held. Responses may be an artifact of the researcher's framing, and the responses garnered may differ from responses to open-ended questions. The use of open ended survey questions would have been better here, even though demanding more time from respondents and entailing a more difficult data analysis.

Several of the survey's response choices failed to make clear and equivalent distinctions, hampering interpretation of the results. For example, the response choice *The recruit did not like the area/community* was not well matched with another question's response choice *I or my family do not like the Oregon lifestyle*. In a similar vein, the response choice *They did not like the salary or proposal offered* mixed economic and potentially non-economic factors together. The term *Oregon lifestyle* was not defined for respondents, and may have been understood in different ways. The inquiry *Were any of these recruitment attempts unsuccessful* did not distinguish a rate of recruitment failures. Furthermore, the survey questions were not tested for validity and reliability.

The Oregon Medical Association issued a 10-page workforce assessment survey the same month as the survey was mailed. This may have introduced combined history and testing effects if the questions and answers from the OMA survey influenced answers on this survey.

Recall bias is another limitation of note in asking about reasons for locating a practice in Oregon. Surveying physicians who have just entered practice would be a preferable approach. All these factors limit the internal validity of the survey results.

Limits to the external validity of survey results are also apparent. The 49% response rate is ultimately the result of some self-selection by respondents, despite use of a randomly selected list to control selection bias. The researcher cannot represent the thoughts and motivations of non-respondents. This limits the ability to accurately generalize the results of this survey to all Oregon physicians.

The primary delimitations of the study arise from its focus on Oregon physicians who have experience with recruitment of other physicians. Oregon hospitals are also major employers of physicians, and it cannot be presumed that their recruitment experience matches that of community medical practices. As we have previously pointed out, a number of factors on other levels (such as supply, demand, specialization, policy, and an aging demographic) are also beyond the scope of the survey and interviews.

This descriptive study indicated the presence of economic and non-economic factors related to recruitment and retention of physicians in Oregon. An analytic study would be needed to establish the relative importance of the various economic and non-economic factors.

Statement of conclusions

A review of literature disclosed that utility theory based in economics, as well as satisfaction theory based in psychology, have been occasionally applied to recruitment issues. There is little in the way of 'high level' theory specific to recruitment. In its place is 'low level' theory, consisting of the organizing constructs for recruitment practices. Such low level theory is largely implicit, marginally developed and scientifically untested. The identification of low level recruitment theory is an innovative contribution to recruitment studies.

This descriptive random sample survey of 494 Oregon physicians indicated the presence of economic and non-economic factors related to the recruitment and retention of physicians in Oregon. The survey found that non-economic factors are overwhelmingly selected by physicians as reasons for locating their practices in Oregon, while economic factors are strongly selected as reasons for relocating out of Oregon, and as reasons for physician job candidates not accepting Oregon positions. The data and research design do not provide the information needed to explain these divergent findings.

Directions for future research

This study has identified a number of research questions and related methods of interest. The following are key research questions that remain unresolved or in need of confirmation by follow up studies.

- An analytic study of newly arrived physicians in Oregon to determine the most influential economic and non-economic factors in physician decisions to locate a medical practice in Oregon.

- An analytic study of newly departed physicians to determine the most influential economic and non-economic factors in physician decisions to relocate a medical practice out of Oregon.

- An analytical longitudinal study of those physicians who left Oregon to determine the percentage of physicians who continue to stay and practice at the new location.

- A longitudinal study (similar to Rittenhouse, 2004) of physicians who have reported an intention to relocate out of Oregon to determine the percentage that actually do so over time.

- A longitudinal study of physicians to determine the relative importance of economic factors over the span of their medical careers.

- A descriptive study of physicians newly arrived in Oregon, using open-ended survey or interview questions to determine the range of reasons for locating a medical practice in Oregon.

- A descriptive study of Oregon hospital human resources offices' recruitment practices and experiences in the recruitment of physicians.

There is another level of potential research to consider in addition to these specific research questions. The review of literature revealed that much of recruitment theory is 'low level theory', which appears as the ordinary organizing constructs for recruitment practices. As recruitment is largely an applied endeavor, recruitment theory is little developed and examined. Recruitment theory is fertile ground for development and testing.

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APPENDICES

APPENDIX A

OSU Oregon State University

Department of Public Health
Oregon State University, 258 Waldo Hall, Corvallis, Oregon 97331
T 541-737-2686| F 541-737-4001

Dear Physician:

Oregon is soon to discuss the healthcare financial debate in our legislature. In anticipation of a proposed physician shortage, it is imperative that Oregon recruit and retain highly competent and qualified physicians. I am asking for your help with an important research program sponsored by the College of Health and Human Sciences at Oregon State University. This information, when collected, will provide policymakers, state politicians and recruitment individuals in hospitals and group practices with information for recruitment and retention of physicians in Oregon in a competitive environment.

Your responses, together with others, will be combined and used for statistical summaries only. Your participation in this study is voluntary and you may refuse to answer any question. **Only a small sample of physicians will receive the questionnaire, so your participation is vital to the study.** Approximate time to finish the survey is 5 minutes.

The answers you provide will be kept confidential. Special precautions have been established to protect the confidentiality of your responses. The number on your questionnaire will be removed once your questionnaire has been returned. We use the number to contact those who have not returned their questionnaire, so we do not burden those who have responded. Your questionnaire will be destroyed once your responses have been tallied. There are no foreseeable risks to you as a participant in this project; nor are there any direct benefits. **Your participation is extremely valuable.**

If you have any question about the survey, please contact Nancy Seifert at 503.581.1660, e-mail nancyseifert@comcast.net, or Leonard Friedman, PH.D. at 541.737.2323, e-mail Leonard.friedman@oregonstate.edu. If we are not available when you call, please leave a message and we will call you back.

Thank you for your time and effort, it is greatly appreciated.

Nancy L. Seifert
Doctoral Student
Oregon State University

Leonard H. Friedman, Ph.D., M.P.H.
Associate Professor
Department of Public Health, OSU

Postcard: Please send the enclosed postcard if you would like a copy of the results

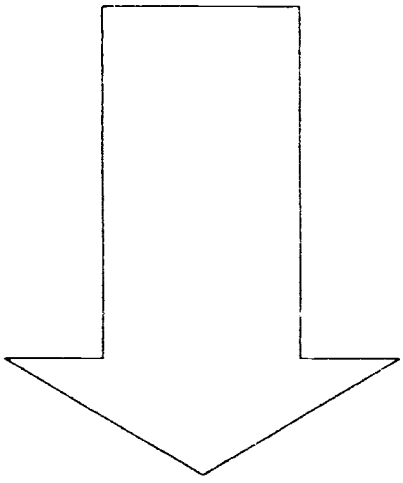
If you have questions about your rights as a participant in this research project, please contact the Oregon State University Institutional Review Board (IRB) Human Protections Administrator at 541.737.3437 or by e-mail at IRB@oregonstate.edu.

OSU IRB Approval Date: 08-18-04
Approval Expiration Date: 08-17-05

APPENDIX B

2004 Physician Opinions On

1980



RECRUITMENT AND RETENTION OF

PHYSICIANS

Please return your completed questionnaire to:

Leonard H. Friedman, Ph.D., MPH and Nancy L. Seifert
PH.D. Candidate
Oregon State University
College of Health and Human Sciences
254 Waldo Hall
Corvallis, OR 97331

Q1. Using the codes listed in the table below, please indicate your primary, and if applicable, your secondary specialty. If you choose the "other" category (#31) please write in a description as well.

a. Primary specialty code: _____

b. Secondary specialty code: _____

01 Allergy & Immunology	12 Nephrology	23 Pediatrics
02 Anesthesiology	13 Neurology	24 Physical medicine & rehabilitation
03 Cardiology	14 Neurosurgery	25 Plastic surgery
04 Cardiothoracic surgery	15 Nuclear Medicine	26 Psychiatry
05 Dermatology	16 OB/GYN	27 Public Health
06 Emergency Medicine	17 Oncology	28 Radiology
07 Endocrinology	18 Ophthalmology	29 Surgery
08 Family Medicine	19 Oral & maxiofacial surgery	30 Thoracic surgery
09 Gastroenterology	20 Orthopaedic surgery	31 Urology
10 Internal Medicine	21 Otolaryngology	32 Other
11 Infectious disease	22 Pathology	

Q2. How long have you practiced your <u>primary</u> specialty in Oregon? (Indicate by circling one number)

1 LESS THAN 2 YEARS
2 TWO TO FIVE YEARS
3 MORE THAN FIVE YEARS BUT LESS THAN 10
4 10 YEARS OR MORE

Q3. Please indicate whether or not each of the following was influential in your decision to locate your practice in the State of Oregon. (Indicate YES or NO by circling one number for each reason)

	YES	NO
A. I, or my family, liked the Oregon lifestyle	1	2
B. I have family who lives in Oregon and I wanted to stay close to them.	1	2
C. There was opportunity to participate in ambulatory surgical centers	1	2
D. The reimbursement from Medicare/Medicaid was adequate	1	2
E. The reimbursement from insurance was adequate	1	2
F. The medical malpractice premiums were satisfactory	1	2
G. I liked the colleagues I would be associated with	1	2
H. Other (*Describe* _____)		

Q4. Please review your answers to question 3 and out of the things that you indicated were influential in your decision to locate your practice in Oregon, write the letter of the first, second, and third most influential reason in the boxes below.

a. The most influential reason was..... ☐

b. The second most influential reason was.... ☐

c. The third most influential reason was..... ☐

Please continue ⟶

Q5. Do you have plans to move your practice out of Oregon within the next five years? (Circle one number then follow arrow to next question)

1 NO → ***Go to question 6***
2 YES →

Q5A. If yes, when do you anticipate moving your practice?

1 WITHIN THE NEXT 12 MONTHS
2 ONE TO TWO YEARS FROM NOW
3 BETWEEN TWO AND FIVE YEARS

Q5B. Please indicate whether or not each of the following was influential in your decision to relocate your practice.

	YES	NO
A. I, and or my family, do not like the Oregon lifestyle	1	2
B. I have family that lives outside Oregon and I would like to stay close to them	1	2
C. There is opportunity to participate in free standing surgical centers in the new location	1	2
D. The reimbursement from Medicare/Medicaid is more adequate in the new location	1	2
E. The reimbursement from insurance is more adequate in the new location	1	2
F. The medical malpractice premiums are more satisfactory in the new location	1	2
G. I like the colleagues I will be associated with	1	2
H. Other (*Describe* _____)		

Q5C. From the list above, what are the first, second, and third most influential reasons for choosing to relocate your practice outside Oregon?

a. The most influential reason was ☐
b. The second most influential reason was ☐
c. The third most influential reason was ☐

Q6. Have you or your practice attempted to recruit one or more new physicians in the last 5 years?

1 NO → **Go to question number 7 on the next page**
2 YES → **Continue with question 6A on the next page**

Please turn the page →

Q6A. Were any of these recruitment attempts unsuccessful (i.e. resulted in a "no hire")? (Circle one number then follow arrow to next question)

1 NO ⟶ **Go to question 7**
2 YES

Q6B. Why do you suppose the recruitment, or recruitments, were unsuccessful? (Indicate YES or NO by circling one number for each reason)

		YES	NO
A.	The prospective recruit(s) did not like the area/ community in which the job was located	1	2
B.	They did not have family close by	1	2
C.	The schools in the area were unfavorable	1	2
D.	The medical malpractice premium was too high	1	2
E.	Oregon's economy was unfavorable	1	2
F.	They did not like the salary or proposal offered	1	2
G.	They thought that the Medicare/Medicaid fee		
H.	schedules were too low	1	2
I.	They felt there was little opportunity for additional income through ambulatory surgical centers	1	2
J.	There was a personality conflict	1	2
K.	They did not feel technology system was sufficient	1	2
L.	Other (*Describe* _____)		

Q6C. From the list above, which do you feel were the first, second and third most influential reasons as to why the recruitments were unsuccessful?

a. The most influential reason was ☐
b. The second most influential reason was ☐
c. The third most influential reason was ☐

Q7. Are you male or female?

1 MALE
2 FEMALE

Q8. Please use this space to make any comments you make have about practicing medicine in Oregon or about this survey in general.

Thank you for your time and effort, it is greatly appreciated.
Please return your survey in the pre-stamped envelope provided

APPENDIX C

Written Comments Section

1. "Oregon is a great place to live.....if you can make a living."

2. "Malpractice costs are skyrocketing and Medicare/Medicaid reimbursement makes it difficult to recruit a new physician when it is time.

3. "The cost of living here makes its difficult to recruit Dr.s to our area."

4. "When I've talked to doctors at conferences in mid-west, who've expressed an interest in coming here, changed their mind once they found out what they can make compared to the cost of living.""

5. "As they say, why live and work in Oregon, If I want to see Oregon, I'll just take a vacation and that will be enough". "We have been recruiting constantly since 1989. The only doctors available to us now are international medical graduates on a J-1 visa".

6. "The people of Oregon are going to witness a serious decline in the availability of specialty care. Six in my group are aged 60, 58, 57, and 55. The project of our replacing ourselves is poor."

7. "The same situation exists with OB/GYN and cardiology.

8. "So many potential recruits know the overall reimbursement is low in Oregon , many don't consider moving here."

9. "Things have dramatically changed for Medicine and not just in Oregon over the past 25 years. What used to be creeping regulation has become galloping—we no longer can do what is right, but only what is allowed. The legal profession has created so many rules that it is impossible to practice without breaking some. I foresee a time (not too distant) when there is a plethora of lawyers and bureaucrats telling a paucity of physicians what they must do—and there is insufficient manpower to provide all but a

minimal level of care to ever larger groups of baby boomers needy patients. The entire system will collapse of it own weight!!"

10. "Of three new MD over 4 years: one stayed, one moved to Idaho, One moved to Portland, OR."

11. "The malpractice premiums are now much higher than when I last was involved in recruiting anyone and would likely be a bigger deterrent to someone coming to Oregon."

12. "Insurance and Medicare rates have not kept up with rising costs of living and malpractice insurance premiums have increased by 2 ½ times since 1999. If I did not have other investments to cover the difference I would be forced to leave. The medical malpractice problem becoming progressively more of a problem in even getting some attention—retirement will soon outnumber "recruits" have already in our group

13. "The malpractice crisis is amplifying our crisis by speeding up retirement and discouraging recruitment in a very tight manpower market."

14. "Recruits didn't know specific Medicaid Medicare reimbursement, but knew they were the basis of uncompetitive salaries"

15. "So many potential recruits know the overall reimbursement is low in Oregon, many do not consider moving here.

16. "We had to use a professional recruiter to get our last 3 MDs costing us about $80,000."

17. "Not able to make job offer competitive with other areas of the country—our full-partner salary is less than many area's starting salary."

18. "Oregon enjoys a great lifestyle, but it cannot compete for top physicians when the cost of practice is high (i.e. med mal premiums) and reimbursement is low (i.e. OHP, Medicare).

19. "This particularly impacts our seniors due to lack of available care and an increasing number of physicians who no longer see Medicare patients in particular."

20. "I have serious concerns about our office's ability to retain our 2 new surgeons and our ability to replace 4 surgeons who will most likely retire in the next 4 years."

21. "The malpractice problem will be the major problem and is now a problem."

22. "The uninsured is major problem"

23. "Med. Mal is No. 1 threat to future of private practice."

24. "Impossible to recruit specialties in my area in Oregon due to national shortage, terrible malpractice environment, and lower than national rate of reimbursement from insurance, Medicare and Medicaid."

25. "Medical staff hospital environment can be very hostile due to liability and reimbursement changes in medicine over past 10 years."

26. "I would not have come here if I had known there would be no cap on malpractice settlements; everyday that I practice here I am risking being bankrupted by a lawsuit that can take away everything I have worked for during my entire career.

27. "Oregon does not treat its physicians fairly, we do not deserve this burden. Any doctor would be a fool to come and practice here."

28. "I practice in small rural town full FP and OB and C-sections which would not be possible without my affiliation with a big organization who covers my malpractice. I am lucky to be able to do this as many other cannot afford. On the other hand I have long hours and the paperwork is tremendous."

29. "When lawyers cannot locate a physician to deliver their own children, then perhaps we can hope for malpractice reform!"

30. "I have obtained licensure in State of California and if Measure 35 fails I will consider relocating to California or back to Wyoming to practice Medicine.

31. "I would not return or have come to Oregon 6 years ago if medical malpractice climate in Oregon was like it is today."

32. "Oregon is a beautiful place to live—the insurance reimbursement is lower than most other parts of the country and I may leave for that reason."

33. "We need Measure 35 to pass.

34. "We need better Medicare reimbursement."

35. "This survey does not reflect my situation. I love living and working in Eugene and am committed to this community.

36. "The OR liability climate is terrible and needs changing."

37. "Lack of medical liability caps has significantly affected my practice and recruiting. 2 ½ years ago myself and the 5 other FP's in my group quit delivering babies because we could not afford to."

38. "The climate here is getting depressing if Measure 35 doesn't pass and malpractice premiums continue to skyrocket I will seriously consider leaving—reimbursements are to low to support continued rising costs."

39. "I have gone to Locum Tenens status to avoid malpractice and insurance billing problems."

40. "I am very disappointed that Measure 35 didn't pass"

41. "If the public only knew what will come."

42. "Costs of malpractice insurance plus poor Medicare and Medicaid payments to doctors—especially surgeons make the practice of medicine unattractive.

43. "I would make more money running a backhoe."

44. "Most doctors who are over 50 are considering quitting as the pay stinks."

45. "If I didn't love surgery I would quite."

46. "Great place to live and raise a family, hopefully this will outweigh negatives when it comes to recruiting new physicians."

47. "Medical liability has become a limiting factor in retaining and recruitment of physicians."

48. "The deteriorating malpractice environment, the deteriorating reimbursement from insurance and the precipitous decline in OHP are leading me to consider moving my practice out of state."

49. "The malpractice premiums are now much higher than when I last was involved in recruiting anyone and would likely be a bigger deterrent to someone coming to Oregon."

50. "Oregon is still being penalized for being careful with LOS, tests ordered, etc. Our average LOS when DRG's came about was ½ that of Florida, so we got reimbursed ½ as much as Florida—go figure."

51. "Lifestyle is paramount to my practice, to my family"

52. "General concern among OB physicians is rising overhead specifically malpractice and poor reimbursement."

53. "Problem in central Oregon physicians in Bend caring for rural patients yet do not qualify for malpractice relief."

54. "Malpractice and reimbursement rates are the most dissuasive agreements for practicing in Oregon."

55. "Oregon health plan is not physician friendly, I end up eating costs."

56. "Low reimbursement by HMO and general insurance company is many times un-assumable or often fraudulent. This places new practices at great risk for failure."

57. "The mismanagement by liability insurance companies have caused the great increase in liability insurance premium, thereby causing some practices to fail."

58. "Training centers should require medical students and residents serve 5 years in area shortage and conditional acceptance to program."

59. "Psychiatrists needs to reinstate scholarship program and "General Practice" in which physicians practiced over 5 years in a psychiatric field and can enter psychiatry residency with extra $$ and stipend/advanced standing."

60. "There should be mental health parity for psychiatric disorders!!"

61. "Lack of tort reform and liberal social policies are the major obstacles to recruit."

62. "My time here is limited—we can't recruit partners."

63. "The malpractice is untenable. Medicare/Medicaid reimbursement is a joke. The risk is too high for the income."

64. "Would prefer if our local medical school would preferentially admit more instate residents. As currently stands, the majority of new OHSU med students are from out of state."

65. "It is obscene that Medicare reimbursement varies among different regions of the country."

66. "Rising overhead, rising malpractice rates and relatively poor increases in revenue reimbursement for primary care make continuing to practice problematic."

67. "Ten years from now physician will consider these were the "good old days", I despair for the state of medical practice; just at the time I will likely be more of a consumer than a provider."

68. "There's an old saying; 'If you have a problem, bring money.' We are being outbid by larger, particularly Midwest cities for young surgeons."

69. "Many do not have family in the area, and this remains a sometimes deciding factor."

70. "The quality of care is declining."

71. "Overextended hospital staff, poor clinical skills both medically and in nursing, no accountability on the part of for profit hospital corporations."

72. "Business is more important than the human factor—profit, not care."

73. "Liability Crisis #1 issue keeping doctors from coming to Oregon, after that, low reimbursement"

74. "We are getting killed by low Medicare/Caid reimbursement compared to big cities such as Miami and NYC."

75. "We need tort reform in Oregon in the malpractice area."

76. "Malpractice reform is my major anxiety". "I was raised here—sad to say goodbye"

77. "I will not move out of Oregon unless malpractice doubles—but I will refer all complex cases to OHSU even if I am capable and have been doing these procedures due to malpractice risks. Everyone expects a perfect result they don't understand what a 1%-10% complication rate means. If an adverse event happens to them, "Somebody must pay."

78. "I am a Portland native, went to OSU, then OHSU and after doing a med school perceptorship in (small town) chose to practice in (small town) since 1989—Small rural towns in Oregon are having a tough time recruiting docs to STAY we "got" 8 J-1 visa docs last year because were declared "medically underserved"—I'll bet 90% of them will leave after the they have done their 3 year commitment to U.S. Citizenship....becoming a retirement community—(Mostly Medicare fixed income and rates in 40% less than commercial insurance doesn't help either."

79. "Unfortunately, medicine is not practiced in a vacuum and is very dependent on the states economy which is poor."

80. "We physicians have yet to stand up to drug and insurance companies and simply react to their wishes and our present administration caters to them. To bring our profession back to its former status, Oregon physicians need to take a more active role in policy making locally and nationally."

81. "The medical-legal environment is currently terrible and may cause me to retire early. I am 56 and comfortable with my practice of medicine but am very pessimistic about our future in terms of torts."

82. "There is a point of diminishing returns where the deteriorating practice environment isn't compensated for the original reason of practicing here."

83. "Oregon continues to be a good place to live and practice medicine. Those physicians who would choose to go elsewhere solely to earn a higher income would probably not be a "good fit" for Oregon medicine anyway."

84. "The most important factors for the recruitment of good physicians are maintenance and improvement of quality schools K-12 and higher ed."

85. "Oregon physician endure the poor medical climate because it is otherwise such a great place to live."

86. "With increasing population, property prices/taxes, longer commute times, etc. the benefits may soon be outweighed by the losses of medical practice here."

87. "I stopped doing OB 6 years ago, and plan to retire soon because of the onerous malpractice climate in Oregon, even though in 35 years of practice I have never had a claim! Good well-trained MD's are being driven out of state and out of practice."

88. "We have found recruitment to be extremely challenging. It is very difficult to compete with the packages that are being offered in other parts of the country."

89. "I would not start practice here today under these circumstances."

90. "Having trouble referring patients to specialists due to lack of MD's"

91. "I have no complaints"

92. "I love working in the great state of Oregon".

93. "We need political efforts by our state and regional officials to improve Medicare payment. The current geographical model of payment decreasing reimbursement for superior performance cheats physician of fair reimbursement in the Northwest."

94. "Oregon is still a great place to be!"

95. "The Oregon economy remains unfavorable. The defeat of Measure 35 will be difficult to overcome. Reimbursement from Medicare/Medicaid continues to be an obstacle."

96. "I think it is a great place for me. I was disappointed in the recent defeat of measure 35."

97. "If something isn't done to control liability insurance in Oregon a "crisis state" there will be fewer and fewer physicians staying or coming here. Failure of Measure 35 will accelerate the process."

98. "My husband is OB/GYN and his malpractice premiums have been extremely high our overall income is much lower than before our move. We hope it will improve as we like Oregon, our jobs and the people we work with."

99. "I love it (practice in Oregon) I see a disaster brewing—our south coast OB care is a gnat's ass away from evaporating due to malpractice premiums."

100. "There is a point of diminishing returns where the deteriorating practice environment isn't compensated for by the reasons for practicing here this is rapidly approaching."

101. "I moved here to get married and had great difficulty finding a job, actually Am now in a temp position but looking for a permanent one. The OHP measure defeat (this past spring) cost a couple of positions at some clinics where I was looking."

102. "The crisis is coming with decreased access to care for Medicare, Medicaid and uninsured. Low reimbursement and high liability insurance expenses. I am 61 and if I were starting again, would try elsewhere. Too much managed care hassle as well."

103. "Oregon reimbursement is low, too High HMO/managed care, High unemployment and uninsured patient volume, Low Medicare reimbursement rate, Perceived high income tax (See the growth in Clark County Washington)."

104. "Oregon great state—except for kooky Multnomah county and Portland"

105. "Downside=salaries are lower than in other parts of the country, Upside=Oregon is a great place."

106. "I have practiced in the Midwest prior to coming here. If I did not have family here, I would not have come. Oregon is not a pleasant place to practice. Pay is lower, malpx is higher, and more paperwork."

107. "Clearly malpractice insurance rates and availability and the threat of lawsuits are a major problem contributing to MD early retirement, changing modes of practice and choosing to practice other than in Oregon. I would put poor state economy and poor reimbursement of less importance than the malpractice crisis."

108. "If you are really interested in physician retention, you would look at physician satisfaction. Satisfied physicians stay. The scope of this survey is likely too narrow to be meaningful."

109. "I have gone to Locum Tenes status to avoid malpractice and insurance billing problems."

110. "I am retiring prematurely due to the inability to practice medicine in the way I feel is best for the entire community. Physician are practicing in a high stress low control environment. No control over access to patients due to

poor reimbursement. Hospitals do not have enough ___ risk of malpractice suits. I have loved being an OB/GYN for over 20 years—the joy is now gone due to deteriorating infrastructure."

111. "This survey would be different questions in recruitment between urban and rural."

112. "We are getting killed by low M/C reimbursement because big cities such as Miami and NYC. We need tort reform in Oregon in the malpractice arena."

113. "Poor political climate (corrupt) morality is pitiful too liberal a state for most Americans, malpractice premiums high."

114. "We need measure 35 to pass. We need better Medicare reimbursement."

115. "There are too many physician in Oregon and Portland is one of the most over-physician-end cities in the country."

116. "FYI I practice at Kaiser sometimes different issues."

117. "I feel I have little to offer."

118. "Competition in my subspecialty, foot/ankle surgery continues to increase. However, I love it here in Oregon."

119. "The most worrisome is the few numbers of specialists available. I come from a large met. Area with a medical school; the practice of medicine is very different."

120. "Very privatized. Lost of competition with OHSU—difficult to maintain high technology in rural areas difficult to attain proficiency in new areas for doctors already established in practice."

121. "Great place to live. I work in rural OR. You have to work hard and not spend a lot of money."

122. "My practice in academic institution offered me opportunity to improve my field and teach lots of new radiologists."

123. "Retiring early—no longer willing to risk assets from malpractice suit."

124. "I now practice part-time. Because of concerns about malpractice risks and costs of insurance, I don't go to the ER to tae care of/admit really sick kids nor do I go to deliveries or work in the nursery. I have never been sued and I want to keep it that way."

125. "No complaints."

126. "Planning on early retirement."

127. "I am a native, second generation Oregonian, family, lifestyle, and need dictate recruitment. The spouse dictates the place to practice."

128. "Survey too limited in response. General concern among OB Physicians is rising overhead specifically malpractice and poor reimbursement. Problem in central Oregon—physicians in Bend caring for rural patients do not qualify for malpractice relief."

129. "Terrible malpractice situation."

130. "If my children were not in a difficult age group to move (high school) I would certainly consider moving out of state."

131. "Oregon MD's and nationally, we need to take a more active role in policy making."

132. "Medicaid program is failing, Medicare reimbursement low and accounts for large percentage practice history of high physician turnover."

133. "Poor medical malpractice is a problem, the failure of OHP is another, most recruits look past those issues."

134. "Reimbursement and high liability = no physicians."

135. "The OHP is poorly run and administrated. Billing and reimbursement are purposefully prolonged. Restrictive physician panel ignore expertise and access for all patients."

136. "My medical malpractice insurance has been: First year, $3,000, 2nd year, $12, 500, 3rd year, $25,000, 4th year there has been the possibility it could go up to $70,000 This is the major threat to my staying in Oregon this is the major hurdle to attracting future MD in my practice. NOTE: I have never been sued."

137. "Overall, great climate to practice in, esp. dermatology. I would love to see Medicare $$ increase since we deliver medicine efficiently and are penalized for this nationally. Also I hope Measure 35 passes."

138. "Malpractice situation making it more difficult to find qualified applicants."

139. "Medical liability has become a limiting factor in retaining and recruitment of physicians."

140. "Malpractice insurance and high % of uninsured has prevented me from being able to recruit. When I came here 12+ years ago I was the 5th in my field, now there are only 3."

141. "We work harder every year and make less every year for 5 years straight, due to increasing malpractice premiums, increased costs of compliance and federal regulations and decreasing reimbursements from

almost all payers. The above is a direct quote from my account. I am very conscientious and hard working doctor. I scored in the top 5% of all surgeons national on the specialty board. I have a large practice and I take call (ER) for free 33-50% of my life, I have never turned a patient away due to lack of insurance and we don't screen anyone for insurance whey they make appointments. I have never had to pay a malpractice suit, but my premium went up 100%. I often have to perform life or death surgery without any pay but still at risk for a lawsuit. I could go on, but why should we keep doing this? A marked decrease in access to quality car is coming."

142. "Having more difficult time referring patients to specialists due to lack of MD's—esp. pulm, neuro, ___. Working part time in local ER due to poor reimbursement from Medicare/OHP."

143. "I practice in central Oregon. We are lacking specialists in infertility, perinatology, oncology, and neonatology. That limits the care for patients. Frustrated by lack of funds from hospital to recruit physicians or improve services."

144. "Medical practice is unattractive generally, I believe, because of the societal and legal pressures that cause MD's to practice unscientific, wasteful medicine as we attempt to hold onto patients, not lose them to competing practices (businesses), while accommodating unrealistic expectations. We've got the most exotic (expensive) health care but our citizens are not healthier."

145. "Oregon has always compensated physician less well than surrounding and Midwestern states. I am sure that affects competitive recruitment."

146. "Currently biggest problems facing MD's in Oregon are: Medical malpractice, reimbursement from Medicaid/Medicare."

147. "Low reimbursement and climbing malpractice insurance costs have pushed my partner to relocate and for me to retire earlier than I would have."

148. "Treating non-paying patients (federally mandated) is costing us hundreds of thousands of dollars annually from lost revenue. i.e. serving the uninsured. It will stifle emergency medicine."

149. "Recruiting success is best when physician has family in Oregon. 2nd best recruiting is for the NW lifestyle."

150. "It has become more arduous to practice because of documentation, patient's unrealistic expectations and the failure of our psychiatric system."

151. "It is obscene that Medicare reimbursement varies among different regions of the country."

152. "We have not had any problems recruiting physician. Our pay scale is pegged right at the median nationally. More often, the problem is that people don't know how to recruit effectively."

153. "Medical groups I have been associated with have always had numerous very qualified candidates for any opening."

154. "Oregon trial lawyers/enabling courts are the biggest problems—direct intrusion but tremendous secondary fall out in (certain) patient attitudes and the way medicine is practiced."

155. "You are not asking the right questions. Can't find people to apply to jobs in Oregon due to reputation."

156. "Malpractice climate makes practice difficult. I have had to drop OB services, and although I plan on staying, I would not have started practice in OR in today's climate. (I have been here 7 years)."

157. "The medical malpractice crisis is really terrible. It costs every patient more because doctors are practicing excessively "defensive" medicine. I am confident that access to care will continue to erode unless our state has a change in the malpractice climate here."

158. "We have been fortunate in being able to hire physician. I'm afraid that the future may not be so rosy with low reimbursements and high liability

insurance as well as cost of living. I believe that we are at the beginning of a crisis."

159. "Oregon already gives a tax incentive to work in smaller communities. However, the amount of money is small compared to the burden of medical school debt. In my opinion, the state and the feds need to make the "rural incentive" more meaningful, i.e. larger."

160. "The reimbursement managed care rates and malpractice crisis have all been very negative forces for recruitment."

161. "My ability to practice is burdened by visa requirements, as we are foreign nationals. It is my desire to remain in OR long term."

162. "When I moved to Oregon 4 ½ years ago, the malpractice climate was tolerable. Currently in my field premiums are skyrocketing and the number of suits without merit are climbing. Other states also have similar problems. I would prefer to fix problems here instead of moving, hopefully this will be possible on a national level since Measure 35 failed."

163. "I will not move out of Oregon unless malpractice doubles—but I will refer all complex cases to OHSU, even if I am capable and have been doing those procedures due to malpractice risks. Everyone expects a perfect result, and they don't understand what a 1%-10% complication rate means. If an adverse event happens to them "somebody must pay."

164. "The number one threat to future of private practice in Oregon are: the escalating malpractice premiums especially for OB/GYN ($75,000 per year). I am very upset that Measure 35 failed."

165. "Most challenging has been decreasing reimbursement for services. Increasing problems providing the medication we think appropriate (cost). Constant demands for reports for every imaginable reason and then some. Finally so many of our patients are losing or have lost their insurance coverage."

166. "Reimbursement is too low, because HMO penetration and cost of practice too high."

167. "Wonderful place to live, bad place to try to make a living compared to other states."

168. "If Measure 35 fails, open up the floodgates as any docs who are young will be leaving."

169. "I myself, eliminated the practice of obstetrics due to the costs of liability insurance."

170. "Impossible to recruit docs in my specialty due to national shortage."

171. "I practice at the Portland VA and OHSU. I do not buy malpractice insurance and receive a salary."

172. "Great place to practice, but becoming more difficult due to high malpractice premiums and low reimbursement."

173. "(why the recruit did not accept the offer) A perceived risk of malpractice voiced by a couple of our refusals."

174. "Low reimbursement by HMO and general insurance company is many times un-assumable or often fraudulent. This places new practice at great risk for failure . The mismanagement by liability insurance companies here have caused the great increase in liability premiums thereby causing some practices to fail."

175. "I work for the county health department. I like that Oregon is progressive at creating a health plan to care for others uninsured people."

176. "The questionnaire does not fit my situation at all. Practiced here since 1978 and medicine is crumbling around us. I will retire and never

permit myself to be hospitalized. JCAHO, legal are out of control. Cannot practice quality medicine any longer or earn a living."

177. "I work for a HMO @ salary—different issues than with fee for service."

178. "The malpractice climate is worsening (pending Measure 35). The rural practitioner tax credit is crucial to retain me and other rural practitioners."

179. "As a salaried MD at a public inpatient facility, my views and dilemmas may not reflect those of my private sector colleagues. We seem to suffer from limited public funding, a poor tax base, caused by years of anti-tax activism, which has left the state's mental health system in a shambles. The presence of 25+ MD on our staff is a testament to the beauty of the state of Oregon."

180. "Plastered over in paper, totally frustrated with insurance companies—extreme amount of time wasted arguing with insurance companies on reimbursement- workload up, pay down, patient count up, patient face-to-face time down, patient satisfaction down all leads to physician position in society down."

181. "I moved to Oregon 31 years ago. A great many things have changed Now: to low Medicare/Medicaid, too low insurance reimbursement, too much managed care, too high liability insurance cost, poor economy, school in trouble."

182. "The state I moved to, to practice in over 12 years ago is not the same. If I have to give up OB because of malpractice insurance costs, I will move."

183. "The only reason to practice medicine here is because Oregon is God's country. The medical practice environment is terrible."

184. "I love the environment of safety, clean living, and green spaces—primary care is much harder than it was 5 years ago—more paperwork—less reimbursement—high malpractice."

185. "I work at Kaiser-Permanente and I am very happy with my work environment and co-workers."

186. "In spite of the negatives, I still enjoy my practice."

187. "I am close to retirement. The medical malpractice premiums are so high that I will probably stop performing brain surgery of any type to reduce them, this will reduce the number of neurosurgeons available to provide care to patients with head injuries."

188. "Because I am Oregon native with multiple generations of family here, I did not and likely would not relocate unless things were a lot worse. But I am retiring earlier than I might otherwise because of increasing expenses and low reimbursements."

189. "Recruits usually didn't know specific Medicaid, Medicare and insurance fee schedules, but they knew they were the basis of uncompetitive salaries. Changing public school quality appeared to be a major factor for our recruit with small children."

190. "Survey leaves out a lot of reason for leaving. several typos present."

191. "We need political efforts by our state and regional officials to improve Medicare payment. The current geographical model of payment decreasing $$ for increased performance cheats physicians of fair reimbursement in the Northwest. It also wouldn't hurt for the state to have passed malpractice reform, but Oregon is still a great place to be."

192. "Oregon Health Plan/Medicaid is not physician friendly. I end up eating costs—example recently; administering topotecan (sp) more than 4 mg not covered. To pre-authorize prescriptions requires me to be on hold, then submit appeals, they run out the clock, so now we just don't' fight for patients anymore. When best care not available to patient, I'm the one who has to suffer patients' and family's anger. People think good health care is a right. It should be."

APPENDIX D

Recruitment Practice

Where theory indicates the kinds of actions to be done, in practice we grapple with performing those actions. In our review of recruitment practices we will identify the difficulties and thornier decisions that inundate recruiters. A sense of best practices or viable solutions (as available) will be provided for market analysis, recruiting, screening, selecting, and hiring. We will draw once more on Freeman (2002), Olson (2002), Lewitt (1982), and the National Association of Physician Recruiters.

The low level theory of market analysis clearly identifies the types of information needed. The primary practical issue in market analysis is developing sources of reliable and locally relevant information. Aggregated data from large areas might not well reflect local conditions. The Oregon Medical Association is a source of data on physicians by specialty and location. Data on service demand and physician incomes in the service area may be proprietary to organizations or personal to physicians. Medical Group Management Association markets a comparative physician salary analysis by region and local areas. Specialty journals and local associations also provide guidelines for salary and benefits. The local hospital is often a source of information on patient census and operating room availability. Obtaining high quality local demand and financial information is the central and enduring practical problem of market analysis (Scott, 2005).

Where one is recruiting applicants *to* may be every bit as important as where one is recruiting applicants *from*. Rabinowitz (1999) found that medical students from rural areas were more likely to report an interest in practicing in rural areas. Cooper (1977) recognized that practice location choices were multi-factorial. Colwill (1992) added the factor of rural clinical experience as part of the medical educational program. Targeting recruiting and also screening for these factors might (at least provisionally) be used when recruiting for rural practices. Further references of note on recruiting factors for rural practices are Pathman, 2000; Curran, 2004; and Blumenthal, 1996.

In addition to geographic location, organizational culture is also a distinctive feature of the site. Recruiting, screening, and hiring physicians who are in alignment with the practice's mission, values, and vision helps to secure a good fit and prevent culture clashes (Covey, 1994; Duncan, 1995).

The low level theory of recruiting identifies internal, external, and media sources of recruits. The first practical issues involve definition of the size of the pool of applicants sought and the geographic scope of the search. These issues are closely related to recruiting resources and their allocation. How much should be spent and in what ways? It is reasonable to expect incurring greater expense in drawing and screening larger numbers of applicants from increasingly distant locales. In California, if Kaiser Permanente has an opening, they choose from between twenty

and forty applicants. A small medical practice might opt for a more modest applicant pool. According to Kaiser's CEO, many new recruits are from existing private practices in the surrounding area (Goldsmith, 2004).

A practical media source issue involves the selection of effective images and messages. This should be coordinated with the organization's larger marketing and public relations efforts and its expression of mission (McInerney 1998; Bard, 1990). Another key media issue concerns where to advertise. Media venues include medical journals, newspapers, medical conference brochures, and various internet sites, electronic bulletin boards, and search engines. No research was located that compared these venues for efficiency and efficacy. One locale waged a unique (and successful) recruitment campaign with bumper stickers stating that their town needed doctor and providing a phone number.

The next practical issue revolves around whether to do this function in-house or to outsource it to a firm specializing in recruitment. Such companies are also called placement firms or employment agencies, and their numbers have rapidly increased (New Physician, 2005). For an extensive list of recruitment firms, consult: http://dmoz.org/Health/Medicine/Employment/Recruitment_and_Staffing.

Recruitment firms are expected to provide expertise in the in the recruitment process and in the legal matters surrounding hiring. Additionally they should be selected for expertise in physician hiring, for reputation, for cost, and for average time

to fill a position. Note that filling a position is not always an indication of successful outcome, as in the case of new hires who prove to be poor fits or are only briefly retained (Bruce, 2001; Cornell, 1999; Freeman, 2002). Highly focused services may be obtained from some recruitment firms, such as web-based job listings, placement services, leadership training, and assistance with recruitment and retention strategies (Coffman, 2002).

The use of recruitment firms is advised when the medical practice has a history of unsuccessful recruitments, when time is of the essence, when in-house recruiting expertise is marginal, and when financial resources are adequate to cover the firm's fees (National Health Service Corp, 1991).

Screening occurs explicitly in the review of qualifications and work history from c.v.'s, and in checking on character and skills from references. Screening can be facilitated by performing a job analysis which clarifies the tasks, skills, and knowledge that are required for the position. It is crucial to access key national databases containing licensing, specialty certification, malpractice claims history, and licensing board disciplinary actions. Sources include the National Practitioner Data Bank, the State Board of Medical Examiners, the Federation of State Medical Boards, specialty boards or associations, and the American Medical Association Department of Investigation File.

In-person interviews are arguably the most expensive, time consuming, expertise intensive, and telling of screening methods. Telephone interviews are often used prior to deciding on invitations to in-person interviews. The telephone interview is an opportunity to characterize the practice, the market analysis, and the setting for the applicant, and to elicit their needs and concerns. Community size, climate requirements, recreation opportunities, schools for children, spouse's educational and or work needs, and proximity to family and friends may all be relevant topics. Explore as well the applicant's clinical focus, research and continuing education interests, and practice preferences (i.e. solo, group). Freeman (2002) and Lewitt (1982) both stress the importance of having an applicant information sheet at hand, summarizing qualifications and history. It should also list the major questions you have about (and for) the applicant.

Financial arrangements can be made and expressed in various ways. These include percentage of gross charges, percentage of net, fee for service, production based, and minimum income guarantees (Grant, 1979). The literature suggests (not surprisingly) that economic compensation is one of the most important decision factors for applicants (Curran, 2004; Colwill, 2003; Pathman, 2000; Coffman, 2002).

For a well-organized interview process, plan the itinerary and timing (where the candidate will be taken and when); the responsibility (who will be present with the candidate); discretion (what information will be provided); and the coordination of communication (which individuals will ask what questions). Among considerations

for the needs of candidates from out of town, help to arrange travel and lodging, provide a tour of the community, and arrange time for the candidate to meet with a real estate agent. Take care not to overwhelm candidates as you plan for facilities tours, formal interviews, and social activities.

It is of paramount importance to include the spouse, as the decision to locate is usually based on the candidate's requirements, but seldom will a physician relocate if the spouse is not on board with the decision (Lewitt, 1982; Freeman, 2002). Scott (2005) forms a spousal support team to identify the needs of spouses, accompany them, and provide whatever assistance may be requested. Scott, as Chairman of the National Association of Physician Recruiters, advises that spousal buy-in is a pivotal recruitment factor.

Do not neglect post-interview follow up, supplying further information as may have been requested. A second site visit is often extended to candidates when mutual commitment is clear. This visit may address living accommodations, schools and religious affiliations, spouse's occupation and interests, community support, banking, medical staff support, establishing the practice, practice structure, start-up funds, office personnel, equipment and supplies, insurance, office systems, professional assistance, legal necessities and arranging hospital privileges.

Interviewing often overshadows formal screening tests of temperament, which can provide useful information on fit with other personnel. Among respected test are

the Myers-Briggs personality assessment tools, based on the teachings of Carl Jung (Myersbriggs.com), Behavioral Assessment Simulations (Stahl, 2004) and Harrison Assessments (Harrisonassessments.com).

Selection, as previously noted, calls on the integration of many objective and subjective factors. The applicant and the organization each engage in a selection process. For hiring organizations, one major practical issue involves the relationship between a hiring committee and the manager invested with hiring authority. There is some risk in opposing the advice of a committee composed of individuals who will be working with the new hire. There are also times when that risk must be taken, as when the committee's advice conflicts with legal employment policies and laws enacted by the state or federal government (Olson, 2002).

As with selection, contracting is a process of finding mutual agreement. Once mutual commitment is apparent, a signed contract should be obtained as soon as possible. Olson's (2002) textbook has templates of contracts for use and revision. It is wise to have these contract forms reviewed by counsel annually to ascertain that their language and clauses remain current.

While it is important to note that the entire compensation package (including incentives) must be attractive, the elements of meaningful work, freedom to use personal judgment, and time to do quality work are all recognized as key factors (Duncan, 1995).

The transition period is a stressful time for new hires. Assistance methods include a mentorship program (Lokey, 2004); an advertising campaign to introduce the physician to the general community; posting pictures of the new physician so staff will recognize them; help with moving; and arranging professional and social introductions.

The foregoing discussion of recruitment practices points out a host of complicated pragmatic decisions that rest more on sensibilities well tuned to personal, inter-personal, and organizational concerns than on research data. This is in keeping with our characterization of recruitment as an applied field offering opportunities for theoretic and research advancement.