Professionalism Among Medical Practitioners: A Case Study of Rural Physicians

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ABSTRACT

In America, certain attributes and behaviors become more publicly acceptable and more prominent in personalities as an individual matures in their chosen career path. The elite position in society of medical practitioners has been threatened during the 20th Century by new and increasing market pressures. The main hypotheses addressed in this project is the determination of the directional change of the attitudes that represent professionalism as a physician gains experience in the current medical environment and whether these attitudes change as a result of rural setting or specialization in medical practice. This project will also try to determine the reliability of a Likert scale survey instrument, designed and refined through principals of organization behavior theory in the late 1960s by Richard H. Hall. Using this tool, professional attitudes were measured in an original sample of randomly selected physicians drawn from the membership of a rural medical organization and differences were examined using bivariate analyses. The additional influences of medical tenure, organizational size and discipline specialization were also analyzed using bivariate analysis to determine if life experience (tenure, location and specialty choice) positively affects core attitudes of professionalism in medical practice. Results reflect the changing market environment and population demographic changes in rural medical practice, while also demonstrating a significant difference between physicians practicing solo without the support of a group structure.

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CHAPTER 1

PROBLEM STATEMENT

The purpose of this study is to explore the relationship between the physicians' lived experience in medical practice servicing a patient population that is drawn primarily from a rural setting, and the level of professionalism exhibited in this cross-sectional study. This study collected original data from a random sample of physicians in rural Southwest Virginia to determine the magnitude of physician attitudes on professionalism using a condensed version of Richard Hall's 1968 Professionalism Scale. The theoretical positioning of this researcher within the positivist tradition provides for the use of univariate and bivariate analyses to examine the relationship between self-reported years in medical practice, the size of the organization within which they practice general or specialized medicine, and a rating of their professionalism derived from response to a reduced version of Richard H. Hall's professionalism scale.

Demographic population trends, particularly an aging population base also exert pressure directly on primary care physicians more than other aspects of the health care system (Federal Interagency Forum on Aging-Related Statistics 2006). The advances of modern science have enabled longer life for modern man, however longer life is increasingly associated with chronic illness and long-term physician monitored care. Changes in market forces related to the managed care environment have changed the practice of medicine by: significantly reduced the time allotted for the interaction of physicians with both their patients and colleagues; challenged a physician's authority to define treatment regimens without oversight; increased pressure for clear and concise communication; and spotlighted the need for professional medical norms of behavior (Feldman, Novack, and Gracely 1998).

Defining "professionalism" has recently become the focus of several major initiatives by national related organizations targeted at the education of medical students and raising the awareness of practicing professionals, including the American Board of Internal Medicine's Medical Professionalism in the New Millennium: A Physician's Charter (2002), the American Medical Association's Strategies for Teaching and Evaluating Professionalism (2003), and the recently revised American Medical Students Association's Model Oath for the New Professional (2007). Historically we find that Paul Starr in his analysis of *The Social Transformation of American Medicine: The Rise of a Sovereign Profession and the Making of a Vast Industry*, relies on sociological theory to define a profession as,

> An occupation that regulates itself through systematic, required training and collegial discipline; that has a base in technical, specialized knowledge; and that has a service rather than profit orientation, enshrined in its code of ethics (Starr 1982:15).

Richard H. Hall relies on organizational behavior theory to define professional behavior as a combination of the following attributes:

> 1) the practitioner's reliance on a professional organization as the major reference point, 2) belief in public service, 3) belief in self-regulation and colleague control, 4) the sense of calling to a specific line of work, and 5) individual autonomy in decision making (Hall 1968:93).

As individuals, humans react differently to levels authority exerted within a structured organization, even as professionals. In social theory Max Weber tells us that this reaction is shaped at least in part, by accumulation of social status within a community and Talcott Parsons theorized that if either socially constructed role is threatened in a medical setting, it can result in a significant change in the physician-patient interaction (Haug 1994). One perceived threat originating out of the managed care environment is a restriction of the formerly independent physicians' autonomy (Starr 1982). The result has been a reduction in their ability to accomplish the expected role of gate-keeper for their patient's well being (Feldman 1998; Starr 1982).

Another threat to social standing can be through loss of leadership opportunity. Professional advancement through bureaucratic organizational structure has been associated with increases in leadership ability modeled after those of managers and mentors, and self-imposed expectations of performance directly associated to organizational tenets of professionalism (Hall 2002). How do professionals advance and leadership emerge when an organization does not exist and there is not a bureaucratic structure through which to advance as is the case for the solo medical practitioner?

By synthesizing the current literature on leadership and decision making in bureaucratic organizational structures with the market forces at play in the world of medicine currently, I will utilize a broadly grounded theoretical basis as an explanation of the relationship between professional attitudes and behaviors of physicians and their the lived experiences. Through a survey of rural medical practitioners and analysis of the responses to the 25 questions with the highest reliability coefficients found in the factorial analysis conducted by William Snizek in 1972, from the original 50 question Professionalism Scale by Richard Hall. Richard Hall's Professionalism Scale is a recognized measurement tool assessing the five dimensions of professionalism. By looking at the different components of professionalism in relation to the

individual tenure in medical practice and organizational location of the practitioner to determine if the organizational behavior theory of professionalism will cross socially constructed status barriers and be relevant for physicians. The combination of two theoretically distinct ways of thinking about professionalism can then be joined to serve as a bridge between the business and medical professional communities raising the awareness of physicians to a practical application of yet another dimension of change in the current medical environment.

CHAPTER 2
REVIEW OF THE LITERATURE

The Rural Setting

Since Abraham Flexner submitted his stinging analysis of the state of American medical education to the Carnegie Foundation in 1910, there has been sweeping reform of the process of educating physicians. New medical schools have been and continue to be built across the nation, while existing schools have recently started to expand their class sizes, graduating more trained physicians than ever before. However, there remains a dearth of general medical practitioners in the inner cities and in rural areas where "more than 20 million people live with a shortage of physicians to meet their basic health care needs" (American Medical Student Association 2007).

NATIONALLY

Rural physicians are facing a significant increase in the demand for healthcare by residents over the age of 65. This age group makes up an increasing percentage of our population due to the baby boomers starting to reach retirement, aging in place of rural residents, and the longevity of more individuals living with multiple chronic illnesses and disabilities (Fowles and Greenberg 2003). If these individuals live to the age of 75, on average they require up to three times more healthcare resources and physician time than the average person between the ages of 45-64. According to the Physician Workforce Policy Guidelines for the United States, 2000-2020, in addition to responding to higher levels of demand for their services than ever before, physicians face similar demographic problems on the national level,

> Like the rest of the U.S. population, physicians, as a group, are growing older. In fact, between 1982 and 2001, the proportion of physicians aged 65 and older increased from 8 percent to 11 percent. In 2001, more than 84,000 practicing physicians were 65 years of age or older, another 118,000 between 55 and 64 will reach 65 by 2011, and another 203,000 between 45 and 54 will reach 65 by 2021. (U.S. Department of Health and Human Services: Council on Medical Education 2005)

Although many social scientists see rural locations as a last bastion of resistance to the dynamic forces of change, this may be limited in the medical profession by the ability of existing physicians to find replacements at the time of their retirement willing to practice in such remote localities. According to the Edward Salsberg testifying for the Association of American Medical Colleges in a 2006 Legislative Hearing on the *Physicians for Underserved Areas Act,* "In addition to the large number of physicians approaching retirement age, there are growing reports

that the newest generation of physicians do not want to work the long hours of physicians in the past... as a result, the future physician workforce may effectively be 10% lower than their aggregate numbers may suggest" (Association of American Medical Colleges 2006).

This prediction places the rural physicians in an even worse position to meet even basic demand for services while trying to maintain a professional demeanor in a solo practice, where the physician is also primarily responsible for running a business. Physician extenders, such as Physician Assistants, Nurse Practitioners, and Case Workers may be a partial solution, but many physicians are reluctant to reorganize their practices. Dr. Casalino warns physicians of another market pressure that is beginning to encroach on their elite social status as well in a report on his work with the Robert Wood Johnson Foundation. He cites the rapid growth in disease management companies focusing on dealing directly with patients as an area of special concern for especially for primary care physicians (Casalino 2006). Dr. Casalino's research highlights the fact that, "Right now, the payment system encourages individual physicians to run a ragged race from patient to patient… the more patients they see, the more they get paid" (Casalino 2006). The pressures exerted on physicians by these and other market forces increase visibility of physician's professional behavior and stress a need for professionalism in their daily lives.

IN VIRGINIA

At the turn of the 21st Century in Virginia there are more than 257,000 persons employed by the healthcare industry. Per capita health services employment ranked Virginia as only 38th out of 50 states and well below the national average in the number of hospital beds per 100,000 in population. Although the number of active physician assistants (721) and nurse practitioners (2,980) in Virginia continues to rise annually, in 2000 Virginia rated higher than the national average in only one category of nurse practitioner (42 nurse practitioners per 100,000 compared to the national rate of 33.7:100,000). Virginia's medical schools graduated over 400 new physicians in 2000, but still ranked well below average with 5.8 practicing physicians per 100,000 population compared to 6.4:100,000 nationally (Bureau of Health Professionals, Health Resources and Services Administration 2007).

In order to look at the problem of physician shortage at a regional level it was necessary to use the U. S. Census Bureau's system of dividing the population into smaller segments. Using the Rural-Urban Continuum Codes, which divide the country into groupings based on context of

economic opportunity as measured by accessibility of larger centers of commerce allowed a regional view. According to the Department of Agriculture's Economic Research Service:

> Rural-Urban Continuum Codes form a classification scheme that distinguishes metropolitan (metro) counties by the population size of their metro area, and nonmetropolitan (nonmetro) counties by degree of urbanization and adjacency to a metro area or areas. The metro and nonmetro categories have been subdivided into three metro and six nonmetro groupings, resulting in a nine-part county codification… Metro counties are distinguished by population size of the Metropolitan Statistical Area of which they are part. Nonmetro counties are classified according to the aggregate size of their urban population. Within the three urban size categories, nonmetro counties are further identified by whether or not they have some functional adjacency to a metro area or areas. *A nonmetro county is defined as adjacent if it physically adjoins one or more metro areas, and has at least 2 percent of its employed labor force commuting to central metro counties.* Nonmetro counties that do not meet these criteria are classed as nonadjacent. (US Department of Agriculture (USDA), Economic Research Service 2007). [*Emphasis added.*]

Using the measurement system of rurality (Appendix A) and other resources provided through the web by the USDA Economic Research Service (http://www.ers.usda.gov/Briefing/Rurality/UrbanInf/) a clear division between the state level and the area of specific focus in this thesis was possible.

SOUTHWESTERN VIRGINIA

If a person lives west of the Piedmont geographic region in Virginia, then they are living in an area considered to be small metro, micropolitan, micropolitan adjacent, nonadjacent, or nonmetro area. Emphasizing the connection of the population's ability to commute for employment opportunity equates for the purpose of this thesis to the ability to commute for physician's services. Out of a total of forty-six small cities, towns, and counties in the Southwest and Roanoke regions of Virginia thirty-one are currently designated as medically underserved by the Virginia Department of Health (Virginia Center for Healthy Communities 2003). To be designated as medically-underserved, a city or country must meet certain levels of physician service to total population ratio, poverty, population age, and infant mortality set by the federal government. The Department of Health and Human Services (DHHS) uses the ratio of 1 physician for every 2,000 people as a standard for adequate care (University of North Carolina-Chapel Hill, Cecil G. Sheps Center for Health Services Research 2006). As shown on the maps recently published by the Virginia Department of Health's Office of Health Policy and Planning (December 2006), more than thirty areas west of the Piedmont are experiencing a *Primary Care Health Professional Shortage (HPSA)* currently. The cover article of the *OHPP Access*

newsletter, December, 2006 issue cites additional areas in Southwestern Virginia which currently have applications pending for the HPSA designation.

Rural health care is on the decline, and rural physicians becoming a rare commodity in an ever expanding and changing economic environment. The social status of the rural primary care physician is becoming equivalent to that of other endangered species. How they react in the economic market place may determine their future in American society.

Conceptualization of Elite Status

During the transformation of American society from British colony to a world power, one consistent and stable figurehead, especially in small rural communities, has been the local physician. Physicians have traditionally been present at the beginning of life and as witness to the last feeble gasps of the dying. They hold a unique position of power within the communities they serve, freely invested with significant prestige irrespective of their patient's social class. It was the physician in the earliest of civilization that sequestered the knowledge and skill to lay the foundations of what we today call modern medical science.

Individuals practicing this type of elite craftsmanship n society are collectively given "social standing," according to Max Weber ([1922] 1978) in his writings on the economically determined power of status groups. Social status is granted only to those persons who can monopolize such specialized tools or knowledge. This monopoly brings with it an exemption from the normal marketplace and the conflicts of economic forces which reduce the rest of society to occupational competition for limited resources[1].

Conceptualization of a Profession

Even before Emile Durkheim first questioned the need for civic and ethical professional guidelines, occupationally-specific boundaries of behavior have helped to define the practitioners of medicine as a profession. Long before the physicians of our day became respected members of society they were defined by the vows they took before beginning to practice medicine (Hippocratic Oath). They were dedicated to their work by the years of apprenticeship and learning that it took to correctly perform the rituals and administer the secret herbal potions

[1] "The extremely frequent disqualification of 'gainful employment' as such is... a direct result of the ordering of society on 'status principles, in contrast with the regulation of the distribution of power by purely market principles. The market and its economic processes are, as we saw, 'no respecter of persons': it is dominated by 'concrete' interests. It knows nothing of 'status'. (Max Weber [1922] 1978:53)

intended to heal. Physicians set themselves apart by professing 'to be called' by a higher power to do the work of healing the sick and injured and they held themselves and their peers to the standard of 'first doing no harm'.

Stephen R. Latham (2002) relied heavily on the work of Talcott Parsons in the mid 20th Century to define a profession using the "checklist method." He observed the following five actions as being necessary:

- Participation in it [a profession] requires formal education;
- Its members enjoy control over their own occupational training standards and their own disciplinary mechanisms;
- There is a scholarly journal devoted to its standards;
- Its practitioners enjoy relatively high social status;
- Its practitioners have secured protection from state regulation as well as from market pressures; and so on. (Latham 2002:363)

No mention is made in either the checklist above or the literature from which it is drawn of taking oaths, learning and performing rituals, requiring the practitioners to remain apart from the rest of society, or their performance of beneficent acts. And yet, the work of Michele Foucault explains that organized control over medical knowledge and the requirement of licensed practice of medicine is a regulation of power in decision-making during the treatment process; clearly demonstrating restricted public access to the medical profession (Cockerham 2001). The dominance of Max Weber's 'formal rationality' allows the elite social status of medical practitioners to continue to grow by limiting the power of healing to members of the group in authority - physicians.

Weber's (1978) conceptualizations of status and class extend to the economic forces currently in play extend to the current medical environment, such as managed care, and the government mandated programs of Medicare and Medicaid where mandated profit oriented patient care structures can be clearly seen at work (Cockerham 2001).

Conceptualization of Medical Professionalism

Physicians for a little more than a century have organized into groups in order to protect the rights and well-being of the members[2]. The collective needs of physicians are not only protected by these formations at local, regional, state, and national levels of the profession, but

[2] "An 'occupational status group', furthermore, is still a 'status group': normally, that is, it successfully lays claim to social 'status', by virtue first of all of its specific life-style, which in some cases is determined by the occupation which it pursues… it is precisely those communities which are most sharply separated in status… (albeit within very strict and definite limits) a relatively high degree of indifference towards 'trade'. (Max Weber [1922] 1978:54)

are also protected to a somewhat lesser degree by increasing the number of physicians involved, even in small group practices. It is easy to see how a physician might want to protect his/her patients by relying on a trusted peer for support both during the practice of medicine and absences from the office necessitated by private needs of the physician. A desire to practice more balanced medicine has been a motivating factor for physicians to join into group practice since the Mayo brothers first allowed an 'outsider' into their practice in 1892. In addition to a balance between professional and personal time spent with patients, job satisfaction and other considerations lead physicians into group practice (Linzer, et al. 2000) and are a shared view of the medical decision making process in treatment methods, and fair compensation for hours worked (Sanderson-Austin 2001).

The structural/functionalist theories of Talcott Parsons were borrowed again to explain the level of trust placed in the competence of social institutions like the medical community. According to this viewpoint, in order for the institutions to serve their members, they must delineate boundaries for ethical behavior. Thus ensuring the authority of the professional is never used to promote private interests over the patients' or public welfare, or to limit political power so that it cannot influence performance of professional duty in ways which harm the disadvantaged (Latham 2002).

In his last work, *Professionalism, The Third Logic: On the Practice of Knowledge*, Eliot Freidson imagined a world where individuals with specialized knowledge could provide society with especially important services, while having the authority to organize and to control their own daily activities, without intrusion from outside bureaucratic management or the influence of other free market forces (Eliot Freidson 2001). Where else in our society can we find a better example of this imaginary world at work than the practice of medicine?

If physicians hold themselves to a higher social standard than other professions, this self imposed expectation of conformity may be one cause of authoritarian actions and bureaucratic inflexibility exercised by group leadership. In the *Journal of Obstetrics and Gynecology*, Patrick Duff (2002) published an alphabetical primer on "Professionalism in Medicine." In it he suggests that the cause of problem behavior may lie in the professionalism of the physicians,

> I have practiced medicine for 27 years, first as a resident and fellow, then as a student clerkship director, division chief, residency director, and finally an associate dean of students. In my experience, I have observed that very few physicians falter because of lack of intellect or a major deficit in technical skills. Rather, the few that are not successful in their practice have difficulty because of poor professional behavior. (Duff 2002:1127).

Physicians are held, by themselves and their patients, to a higher standard than many top executives in the business world, where it is not unusual for aging senior executives to regularly exhibit temperamental and even eccentric behaviors. Critical evaluation of disruptive physician behavior at any level is a matter of concern not only for their employers and their peers, who serve on disciplinary review panels, but also for leaders in medical education (Weber 2004). Medical educators take seriously the responsibility of inspiring new physicians to model exemplary behavioral traits that will maintain the profession's social status (Wear and Castellani 2000; Association of American Medical Colleges and the National Board of Medical Examiners 2002).

The magnitude of concern within the medical community regarding the professionalism of its members is evidenced by the amount of attention this topic gathers in print media coverage. Significance of this concern world-wide was evidenced when the *The Lancet* announced the American Board of Internal Medicine's project in 2002 stating,

> Physicians today are experiencing frustration as changes in the health-care delivery systems in virtually all industrialised countries threaten the very nature and values of medical professionalism. Meetings among the European Federation of Internal Medicine, the American College of Physicians, and American Society of Internal Medicine (ACP-ASIM), and the American Board of Internal Medicine (ABIM) have confirmed that physician's views on professionalism are similar in quite diverse systems of health-care delivery. We share the view that medicine's commitment to the patient is being challenged by external forces of change within our societies.
>
> Recently, voices from many countries have begun calling for a renewed sense of professionalism, one that is activist in reforming health-care systems. Responding to this challenge, the European Federation of Internal Medicine, the ACP-ASIM Foundation, and the ABIM Foundation combined efforts to launch the Medical Professionalism Project (www.professionalism.org) in late 1999. These three organisations designated members to develop a "charter" to encompass a set of principles to which all medical professionals can and should aspire. (American Board of Internal Medicine 2002:520)

Acceptance of a definition for professionalism, similar in concept to the one used by organizational behavior sociologists, was evidenced by a report issued in May of 2002. The Conference was cosponsored by the Association of American Medical Colleges (AAMC) and the National Board of Medical Examiners (NBME), for the purpose of assessing the state of medical student professionalism. It culminated with suggestions for improving and promoting professional behavior. The medical college professors, students, and administrators from across the country in attendance identified eight categories of professionalism for use in the education of potential physicians as follows:

Professionalism Categories Template

Category	Might Also Include
1. Altruism	
2. Honor and Integrity	Honesty
3. Caring and Compassion	Sensitivity, tolerance, openness, communication
4. Respect	Respect for patient's dignity and autonomy, respect for other health care professionals and staff including teamwork, relationship building
5. Responsibility	Autonomy, self-evaluation, motivation and insight
6. Accountability	Commitment, dedication, duty, legal/policy compliance, self-regulation, service, timeliness and work ethic
7. Excellence and Scholarship	Management and mentoring
8. Leadership	

AAMC/NBME 2002

Conceptualization of Organizational Behavior Theory Professionalism

In the late 1960s Richard H. Hall identified and tested 10 questions relating to each of five attitudes associated with the latent principals of professionalism in various occupations. He employed a Likert scale to measure each question on a survey tool in his organizational behavior research. The principals being tested by Hall were: 1) Reference to a professional organization as the major source for values, beliefs, and identity; 2) Belief in public benefit derived through the profession; 3) Belief in the notion of self-regulation and peer control; 4) A sense of calling to the profession; and 5) Feeling of Autonomy.

In 1972, William E. Snizek, while teaching at Western Kentucky University became familiar with Hall's developing survey tools and decided to examine the empirical "fit" of Hall's 50 questions in the above categories using rotated factor matrices. Hall's (1968) data collection consisted of 328 degree holding professional subjects representing eleven professional groups (physicians, nurses, accountants, teachers, lawyers, social workers, stock brokers, librarians, engineers, personnel and advertising managers) to test the survey design. Snizek (1972) collected additional data from "566 aeronautical, nuclear, and chemical engineers, physicists,

and chemists". In Hall's data the physicians were all either practicing in a large government hospital or at a university student health clinic, both in an urban setting.

Snizek found that using the five questions with the best empirical fit in each category instead of the full ten questions on the original survey design only reduced the overall questionnaire reliability by .02 consistently across both sample sets. The reliability scores in the data Hall collected was reduced from .86 to .84 while Snizek's data set reliability dropped from .80 to .78. Snizek recommended that by dropping half of the questions from the original survey tool significant empirical overlap could be avoided while an improvement in unidimensionality could be obtained (Snizek 1972).

Tenet #1 – Professional Organization as Reference

Organizations reinforce their identity through the conformity of beliefs and values shared by their membership. This 'shared consciousness' is nourished through investigation of homogeneous interests by the organization's members and distribution of collected knowledge gained through a central resource such as a professional journal focused on these topics (Frankford, et al. 2000). Meetings of the membership allow colleagues to interact and exchange information in an informal way that reinforces the group norms and promotes higher standards of practice among peers.

Tenet #2 – Belief in Service to Public

The altruistic viewpoint, especially in medical practice is an important standard of conduct dating back to the Period of Enlightenment Kantian theory, which is reinforced as a moral duty from the very beginning of medical school training through the provision of service learning and indigent care. This belief in public service is tied closely to the autonomous nature of medical practice and evidenced by the long hours of study and apprenticeship involved in preparing to become a physician. It is also evidenced by the medical practitioner's lifelong commitment to provide care wherever there is a need (Knupp 2006). The practicing physician is publicly bound to "first do no harm" at the ceremony for licensure when they take the Hippocratic Oath. The historical value and personal investment placed in this process instills the ongoing belief that the process of delivering healthcare is vital and beneficial to the world is again derived from the initial work of Talcott Parsons. Edward A. Goss developed this further, looking at the benefits of work performed for both the practitioner and the public (Hall 1968).

Tenet #3 – Belief in Self-Regulation

Peer endorsement of ability provides validity to the knowledge, skill and commitment exhibited among physicians (Casalino et al. 2003). Referral networking of patients with special problems creates an avenue of self-monitoring judgment and informal sanction by colleagues for those who do not meet the acceptable group standards of practice. This practice goes far beyond the concept of team effort it also opens other avenues of constraint based in public awareness and patient trust to become a part of the evaluative process (Irvine 1997). Members of a professional group can become 'outsiders' if they do not conform to the expectations of their peers. Participation in this conventional labor market practice also provides individuals with special area expertise to exert discretionary control over the content of their own workload as well as collegial control over their referral of patients to others (Osnowitz 2006).

Tenet #4 – Sense of Calling to Field

In the words of Max Weber (1978) this "passionate devotion" is what gives personal meaning to the day-in-day-out experience of life as a professional. The internal belief of the necessity of your presence provides satisfaction beyond the economic concept of value-for-service exchange. To be 'called into service' in any profession entails the fulfillment of personal sacrifice and the life-long pursuit of an internal need to give more – be it time, knowledge, or skill in practice. Belief that you have been called to serve allows the performance of an act of healing, in the medical profession, to be provided on a personal level without thought of reimbursement or compensation (Snizek 1972).

Tenet #5 – Feeling of Autonomy

The ability to exercise personal judgment and independent decision making in the process without pressure from external sources defines a professional at the pinnacle of their performance. The use of critical reflection upon one's actions in the knowledge that you alone are responsible for them continually serves as motivation for improvement of knowledge, skill and judgment in a changing world that presents daily challenges for immediate and decisive action (Swick 2000).

CHAPTER 3
METHODOLOGY

Research Strategy

The breadth of attitude and behavior addressed by the individual questions used to measure the tenants of professionalism in Hall's Professionalism Scale are highly correlated for reliability (Snizek 1972) and representative of the issues addressed in organizational behavior literature historically by sociologists such as Harold L. Wilensky, William Kornhauser, and Peter M. Blau (Hall 1968). Current interest in the concept of professionalism within the medical community is high as shown by the number of articles recently published in accredited journals on the subject. These factors and minimizing the time needed for completion of the survey by working physicians through the reduction in total number of questions improves the likelihood of compliance by subjects in a mail survey strategy according to a recent study conducted in Great Britain (Barclay et al. 2002). Compliance with mail requests for information is of special concern to this thesis given the falling response rates of general practitioners involved in postal questionnaire studies and the planned research strategy in place for gathering data. In that regard every effort will be made to follow the steps for improving survey response set forth by Barclay et al. (2002) and Donald A. Dillman (1978).

Sampling Design

Using a cluster sample of randomly selected physicians serving rural Virginians to collect original data, this research has located its focus in the Roanoke Valley and Southwestern Regions. Demographic information from the US Census Bureau's identification system for Rural-Urban Continuum Codes has been used to identify these regions as containing small metro, micropolitan adjacent, micropolitan nonadjacent and non-metro core areas.

Physicians predominately located in the small metro (population <1,000,000), and micropolitan (population <50,000) cities and towns currently service this region's health needs although populations of more than 30 locations in this region remain designated as medically underserved. These physicians were located through their membership in a local medical association, the Southwest Virginia Medical Society, which in 2004 posted a roster of members on its website (http://www.svcms.org). It was important to base the sampling of this thesis

within the membership of such an organization due to the premise that reliance upon such an organization is one of the tenets of professionalism to be examined.

This organization has served the medical practitioners of Southwestern Virginia since its inception in 1852, when the Society formalized its by-laws at a meeting held in Abingdon, Virginia. Although the name of the organization has changed several times during the long and distinguished history, it has been known as the Medical Society of Southwestern Virginia since 1920. In 1976 there were 433 members of the Society, making it one of the largest medical groups of its kind in the state. Most of the members make their homes in the 'Fighting Ninth" Congressional District which spreads from Montgomery County in the east to Lee County in the Western tip of the state. Defining its role in the life of area physicians is a quote from an editorial about the Society that appeared in the *Virginia Medical Monthly*, "The Society…has made significant contributions to continuing medical education, and has been a monumental influence in maintaining and strengthening the medical profession of Southwestern Virginia" (Kaufman 1976).

The list of members at the time the roster was initially taken from the online webpage presented a population consisting of 339 physicians representing office locations from Roanoke to Pennington Gap and 32 medical specializations from Allergies to Vascular Surgery. The current Secretary/Treasurer of the Society is counted among the respondents to this survey.

Additional information describing the gender distribution, historic migration, or group location prior to the current information cited on the survey instrument is not available about respondents. The roster was transferred alphabetically into a spreadsheet database using the MS Excel software and 100 members were selected to receive a mailing packet using the random number generation function of that same program (with replacements selected in the same manner without duplication for undeliverable mail).

Self-report Survey

Collecting quantitative data through a mail survey reduces the necessary time spent away from his/her practice by the physician, and the self-reported mail survey maximizes convenience by allowing them to select their own time and place in which to respond. Although this method of data collection does not allow for the expression of fully explored open-ended questioning as in face-to-face or even telephone interviews, it does provide a categorical response continuum

(Likert scaling) and space for comments at the end will allow the physician to personalize any information they would like to include for research consideration. The survey instrument allows for the adequate measurement of professionalism tenets and for the purposes of this study provides the empirical data needed although additional ethnographic information would provide more personal insight and depth to the concept.

A possible limitation of this method is the gate-keeping function served by many office managers and physician's secretaries who may consider filling out a survey to be a waste of time for the physician and discard it without the physician's knowledge. This could significantly reduce the number of responses received and limit the statistical power of the sample size.

Data Collection and Cleaning Process

An Institutional Review Board (IRB) expedited approval application was submitted for review on October 21, 2004 and approval granted on November 1, 2004 for data collection. During this two week period a stratified random sample frame of one hundred physicians was drawn by random number generation and matching from 339 alphabetically assembled and pre-numbered names of physicians, taken from the membership roster on the Southwest Virginia Medical Society web-site (http://www.svcms.org).

To augment the first wave of the survey's location rate of 91%, replacement names were drawn using the same random number generator and sample frame population (without duplication). Packages containing the questionnaire and return envelopes were then hand addressed and sent to the replacements for the 9 undeliverable survey packages from the initial mailing. An unexpectedly high cooperation rate of 45.4% was accomplished from the receipt of 44 completed surveys and one partially completed survey. This was above the expected expectation for cooperation from the medical community. There were 3 physician packages returned with identification as retired from practice, yielding a total eligibility rate of 96.7% for both survey waves (11/2 and 11/18). Total response rate was calculated using only the known percentages of participation, yielding a rate of 40%.

All mailing packages were prepared using the "total design method" developed by Donald A. Dillman (1978) to maximize response rate. The initial mailing was sent out November 2, 2004. The package (Appendix B) for each potential respondent included:

1) A personally signed letter from this researcher on letterhead supplied by the Virginia Tech Sociology Department with their Logo, describing in detail the

precautions taken for confidentiality of data, the project purpose, and a request for their participation;

2) A copy of the survey instrument;

3) A self-addressed, pre-stamped, and numbered envelope for screening purposes used to prevent duplication during the second round of mailings which took place November 17, 2004.

The letters from both mailings 1 and 2 inform each physician about the purpose of the project and provide general background information on the researcher. As required under IRB specifications it also assured the respondent of confidentiality and that reporting of analyses would include combined data in categorically descriptive information. The last paragraph of the letter also provided direction as to their rights under the Institutional Review Board process and served to satisfy the informed consent regulations for the granting of implicit rights to use the their responses.

The survey instrument, employed short closed-end questions to identify general demographic information about respondents, the total number of years they have practiced medicine (medical tenure), and their participation in solo or group practice, the number of members comprising the group with which they practiced (group size). These answers were combined with the condensed version of Hall's Professionalism Scale as recommended by William Snizek (1972). The professionalism scale uses a combination of both positively and negatively oriented questions for scoring responses to situational activities and opinions which can be applied from the physician's lived experience.

After consideration of several comments received from the first mailing responses regarding the lack of connection between the survey column headings and the opinions being requested, the headings were reworded as shown on the second mail survey in Appendix B. The revised version of the survey replaced the original in the second round mailing with the Likert Scale headings changed as follows: *Very Well* became *Strongly Agree*; *Well* became *Agree*; *Neutral* remained unchanged; *Poorly* become *Disagree*; and *Very Poorly* became *Strongly Disagree*. Of the questionnaire responses received, eleven out of the forty-five returned were the new version, the rest were the original format questionnaire.

The package also included a pre-stamped and self-addressed return envelope for the convenience of the physician provided to increase the likelihood of their participation. These

envelopes were numbered on the inside flap during the first mailing so that the respondents would not be re-sampled during a second round of survey mailings. The second mailing packet sent to non-responding physicians after a period of five days elapsed without receiving a response between November 18 and 22, 2004. Twenty-eight surveys were received on or prior to November 18, 2004, the remainder received between November 22, and December 31, 2004.

For the purposes of confidentiality, all response data was collected, compiled into an MS Excel spreadsheet, and kept by me with additional Institutional Review Board (IRB) approved access granted upon request only to the Primary Investigator on the project, Dr. William Snizek. Peter Mateyka was granted access to a compiled spreadsheet of data for preliminary statistical analysis, where response records were identified by date of receipt only. At no time since their receipt has anyone else been allowed to access the original survey responses, as was promised in the contact letter and specified under the IRB application approval.

Data Coding Process

Initially this project was undertaken as a class assignment for Sociology 5604, "Organizations in Society," in Fall 2004. The initial time allotted by a scholastic semester did not allow for either the final reception of survey data or full analysis of the potential for the data collected. The initial projected time frame for completion was:

Table 1. Class Project Timetable

October 21, 2004	IRB application submission
October 21-November 1, 2004	Generic mailing package development
November 1, 2004	IRB approval
November 1-2, 2004	Sample preparation and initial mailing
November 5, 2004	First response period begins
November 17, 2004	First response period ends and Second mailing to non-responsive sample members is sent
November 22, 2004	Second response period begins
November 27, 2004	Preliminary data collection ends
November 27-December 15, 2004	Preliminary data analysis conducted[3]
December 15, 2004	Final class project summary submitted
December 31, 2004	Final survey response received

[3] Preliminary data analysis conducted by Peter J. Mateyka, co-author of final class summary report.

For purposes of a class project, Mr. Peter Mateyka did the reliability and factorial analysis the collected response data was compiled using the date of receipt as identification, thus separating the original contact information for each physician from the data set. A Microsoft Excel spreadsheet program was used for initial data entry and the individual datum were then transferred into SPSS for analysis. Using the individual question responses as indicated above coded 1-5 and 99 for non-response, an average scoring calculation within each tenant group was calculated. Each respondent's average score on the five tenets were then added to arrive at an index score for each respondent. The scores were then analyzed for a relationship between the five tenant groups of questions, and the length of tenure in medical practice, and/or the size of group in which the physician practices using bivariate analyses. The preliminary statistical analysis was included in the class project summary during the fall semester of 2003 for SOC 5604: Organizations in Work.

For this thesis the data was again collected and entered from the original response questionnaires by me directly into a new SPSS file using the mnemonic key as shown above with the recoding of missing data as system missing. The data entry was rechecked against the initial entry into MS Excel for accuracy. It was at this point that a mistake in transcription from Hall's original survey was noticed. Question number 31 from Richard H. Hall's original survey was inadvertently inserted in the place of question number 36 which had a much higher factorial rating relating to the tenet of reliance on a Professional Organization as Reference. In the work of William Snizek question 31 was "shown to have little, if any, discernible "fit" within *any* of the five theoretically established components of professionalism" (Snizek 1972). It will remain within the tenet and be tested for purposes of this analysis as if it were part of the originally recommended question set.

Measures

Self-reporting of questions related to the independent variables identified below was placed on the survey instrument before the reduced version of Hall's Professionalism scale to describe the latent concept of <u>experience</u>. Measurement of these variables is shown below *(Coding for mnemonic in parentheses):*

Medical Tenure – question #1 responses were subtracted from the current year in which the survey was received and grouped into the following categories of experience: 11-20 years(1); 21-30 years(2); 31+ years(3).

Group Membership – question #6 (dummy variable Solo = 0; Group = 1)

Specialization – question #3 was self-reported and checked against the 2005 Virginia Physicians Directory listing for each respondent combining Family Practice/Internal Medicine/Pediatricians into a group labeled as a Primary Care Specialty (dummy variable Specialist = 0; PC = 1)

Rurality – determined from the mailing address zip code and the Urban Influence Continuum as provided by the US Census Bureau (dummy variable Small-metro = 0; Micropolitan/Rural = 1)

Each of these variables measures a different piece of the individual physician's experience within the practice of medicine and shapes their personal interpretation of underlying social values such as power and authority. These social constructions ultimately shape the interactions of the physician with patients, peers, and co-workers in the medical setting.

Specialty certification was a self-reported question on the instrument however; each response was verified by the researcher using the 2005 Directory of Virginia Physicians published annually by the Medical Society of Virginia. Some specialty practices are more physically and mentally demanding than others and for that reason have lower tenure rates and higher rates of group participation (providing the ability to share duties such as times on-call). Responses for the following variable are being utilized as a control:

Specialty Certification – question #3. If physician has specialized training in a particular field of medicine other than primary patient care, then they will be coded as 0, while primary care physicians such as Family Practitioners, Internal Medicine Practitioners and Pediatricians will be coded as 1.

The special focus of this thesis is the placement of these physicians in rural practice which due to the demands of a medically underserved and increasingly aging population exert additional pressure on physicians. Therefore another control variable has been created to locate the physician by the geographic location of their office. This will also be utilized as a control for differences in responses.

Rurality – Small metro – Roanoke/Salem (0); Micropolitan/Rural – All others (1);

The dependent variable is the latent concept of professionalism which has already been defined by five questions for each of the five components above. Each question's response was

scored mnemonically regardless of version regardless of directionality of the question as follows: Very Well/Strongly Agree = 4; Well/Agree = 3; Poorly/Disagree = 2; Very Poorly/Strongly Disagree = 1; and Neutral = 0. Recoding for directionality of question intent will be done at a later time. The five questions within each tenet were tested for reliability using Cronbach's Alpha function of SPSS with the data split between mailing sample responses for comparison across the substituted wording change. An additive index was then created from the variables scoring as consistently correlated in the factor analysis correlations using SPSS to compile the Likert scale responses to the questions within each category into a single variable representative of the measurement of the most effective questions within the five tenets for use in regression analysis. Question numbers are shown on the survey instrument (Appendix B) and are listed here in conjunction with the tenet they describe:

Table 2. Origins of Survey Questions and Coding Mnemonic

Tenet (* indicates reverse-coded question)	**Physician Questionnaire #**	**Hall's Scale #**
Professional Organization as Reference	8	1
	11	6
	18	16
	22*	26
	23*	31
Belief in Service to Public	9*	2
	12	7
	15*	12
	19*	17
	29	47
Belief in Self Regulation	13	8
	20*	18
	24*	33
	27*	43
	30	48
Sense of Calling to Field	14	9
	16	14
	21	24
	25	39
	31	49
Feeling of Autonomy	10	10
	17*	15
	26*	40
	28	45
	32*	50

The professionalism scale uses a combination of both positively and negatively oriented questions for scoring responses to situational activities and opinions which can be applied from the physician's lived experience. The questions themselves are coded as ordinal response categories 0-4 with the neutral response coded as 0. Negatively oriented (reverse-coded) questions are handled by maintaining a consistent strength of response correlated to the higher level and indicated through the placement of an "*" on the questionnaire mnemonic above. These questions were recoded for consistency of direction in SPSS.

Analysis Strategy

Measures of individual physician responses to questions regarding their attitudes and behaviors in the practice of medicine were analyzed for comparative reliability within tenet, survey heading type, group membership, and rurality. Regression analysis was used to examine the relationship of these attitudes and behaviors to the physician's medical tenure and group participation. It is hoped that through this research, a measurement of medical professionalism can be quantified and a positive relationship established to the length of service and the organizational size in which physicians practice.

The professionalism index forms the empirical basis of the dependent variable to be analyzed in correlation to the independent variables: time since graduation from medical school (*medical tenure*), and individual levels of authority and responsibility in the medical practice setting through identification of solo or multiple partner practices (*group membership, group size*), while controlling the sociological and geographical constraints on the medical practitioner (*demographics of specialty and location*).

Ordinary least squares regression using three control variables as outlined above to assess whether a difference can be seen in the life experience and professionalism scoring of:

1) Solo practicing physicians as compared to group practicing physicians.
2) Physicians with extended medical tenure (31+ years) as compared to physicians who have been in the field for 30 years or less.
3) Compare the professionalism index scores of rural physician practices to small metro physician practices.

CHAPTER 4
FINDINGS

Limitations

It should be noted that although the author of this paper and her graduate committee are well pleased with the response received (N=44) in this project, the sample size is relatively small and may therefore be productive of false positive (Type II) statistical errors. This restriction being noted the following results were found through implementation of the statistical functions of the software program SPSS.

Descriptives

Sixty-two percent of the survey responses were received prior to November 18, 2004 and originated from the first mailing. Of the seventeen remaining responses six originated from the first mailing and eleven were from the second mailing sets as indicated by the change in questionnaire column heading labels. All surveys were received on or prior to December 31, 2004. One survey could not be matched to any demographic information however the remaining forty-four were distributed as follows.

Ten surveys were received from physicians whose address indicated their practice was located either in Roanoke or Salem, the only small-metro are designated within Southwestern Virginia. The remaining thirty-four surveys came from rural locations under 50,000 in population. Of the ten Small-metro physicians seven were Specialists and three were Primary Care physicians and all ten practiced in a group setting. These physicians returned six surveys from the first mailing and four from the second.

Thirty-four surveys were received from physicians in Micropolitan and/or Rural areas as designated by the Census Bureau's Urban Influence Continuum. Among these, fourteen physicians were in Solo practice. Nine of these fourteen physicians served as Primary Care physicians either in Family Practice, Internal Medicine, or as a Pediatrician. The remaining twenty rural physicians practiced medicine in a group setting with only three Primary Care physicians in this type of practice. There were a total of eighteen Primary Care physicians returning surveys. Twenty-eight of the rural surveys returned were from the first mailing, equally distributed among group and solo practices. Only seven were received from the second mailing with three originating from group practicing Specialists.

Initial exploration of the data resulted in the following information about the forty-five physicians who responded to the survey. The shortest tenure reported was from a physician with eleven years of experience. Interestingly enough, both he and the physician reporting the longest tenure (60 years) are surgeons. The average length of medical practice in this sampling set was 29.4 years. This researcher can only guess as to why no physicians with less tenure than eleven years of medical experience returned the survey; however, this is the case in this sample. An assumption based in organizational behavior theory might be that physicians with short tenure are still in the acceptance phase for professional association membership and therefore less likely to be in a position to extend their power network and be included in the membership of such well-established groups (Emerson 1962).

Physicians with eleven to twenty years of experience (n=10) made up 22.2% of respondents. Physicians in the prime years of their practice with between twenty-one and thirty years of experience (n=11) made up an additional 24.4% of the sample. The 51.1% of our sample with over thirty-one years of experience make up over half of respondents. The remaining 2.3% is attributable to the one respondent that did not return the first page of the instrument which contained all demographic qualifying questions. Table 3 and Table 4 below provide additional descriptive information from the sample:

Table 3. Respondent Distribution by Location and Specialization (N=45)

Specialization	*Small Metro*	*Micropolitan and Rural*	*Years of Tenure Represented*
Allergy	1	0	28
Anesthesiology	0	1	31
Cardiovascular Disease	0	1	31
Dermatology	0	1	23
FP	0	12	18 - 41
Gen. Surgery	1	2	11 - 37
Hematology	0	1	16
Internal Med	1	5	13 - 33
Nephrology	0	1	29
Neurology	0	1	30
Neurosurgery	1	0	26
Obstetrics	0	2	25 - 32
Oncology	0	1	19
Ophthalmology	2	0	34 - 41
Otolaryngology	0	1	37
Pathology	0	1	43
Pediatrics	0	2	38 - 56
Psychiatry	1	1	14 - 33
Pulmonology	1	0	33
Radiology	0	1	34
Thoracic Surgery	1	0	60
Urology	0	1	15
Non-reported (Roanoke Postmark)	1	0	25

Table 4. Medically Underserved Areas Represented (N=11)

Physician's Location / Number of responses*	***Physician Specialty***	***Medically Underserved***	***Primary Care Health Professional Shortage Area***
Abingdon / 5	Anesthesiology - Dermatology - General Surgery - Internal Medicine – Obstetrics	Yes (Washington Co)	Yes (Washington Co)
Bristol City / 2	Family Practitioner – Psychiatry	Yes	No
Floyd / 1	Family Practice	Yes	Pending
Galax / 1	Obstetrics	No	Pending
Lebanon / 1	Family Practice	Yes (Russell Co)	Yes
Marion / 3	General Surgery - Internal Medicine - Pediatrics	Partially	Pending
Pulaski / 1	Family Practice	Partially	No
Roanoke City / Cannot be separated from the Small-metro area responses**	Allergy - Family Practice - Neurosurgery - Opthamology - Pulmonology - Thoracic Surgery	Partially	Yes
St. Paul / 1	Family Practice	Yes (Russell Co)	Yes
Wise / 1	Internal Medicine	No	Yes
Wytheville / 1	Family Practice	Partially	No

* Remaining surveys received from areas not Medically Underserved by the Virginia Department of Health: Blacksburg/7; Christiansburg/7; Radford/3; Richlands/1.

** Responses from Roanoke zip codes were combined with those of Salem in the Small-metro classification / 10.

This sample represents a wide range of years of medical experience, physician specializations and geographic areas. All of the physicians are practicing in medically underserved or within commuting distances of medically underserved residents in Southwest Virginia. Even the designation as Small Metropolitan area and the clustering of three major hospital complexes[4] in Roanoke City was not enough to fully reach the saturation of primary patient care physicians expected by the Virginia Department of Health. Collapsing the Family Practitioners, Internal Medicine, and Pediatricians in this sample into one group under the heading Primary Care almost evenly splits this sample. Twenty-one Primary Care physicians returned surveys, while Specialists completed twenty-four of the questionnaires in this sample.

When Hall introduced this survey initially he included physicians from two urban medical locations in his sample. The first was a group of 17 physicians located at a major university health facility; the second a group of 18 physicians from a government hospital. Of these 35 questionnaires distributed by Hall, he received a total of 21 completed surveys. This provided him with a combined return ratio of 60%.

In the current research a total of 100 physicians were initially mailed questionnaires with 45 surveys returned containing at least partial responses. Of these, a single physician returned a questionnaire from both mailing dates due to overlap of mailing dates. A response rate of 44% was greater than anticipated by this researcher.

Mean score comparison between Hall's physicians and the current sample using an additive index of the five questions related to each of the principal tenets appears in Table 5. During the development of his scale in 1968, Richard Hall expanded the original work of Harold L. Wilensky (1964) using representatives from a large variety of occupational settings to assess both professionalism and bureaucratic dimensions measured through separate Likert measurement scales. Hall also collected information through qualitative interviews providing background for each group, such as group requirements of professional licensure and frequency of membership and/or attendance at professional organizational meetings. This information was then associated with the mean scores on the attitude scales to determine the strength and validity of the scoring mechanism (Hall 1968). The reported information includes what Hall calls both

[4] Carilion Roanoke Memorial and Community Hospitals, HCA Lewis-Gale Medical Center, and the Veteran's Administration Hospital

aspiring and acknowledged professions, for comparative purposes with the current sample, it was necessary to only report part of Hall's total findings.

When Hall (1968) associated the attitudes measured through the scale instrument and the background information using cross-tabulation he found a strong association between Likert scale and verbalized behavioral responses (pp. 97). However, he does not report any specific tenet associations related to either type of data collected from physicians in his sample, as he does for the legal professionals. Hall includes a table on page 98 entitled "Table 2. Ranks on Professionalism Scales by Occupational Group," an excerpt from which appears in Table 5 below with the addition of the mean scores of the current sample:

Table 5. Ranks on Professionalism Scales by Professional Group Limited to Physicians

Occupational (Physicians Only) Group	Professional Organization as Reference	Belief in Service to Public	Belief in Self Regulation	Sense of Calling to Field	Feeling of Autonomy
Hall's Group 1 (N=10)	19.0	3.0	17.0	21.0	21.0
Hall's Group 2 (N=11)	5.5	7.5	9.0	16.0	12.0
Current Sample (N=38)	18.3	17.1	19.7	18.5	18.5

NOTE: Lower rank indicates lower degree of professionalism (Hall 1968)

According to Hall's (1968) research the dedication of a professional is reflected in both the tenets of Belief in Service to Public and Sense of Calling to Field, which reflected a wide range of divergence in his data. These differences were associated, by Hall, to the compensation received within the aspiring professions, such as teachers and social workers because a higher average scoring was seen among them as compared to established professionals like attorneys and physicians. However, when looking only at physicians the current sample resulted in a range of difference (17.1 – 18.5) that was much narrower than Hall's data suggests.

Reliability

Testing of reliability for all twenty-five questions of the survey using SPSS resulted in the following comparison of empirical "fit" within each category.

Professional Organization as Reference	(PO1-5)	= .318
Belief in Service to Public	(PS1-5)	= .690
Belief in Self Regulation	(SR1-5)	= .812
Sense of Calling to Field	(SC1-5)	= .630
Feeling of Autonomy	(AT1-5)	= .453

Even with the limitation of a small sized sample (N=44) I had hoped for higher Cronbach's Alpha scores than was actually achieved. The above values indicate that there may be quite a bit of multidimensionality left within the questions of Hall's scale as interpreted in today's medical environment. Therefore, I continued testing of the data using a Principal Component Factor Analysis to determine which questions were in fact not a good "fit" within each category. The results are compared below with the original data results collected from various professions by both Hall (1968) and Snizek (1972) in Table 6. Within each tenet, I have noted the correlations for the current sample which were determined to be best suited for a second component with an asterisk following the score.

Table 6. Varimax Rotation Factor Loading from Principal Axes Solutions for Five Pre-Established Categories

Tenets of Professionalism as based on Theoretical and Empirical Dimensions by Hall and Snizek		Hall's Data	Snizek's Data	Physician Questionnaire #
Professional organization as reference	1	.56	-.42	-.69*
	2	.58	-.24	.64
	3	.55	-.16	.62
	4	.52	-.44	.69
Question selected through substitution error -	5	.04	-.07	.83*
Belief in public service	1	.68	-.66	.88
	2	.55	-.50	.92*
	3	.47	-.53	.64
	4	.70	-.64	.73
	5	.63	-.31	.61*
Belief in Self Regulation	1	-.57	.31	.73
	2	-.45	.56	.90
	3	-.68	.64	.83
	4	-.67	.59	.68
	5	-.60	.47	.69
Sense of calling	1	.50	.53	.71
	2	.45	.55	.55
	3	.42	.68	.86
	4	.23	.30	.74
	5	.29	.39	.98*
Feeling of Autonomy	1	.71	-.69	.81*
	2	.64	-.61	.67
	3	.55	-.57	.72
	4	.71	-.73	.82*
	5	.66	-.70	.82

* Items selected as best empirically corresponding to a second theoretical dimension. The numbering at left indicates its location on the Physician Questionnaire using in the current sample of rural physicians.
Extraction Method: Principal Component Analysis
Rotation Method: Varimax with Kaiser Normalization

a. Tenet Rotations Converged in 3 Iterations for Professional Organization as Reference; Belief in Service to Public; Sense of Calling to Field; and Feeling of Autonomy

b. The Tenet of Belief in Self Regulation Converged during the Principal Component Extraction could not therefore be rotated.

After looking at the disparity between all three sets of scores, another complete factor analysis was run including all twenty-five questions as one set of variables. This analysis resulted in a rotation which realigned many of the variables into very different combinations than either Hall or Snizek's evaluation of latent concepts and introducing four additional components combinations. The Rotation Matrix of Principal Components is shown on the next page:

Table 7. Rotated Component Matrix (Listwise N=38)

	Component								
	1	2	3	4	5	6	7	8	9
SR1	.835								
SR5	.779								
SC2	.720								
SR2	.644								
SR3	.488								
AT3		.853							
SR4		.632					.403		
SC5		.517	.368						
AT5	.429	.511							
PS4			.780						
PO5			.748						
PS5				.830					
PS1			.419	.650					
PS3			.380	.520	.462				
PO1				-.454	.381		.413		
SC4					.854				
SC3	.429		-.352		.581				
SC1					.456			.406	
AT1						.821			
AT2						.596		-.364	
PO4							.802		
AT4						.465	-.571		
PS2								.834	
PO3	.379							.679	
PO2									.921

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a Rotation converged in 10 iterations.

The Cronbach's Alpha calculations producing the three highest scoring questions for each tenet as originally aligned in the documented analyses of Hall and Snizek were re-analyzed using current data. The previously documented combinations yielded higher Cronbach's Alpha

scores for each category using three questions than for five, except in the area of Belief in Service to Public, which only increased by thirteen one hundredths (.708). The analysis using the categories standardized by previous research was determined to be the best "fit" for the smaller groups (three questions) from the current data providing the following Alpha scores for each tenet:

Professional Organization as Reference	(Variables PO2-PO3-PO4)	= .380
Belief in Service to Public	(Variables PS1-PS3-PS4)	= .695
Belief in Self Regulation	(Variables SR1-SR2-SR3)	= .819
Sense of Calling to Field	(Variables SC1-SC3-SC4)	= .698
Feeling of Autonomy	(Variables AT2-AT3-AT5)	= .571

Although the scores improved somewhat across the board, two major tenets of professionalism remain below the acceptable level of reliability (.7) on their Cronbach's Alpha scores – Professional Organization as Reference and Feeling of Autonomy.

In an attempt to clarify at least some of the reasons behind the differences in reliability scoring in the current data cited above and the original analyses by Hall and Snizek, I went back to the data. When these splits were made in the data some interesting patterns in professionalism to setting began to emerge along the lines of possible theoretical interests explored elsewhere in this thesis:

1) **Experience** - Tenured physicians (31 years or more in the profession {n=23}) compared to those their prime (21-30 years of experience {n=11}) and those beginning to come into their own (11-20 years experience {n=10})

2) **Group Membership** - Physicians practicing within a group (n=30) compared to those in solo practice (n=14),

3) **Specialization** - Primary Care (n=21) compared to Specialized physicians (n=24), and

4) **Practice Locality** - Rural practices (n=35) compared to Small-metro (n=10).

Experience

First looking at a three-way split in the data for physician experience gave a surprising insight to differences that may be attributable at least partially to cohort generational variation. On Professional Organization as Reference, a dramatic deviation took place between the experience levels. The young group scored a negative Cronbach's Alpha, which is an indication

of covariance among the questions. However, the middle group of physicians in their prime years of practice reached a reliability level of .719; while the older group of tenured physicians dropped back into questionable consistency among their answers scoring an Alpha of .329. When the tenet of Belief in Service to Public was tested, both the younger groups were unable to reach an acceptable reliability level, scoring a .586 and .571 respectively, while the older group responded consistently to the questions with a score of .776. On the questions relating to Belief in Self Regulation of the Profession, all three groups reached an amazingly high level of agreement in their responses with Alpha's of .830, .941, and .815 in order of the tenure accumulated. Sense of Calling to Field to the Profession responses again placed the older group in the position of being the only group answering at a level of reliable cohesion with an Alpha score of .808, while the other group's scores were .535 for the young and .451 for the prime year physicians. When it came to the Feeling of Autonomy, again it was the physicians in their prime years of practice that reached an acceptable level of reliability with an Alpha rating of .712. The other groups in this tenet did not lag far behind however with scores of .643 in the young group and .513 among the tenured physicians, showing that their answers were not as consistent across the three questions related to Feeling of Autonomy.

Looking at the experience level variation in coherence of the sample tells us that the youngest group of physicians exhibits the most divergent responses. Only on the questions relating to Belief in Self Regulation did this group reach a reliable level of cohesion in their answers. The physicians in their prime years of practice with 21-30 years of experience also exhibit divergent attitudes for the majority of question groupings. The group of physicians with a medium amount of experience managed to reach acceptable levels of reliability on the tenets of professionalism dealing with reliance on a Professional Organization as Reference, Belief in Self Regulation and Feeling of Autonomy.

In this division of the data sample those with 31 or more years of experience were also of like mind on three of the tenets reaching acceptable reliability on Belief in Service to Public, Belief in Self Regulation and Sense of Calling to Field. Perhaps the two more experienced groups have gained local practical knowledge of the changing medical environment from living and working it for an extended period of time, which according to Abbott's (1991) article in the journal *Work and Occupations* contributes to the first order of professionalization.

Group Membership

Group members constantly scored lower Cronbach's Alphas than Solo practitioners on four out of five of the tenets of Professional Organization as Reference (.314 to .519); Belief in Self Regulation (.751 to .865); Sense of Calling to Field (.697 to .732); and Feeling of Autonomy (.403 to .708). Compared to the tenure data split above it was surprising to find that three of the four reach above the acceptable cut-off range of reliability. When we set the consistency of these answers against the setting of group practice, we can speculate that members of a group practice may hold the tenets of Belief in Self Regulation and Feeling of Autonomy as ethical aspirations held in esteem by practice group members as Sanderson-Austin and Wetzler (2001) found in their examination of Medical groupings. These standards were viewed as a perk unique to positioning of tenured members within the group structure and society. Solo practitioners may view these questions as targeted threats at their ability levels in practice, since any attempt at regulation or changing autonomy levels would have to come from outside their normal routines (Irvine 1997).

The tenet remaining below the .7 level of acceptability (Professional Organization as Reference) might be a result of a group member's greater involvement with their immediately available peers with whom they can readily engage on a daily basis, rather than reaching out to a regional, national, or even larger professional organization for information and ethical support (Emerson 1962).

On the tenet of Belief in Service to Public group members scored at a level of higher reliability (.758) than solo practitioners (.424). This makes perfect business sense when realizing that committing time and resources to public service work would impose an even greater workload upon a physician in solo practice. Stretching both his time and finances to provide public service in the community and the rise of the viewpoint that medicine is just another commodity might well explain the greater diversity of answers and lower reliability on this tenet (Feldman et. al. 1998).

Specialization

Dividing the data collected using this grouping system most closely resembles the recommended "split-half" testing system utilized by SPSS to divide variables into equal parts for reliability testing. Through the combination of Family Practitioners, Internal Medicine

Practitioners and Pediatricians (n=19) as compared to other Specialties (n=22) the data responses become almost evenly divided.

On the questions relating to reliance on a Professional Organization as Reference and Feeling of Autonomy, neither primary care physicians nor the physicians with specialized training were reliably consistent in their response. The highest scoring was achieved by the Specialists on the Professional Organization as Reference tenet (Cronbach's Alpha of .456) which is well below acceptable levels. In consideration of the Feeling of Autonomy questions the Primary Care Physicians scored a somewhat higher Alpha of .599, but still did not meet the reliability level needed. This indicates that neither of these tenets resonated in a consistent manner among either group of survey participants.

In testing the scales related to the tenets of Belief in Service to Public and Belief in Self Regulation, the Specialists out scored Primary Care physicians with a reliable level of homogeneity in their answers, scoring .726 and .845 respectively. The questions in the Sense of Calling to Field tenet also reached a level of reliability scoring .789; however, it was the Primary Care physicians who responded more cogently on this tenet. On the tenet of Autonomy the Primary Care physicians (.599) barely out scored the Specialists (.554) in reliability, but neither reached the level of acceptability.

Splitting the data in this manner did not provide a reliable insight to differences expressed by either Primary Care or Specialists on the tenets of Professionalism for our sample. Hall used the split-half method, corrected with the Spearman-Brown formula when pre-testing his data among physicians, nurses, teachers, and accountants with consistently valid results (Hall 1968).

Rural Locality

Organizing the data into compared groups based on the population of the area where the practice was located (10 Small-metro versus 35 Micropolitan/Rural) presented a viewpoint that targeted very different working environments for the practitioners. Again in this data comparison, the reliance on Professional Organization as Reference tenet continued to score Cronbach's Alpha below an acceptable level of reliability with the Small-metro physicians reaching the higher consistency of .524. Rural physicians scored only.354 on this tenet. On the Feeling of Autonomy questions, it was the Rural-based physicians who scored higher (.617) than

did their urban counterparts who scored only .369, but their answers were still too varied to receive an acceptably reliable rating.

These two tenets seem to be consistently less homogeneous in sample responses than the other tenets. When developing his scale, Hall (1968) found that physicians who believed strongly in professional organizations attended the meetings of the organizations to which they belonged. Perhaps the growing number of aging patients in need of care by rural physicians, as well as demands of operating a medical practice in today's managed care environment preclude behaviors which would reinforce these tenets (Sanderson-Austin and Wetzler 2001).

The scoring on both the Belief in Service to Public and Sense of Calling to Field tenets were very close to the .7 cut-off for both groups in this data split with Small-metro physicians scoring .671 and Rural physicians .687 on Belief in Service to Public and .696 for Small-metro physicians and .712 for Rural physicians. The tenet of Professional Belief in Self Regulation again reached the highest level of reliability with a Cronbach's Alpha score for Rural physicians at the level of .836. However, the Small-metro responses were in the negative range on average indicating that for these physicians the questions carried a high level of covariant properties.

CRONBACH'S ALPHA – RELIABILITY SUMMARY

In order to make sense from all the different comparisons in this section, I looked across the various data split options of the physicians being asked to respond. One interpretation is clear from that viewpoint – no tenet of Professionalism being tested in this sample was as constant in reliability as when it was tested thirty years ago except Professional Belief in Self Regulation. Table 8 below summarizes the scores of reliability within each comparison of data.

Table 8. Cronbach's Alpha Reliability Comparisons Across the Data Sample Variations (N=44)

Professionalism Tenet	Tenure in Medical Practice			Group Membership		Specialization		Rurality	
	Young	Prime	Tenured	Solo	Group	Primary Care	Specialty	Metro	Rural
Professional Organization as Reference	.-.559	.708	.329	.525	.314	.325	.456	.524	.362
Belief in Service to Public	.586	.571	.776	.424	.758	.665	.726	.671	.687
Belief in Self Regulation	.830	.941	.815	.751	.865	.783	.845	-.309	.836
Sense of Calling to Field	.535	.451	.808	.697	.732	.789	.603	.669	.712
Feeling of Autonomy	.643	.712	.513	.708	.403	.554	.599	.369	.617

We can also see that there was no advantage in our sample to the split-half comparison of data. The differences of Primary Care practitioners remained when they were combined across the specializations of Family Care, Internal Medicine and Pediatrics; even though they function as first response gate-keepers for the general public and as referring physicians to other Specialists. This data comparison offered no insight what-so-ever to our understanding of why the tenets of professionalism vary in the responses given in this sample.

CROSS-TABULATION

Using Chi-square analysis to determine relationship patterns in this sample produced very interesting results, however none of the calculated percentages reached the .01 level of statistical significance. Looking at tenure compared to group setting revealed a predominance of tenured physicians practicing within group settings (68.2%). When we added the layer of specialization to the Chi-square calculation this majority of tenured physicians grew even larger for the Primary Care physicians practicing in groups to 83.3%. Finally, with the inclusion of Rural/Metro practice location the most surprising pattern emerged. One hundred percent of the physicians located in the metro were also in group practice with 70 percent of those reportedly practicing medicine for over 30 years. Among the rural physicians those with similar levels of experience were practicing in a group setting twice as often as their younger counterparts (62.5% to 37.5%).

UNIVARIATE TESTING

Before beginning any further testing of the data sample, an additive index variable was created using combined mean scores for the five tenets of Professionalism as described above. This dependent variable was placed on the vertical scale (Y-axis) in comparison to the independent variable of Medical Tenure on the horizontal scale (X-axis) of the scatter plot in Figure 1 below to visually assess any linear pattern. A positive linear organization to the data is seen with trend line slope ascending across medical tenure; therefore, further analysis is needed.

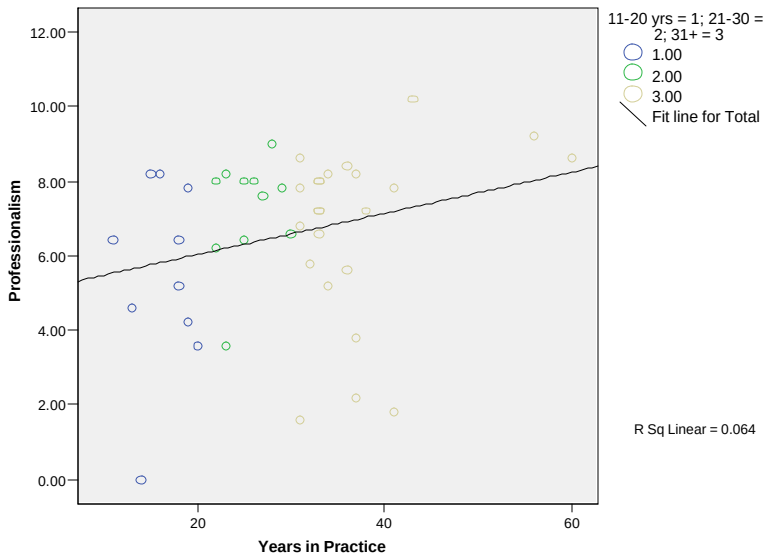

Figure 1: Graph of Tenure and Exhibited Professionalism

The scatter plot of indexed variable Professionalism across the medical tenure of respondents above enables the reader to see the diversity of attitude strength, which occurs in this sample (N=44). The outlying responses occur most noticeably among the older tenured physicians, but there is one physician with an outlying attitudinal mean score in the youngest group as well. Physicians in their prime years of practice seem to cluster more than the other two groups, with the majority placed above the equation line showing us a best fit.

CORRELATIONS

To assess the strength of association between the indexed dependent variables (created in order to save degrees of freedom) and the independent discrete variables of Tenure, Group membership, Specialization and Rurality, a matrix was constructed and shown in Table 9 below.

The association between the individual components of the dependent variable (tenets of professionalism) and the independent variables did not reveal the expected positive relationship as visually defined by the graph of the means of Professionalism over Medical Tenure (shown above). Instead the only independent variable associated with any of the dependent variables at a significant level was relationship between Belief in Service to Public and Rural location.

It was not the expected length of experience (Tenure) that is as significantly correlated to an increase in Professionalism as the rural practice location according to this analysis. The combination of altruistic values historically stronger among rural communities and the immediate contact of the doctor-patient relationship in primary care also strongly associated

within this population that seems to provide the basis of this finding. This would also follow with the initial proposition that rural areas do in fact offer protection and foster resistance to the forces of change at play in the medical profession. Of course, the limitations of the small sample size may be causing false positives to influence the statistical findings as well.

Table 9. Correlation Matrix of Dependent and Independent Variables (N=44)

	Professional Organization as Reference	Belief in Service to Public	Belief in Self Regulation	Sense of Calling to Field	Feeling of Autonomy	Tenure	GROUP	Primary Care
Belief in Service to Public	.095							
Belief in Self Regulation	.323*	.296						
Sense of Calling to Field	.353*	.212	.326*					
Feeling of Autonomy	.057	.393**	.477**	.084				
Tenure	.234	-.062	.102	.266	-.232			
GROUP	-.102	.218	.270	.157	.274	.068		
Primary Care	-.074	-.049	-.015	.033	.021	-.042	-.381*	
Rural	-.150	-.317*	-.270	.086	-.097	-.270	-.370*	.350*

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

There are strongly associated relationships between the tenets themselves as is expected when components of latent concepts are explored. And there are significant levels of correlation between the type of medical specialization and whether the physician is located in a rural area and practices in a group or not. These relationships were also somewhat expected and based on theoretical differences as previously explored under the reliability.

CHAPTER 5

CONCLUSION

Professionalism is an important principal introduced early in the training of a physician. During recent years the concept has received much publicity and is the focus of several national and international taskforce groups concerned with its presence in the medical school curricula. Tools exist which can be borrowed from other theoretical disciplines, such as Organizational Behavior Theory in Sociology to measure the existence of Professionalism among practicing physicians. One such tool was developed by Richard H. Hall (1968) and refined by William Snizek (1972) and utilized in this case study among rural physicians. The periodic testing of such tools is vital to establish their validity and establish benchmarks of change measurement within specific occupations and professions.

To tease out the differences among the professional attitudes of physicians it is important to understand their location within the practice of medicine. And to distinguish between the factors at play in some economic markets that may not be so firmly established in other locations. Some of the factors which impact the way in which a physician performs his daily obligations are: 1) the individual's length of experience in the field in which he/she practices; 2) the sharing of daily interaction of this experience with peer physicians in group practice settings; 3) the differences between the emotional and physical demands of specialized practice and primary care; and 4) the economic market demand for his/her services as measured by geographic location and changing demographic constituencies.

Analysis of the data collected in this case study is inclusive as to the significance of tenured experience, but clearly brings into focus the variations which exist among medical practitioners in the Southwestern Virginia region. The tremendous breadth of knowledge and levels of specialized service available to residents even in medically underserved areas provides a cushion against the aging process and frailties of body that accompany it. Professional attitudes as measured in this sample of practicing physicians in Southwestern Virginia offers proof of the proud historic tradition of rural physicians everywhere. Their dedication to healing and professionalism in medical practice are an integral part of social structure in many communities across the area. These individuals represent an elite group within our Society and are granted social and economic priviledges because of their skills and knowledge reach far beyond that attained by the average citizen.

Proposed Model

Through governmental mandates and managed care directives the status of the elite practitioner within the field of medicine is becoming more susceptible to the forces of the economic market. The possibility of market forces promoting a process of deprofessionalization among medical practitioners can be still be measured using Hall's Professionalism Scale by testing the cohesive nature of the latent principals of professionalism in the modern setting of rural healthcare, but may be better assessed with other tools available to social scientists. By exploring the attitudes of medical practitioners who face the increased pressures of demographic changes in a managed care environment, this study attempted to address the question: Is healthcare rapidly becoming just another commodity on the American market[5]?

Looking at levels of individual attitude change over time instead of through the static lens available in this type of survey I would suggest that additional research be done longitudinally within the medical profession with larger populations. The correlation of relationships between tenure in medical practice, group practice size, and discipline specialization have on each of the five tenets of professionalism separately and in combination could be more fully explored through regression analysis, but only in larger samples would this possibly yield significant results.

The dynamic process clarified through this thesis is visually described in the model below and can be stated as:

> *The lived experience in the practice of medicine (time spent in medicine) and size of the group (setting where a physician practices medicine) will directly reflect in the professionalism attitudes of the practitioner. These professionalism attitudes of the medical physicians will affect the type of medical specialization/s a medical student selects to practice as well as where he locates his/her practice. The personal choice of specialization will also directly affect a physician's professionalism due to the workload and physical demands of the care provided. The specialization choice will also directly affect the size of group in which the physician can practice and the length of time he/she remains in practice.*

[5] In "What is Left of Professionalism after Managed Care?" William M. Sullivan (year:page number) states, "Everywhere, the claims of productivity and profitability, elevated to commanding priorities by the "market model", are reshaping professional practice in ways that threaten to obliterate any distinction between the professions and business."

A graphic representation of the process is shown below:

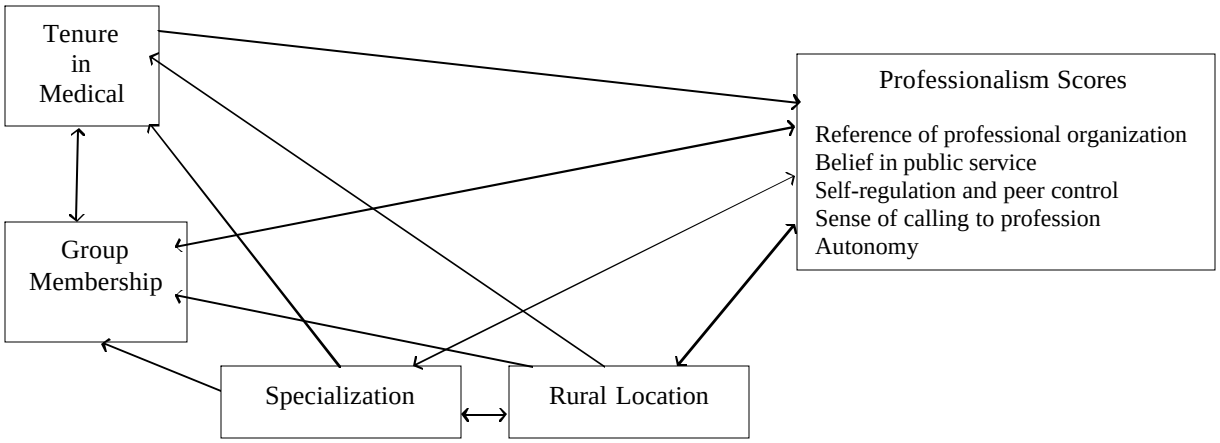

Figure 2: Experience Effects on Professionalism Model

Rural settings will not sustain all types of medical specialties due to market demand for services and requirements and costs of equipment that are only available in larger urban hospitals. The strength of professional attitudes held by a physician also affects the willingness to practice in the personally intrusive and demanding rural environment. Literature shows that rural physicians tend to put in longer hours and remain in medical practice later in life than metropolitan physicians. Under normal working conditions, a physician cannot readily switch from one specialization to another due to the demands of an established practice and the monetary considerations of retraining, nor can they easily entice newer physicians to join a primary care setting practice that is over burdened with a rural aging patient population, when there are better working conditions and more lucrative incomes available in the urban markets.

Even though the analysis contained in this thesis did not result in many statistically significant findings, it did explore the nuances of difference among practicing physicians and their attitudes towards professionalism. It also established significant change in the validity and cogency of Richard H. Hall's professionalism scale which should be re-evaluated for updates in its language and synergy to advances made in the medical environment since the late 1960s.

Because of the social importance attached to these attitudes by the public at large, the medical profession collectively, and the individual physicians this concept should continue to be considered a viable area of social research. Perhaps with further analysis it will yield tremendous amounts of understanding and awareness for the physicians currently in practice and

future generations of physicians. This research holds the potential of providing insight for the improvement of their daily workplace environment and social interaction with other professions.

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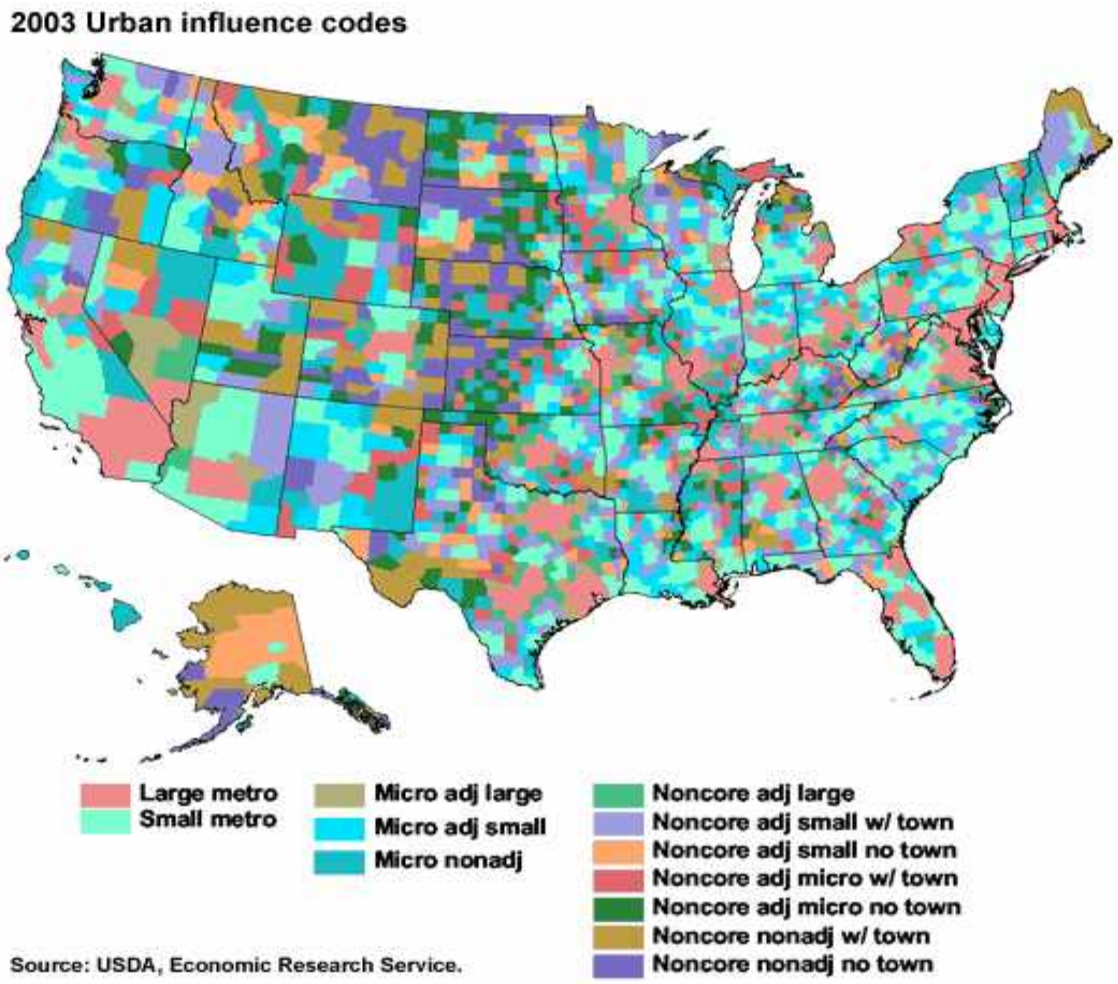
Appendix A: 2003 Urban Influence Codes

Code	Description	Number of counties	2000 Population	Square miles	Population per sq. mile
Metropolitan counties:					
1	In large metro area of 1+ million residents	413	149,224,067	267,423	558.0
2	In small metro area of less than 1 million residents	676	83,355,873	629,671	132.4
Nonmetropolitan counties:					
3	Micropolitan adjacent to large metro	92	5,147,233	94,178	54.7
4	Noncore adjacent to large metro	123	2,364,159	88,229	26.8
5	Micropolitan adjacent to small metro	301	14,668,144	285,527	51.4
6	Noncore adjacent to small metro with own town	358	7,855,590	334,361	23.5
7	Noncore adjacent to small metro no own town	185	1,879,264	336,499	5.6
8	Micropolitan not adjacent to a metro area	282	9,139,821	338,256	27.0
9	Noncore adjacent to micro with own town	201	3,227,833	193,200	16.7
10	Noncore adjacent to micro with no own town	198	1,313,175	196,269	6.7
11	Noncore not adjacent to metro or micro with own town	138	2,247,189	488,521	4.6
12	Noncore not adjacent to metro or micro with no own town	174	999,558	285,304	3.5
	Total	3,141	281,421,906	3,537,438	79.6


2003 Urban influence codes
Large metro
Small metro
Micro adj large
Micro adj small
Micro nonadj
Noncore adj large
Noncore adj small w/ town
Noncore adj small no town
Noncore adj micro w/ town
Noncore adj micro no town
Noncore nonadj w/ town
Noncore nonadj no town
Source: USDA, Economic Research Service.

Appendix B: Sample Physician Mail Packette

Date (First Mailing: 11/01/04 & Follow-up Mailing: 11/18/04)

Doctor's Name
Doctor's Address

Dear Dr. *Last Name*,

My name is Peg Wimmer and I am a graduate student in Sociology at Virginia Tech. I am conducting a research project in which I need your help. The focus of this project is the effect familiarity of routine has on professionalism in medical practice. All that I am asking is that you take ten minutes of your time to fill in the enclosed survey form and return it in the pre-stamped, self-addressed envelope, also enclosed for your convenience.

The survey form purposefully does not include any reference to your identity. The anonymous return of information ensures that the answers will not be traced back to you personally, so that you can give me your honest and forthright opinion without fear of repercussion. When I receive the completed form your answers will be grouped with other physician responses and statistically correlated for use in my project. The survey contains questions about the length of time you have been in practice, size of your practice group, and your responsibilities within the organization. Several of the questions focus on how you view your role as a physician and your participation in the profession as a whole.

By completing and returning the enclosed survey, you implicitly grant me the right to the use of your responses in combination with others in this projects completion. Your participation will help me complete my Master's degree in Sociology and hopefully shed light on the many responsibilities and varying roles physicians have to fulfill as they complete their daily routine. If you have any questions about this research project, or any aspect of the enclosed questionnaire, please contact me at (540) 651-3435 or through email at pwimmer@vt.edu. Thank you.

Sincerely,

Peg Wimmer
Sociology Graduate Student
VPI & SU

Please give short answers to the following questions:

1. In what year did you receive your medical degree? _____

2. From what school did you receive your medical degree? _____

3. Are you certified to practice in a medical specialty? _____ (yes or no) If yes, what field(s)?
_____

4. How long have you practiced medicine in the State of Virginia? _____ (# of years)

5. When did you begin your medical practice in Southwestern Virginia? _____

6. Do you practice medicine as a member of a group of physicians? _____ (yes or no)
If yes, how long have you been with this group? _____
How many physicians, including you, see patients in this group? _____
7. Is your practice affiliated with a larger corporate network such as Carilion or HCA? _____

The statements which appear below describe various activities performed by physicians in the course of their work. Please indicate the extent to which each statement describes your <u>own</u> activities as a physician. If the statement describes your opinions or activities you perform **Very Well**, then check that box next to the statement. If it describes your opinions or activities, **Well**, then check that box, and so on. Please place a checkmark in the appropriate response for each question asked below:

#	Question:	Very Well	Well	Neutral	Poorly	Very Poorly
8	**I systematically read the professional journals.**					
9	**Other professions are actually more vital to society than mine.**					
10	**I make my own decisions in regard to what is to be done in my work.**					
11	**I regularly attend professional meetings at the local level.**					
12	**I think that my profession, more than any other, is essential for society.**					
13	**My fellow professionals have a pretty good idea about each other's competence.**					
14	**People in this profession have a real "calling" for their work.**					
15	**The importance of my profession is sometimes over stressed.**					
16	**The dedication of people in this field is most gratifying.**					
17	**I don't have much opportunity to exercise my own judgment.**					
18	**I believe that the professional organization(s) should be supported.**					
19	**Some other occupations are actually more important to society than is mine.**					

#	Question:	Very Well	Well	Neutral	Poorly	Very Poorly
20	**A problem in this profession is that no one really knows what his colleagues are doing.**					
21	**It is encouraging to see the high level of idealism which is maintained by people in this field.**					
22	**The professional organization doesn't really do too much for the average member.**					
23	**The real test of how good a person is in his field is the layman's opinion of him.**					
24	**We really have no way of judging each other's competence.**					
25	**Most people would stay in the profession even if their incomes were reduced.**					
26	**My own decisions are subject to review.**					
27	**There is not much opportunity to judge how another person does his work.**					
28	**I am my own boss in almost every work-related situation.**					
29	**If ever an occupation is indispensable, it is this one.**					
30	**My colleagues pretty well know how well we all do in our work.**					
31	**There are very few people who don't really believe in their work.**					
32	**Most of my decisions are reviewed by other people.**					

When you have completed this form please insert it into the self-addressed, pre-stamped envelope provided and mail.

Thank you for taking time to help me in this project!

Sample Doctor's Letter for Second Round Mailing (11/18/04)
November 17, 2004

Doctor's Name
Doctor's Addess

Dear Dr. *Last Name*,

My name is Peg Wimmer, I am a graduate student in Sociology at Virginia Tech and I am again asking for your help. I am conducting a research project and your response is instrumental in the completion of a viable piece of research. The focus of this project is the effect familiarity of routine has on professionalism in medical practice. All that I am asking is that you take ten minutes of your time to fill in the enclosed survey form and return it in the pre-stamped, self-addressed envelope, also enclosed for your convenience.

The survey form purposefully does not include any reference to your identity. The anonymous return of information ensures that the answers will not be traced back to you personally, so that you can give me your honest and forthright opinion without fear of repercussion. When I receive the completed form your answers will be grouped with other physician responses and statistically correlated for use in my project. The survey contains questions about the length of time you have been in practice, size of your practice group, and your responsibilities within the organization. Several of the questions focus on how you view your role as a physician, the role played by professional organizations such as the regional medical society, and the medical profession's role in our society.

By completing and returning the enclosed survey, you implicitly grant me the right to the use of your responses only in combination with others in this projects completion. Your participation will help me complete my Master's degree in Sociology and hopefully shed light on the many responsibilities and varying roles physicians have to fulfill as they complete their daily routine. If you have any questions about this research project, or any aspect of the enclosed questionnaire, please contact me at (540) 651-3435 or through email at pwimmer@vt.edu. Thank you.

Sincerely,

Peg Wimmer
Sociology Graduate Student
VPI & SU

Enclosure

Please give short answers to the following questions:

1. In what year did you receive your medical degree? _____

2. From what school did you receive your medical degree? _____

3. Are you certified to practice in a medical specialty? _____ (yes or no) If yes, what field(s)?
   _____

4. How long have you practiced medicine in the State of Virginia? _____ (# of years)

5. When did you begin your medical practice in Southwestern Virginia? _____

6. Do you practice medicine as a member of a group of physicians? _____ (yes or no)
   If yes, how long have you been with this group? _____
   How many physicians, including you, see patients in this group? _____
7. Is your practice affiliated with a larger corporate network such as Carilion or HCA? _____

The statements which appear below describe various activities performed by physicians in the course of their work. Please indicate the extent to which each statement describes your <u>own</u> activities as a physician. If the statement describes your opinions or activities you perform **Strongly Agree**, then check that box next to the statement. If it describes your opinions or activities, **Agree**, then check that box, and so on. Please place a checkmark in the appropriate response for each question asked below:

#	Question:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
8	**I systematically read the professional journals.**					
9	**Other professions are actually more vital to society than mine.**					
10	**I make my own decisions in regard to what is to be done in my work.**					
11	**I regularly attend professional meetings at the local level.**					
12	**I think that my profession, more than any other, is essential for society.**					
13	**My fellow professionals have a pretty good idea about each other's competence.**					
14	**People in this profession have a real "calling" for their work.**					
15	**The importance of my profession is sometimes over stressed.**					
16	**The dedication of people in this field is most gratifying.**					
17	**I don't have much opportunity to exercise my own judgment.**					
18	**I believe that the professional organization(s) should be supported.**					

#	Question:	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
19	**Some other occupations are actually more important to society than is mine.**					
20	**A problem in this profession is that no one really knows what his colleagues are doing.**					
21	**It is encouraging to see the high level of idealism which is maintained by people in this field.**					
22	**The professional organization doesn't really do too much for the average member.**					
23	**The real test of how good a person is in his field is the layman's opinion of him.**					
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Thank you for taking time to help me in this project!