

The Strengths and Weaknesses of Rural Healthcare as Experienced by a Rural Patient Population in Northeastern Pennsylvania

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Abstract:

In the northeastern Pennsylvania county of Bradford, there are three hospitals and roughly 9 clinics that serve an estimated sixty-three thousand residents. In order to assess the patients' perceptions of the quality of healthcare, a random telephone survey was administered to three hundred adult residents of that county between June and August of 2001. The survey included access to healthcare, basic health insurance information and perceived satisfaction with staff and providers.

This study shows some basic trends in Bradford County Healthcare: 1) 55 percent of patients can secure an appointment within two days of calling, they travel a distance of 5-30 miles to reach that appointment, and 88.7 percent receive care within Bradford County; 2) 90 percent have health insurance with 43 percent of the population having the insurance through a private organization; 3) 42 percent of the population felt that competency was more important than friendliness, honesty or knowledge for staff members and 69 percent were very satisfied with the nurses while only 57 percent were very satisfied with the clerical staff; and 4) 47 percent felt that competency was the most important for their healthcare provider to have and 77 percent were very satisfied with those individuals. As is evident from this data, the patients have relatively easy access to their healthcare, tend to have health insurance, and are very satisfied with their primary providers but their satisfaction wanes when the staff is considered.

Introduction:

In the fall semester of 2000, a faculty member performed an activity with 17 first year medical students at Penn State College of Medicine to see what their perspectives of healthcare were. The students were asked for some of their memorable personal experiences with healthcare. These were then divided into positive and negative experiences. Finally, each was assigned as a 'physician experience' or a 'system experience,' which included staff, insurance and the hospital policy. In the exercise, most of the positive experiences were personal to the physician whereas the negative experiences tended to have to do with the system. One previous study looked at opinions of 56 northwestern rural communities and found that the people thought highly of both the physicians and their local hospitals (Hagopian, et al., 2000).

According to Northern Tier Regional Planning and Development Commission, Bradford county Pennsylvania has an area 1,150.7mi² and fifty percent of that area is woodland (1998). In 2000 the population was 62,761, within 24,453 households and the average household income was \$32,185 (U.S. Census, 2000). In every respect, Bradford County is the picture of a rural community. The population of the county is spread over 50 townships and boroughs with the largest population being that of Sayre borough with greater than 5000 people and the smallest is Armenia Township which has roughly 130 people within its limits. Northern Tier Regional Planning and Development Commission and the Pennsylvania Department of Health indicate that there are three hospitals in the county: Robert Packer Hospital is a 313 bed hospital located in Sayre, Memorial is a 99 bed hospital located in the county seat of Towanda, and Troy Community is a 45 bed hospital located in Troy (1998). In addition to these three hospitals there are at least 9 small clinics belonging to either the Guthrie system, headed in Sayre, or Physician's

Care, headed in Towanda. There are also numerous private or small group practices. In 1998, it was estimated that there were 205 practicing physicians in the county. As you can see, this results in a 297 to one ratio for patients to doctors. With all of these people, one wonders if the health care system is living up to the expectations of the patient population.

In order to assess the strengths and weaknesses of rural healthcare as experienced by the rural patient population, a survey (**Appendix 1**) was administered to 300 households in Bradford County via telephone interviews. These ten minute interviews were conducted between June and August of 2001. As a native of Bradford county, I hope this information will be utilized by the county and its physicians to deliver the quality of care that the patients see to be the most desirable.

Methods:

The survey was randomly delivered to 300 adults (age ≥ 18 years), living in Bradford county via telephone interviews taking place between June and August, 2001. Prior to the administration of the survey and throughout the time period when the survey was being administered, there were public service announcements in two of the county's local papers and on the one local radio station (**Appendix 2**). This advertisement included information regarding what the study was about and information required by the PSCOM IRB. All surveys were administered by the author.

Household phone numbers were chosen in the following manner. Pages of four digit numbers were generated using Microsoft Excel, 97. These pages were then randomly assigned to one of the 16 three digit exchanges. Each number was called to determine if it is a household. If it was a business or fax/modem line, then it was recorded as such. If the number was a household, then the caller proceeded as outlined in the survey script and the survey was then administered. In the event that the household immediately hung up or expressed no interest in doing the survey, the interview was ended and recorded as a non-cooperating household. If there was no answer or an answering machine picked up at the time, the number was reserved and tried again at a later time. In the event that this happened five times, the number was not called further and was put in the vacant household category. Once there is a willing participant, the survey was administered. Calls were made during three different times of the day: 9AM-12PM; 2PM-5PM; 7PM-9PM. The exchanges called during the different times were rotated throughout the study period to reduce bias introduced by working schedules of the population.

All data was entered into the Mini-Tab computer program and basic statistics were generated along with tables and charts.

Results:

The descriptive data of those surveyed shows that the average age was 49.7 years, 76 percent interviewed were female, 25 percent retired and 26 percent non-union large business and the overwhelming majority were insured consumers (**Table 1**).

Table 1: Population Description (n=300)

Average Age	49.7years	Range 18-90 years
Gender	M 24%	F 76%
Occupation	Student Retired Unemployed Non-union large Business Non-union Small Business Union Business Self Employed (Includes farming) Homemaker	<1% 24.7% 3.3% 26% 12.7% 10% 7.33% 15.7%
Health Insurance	Insured <ul style="list-style-type: none"> • Private • HMO • PPS • Medicare only • Medicaid only • Medicare and Private • Medicare and HMO • Medicare and Medicaid Uninsured <ul style="list-style-type: none"> • Due to Personal Choice • Due to Cost • Due to Pre-Existing Condition 	90% <ul style="list-style-type: none"> • 43% • 19.7% • 1.3% • 6% • 4.3% • 14.3% • 0.7% • 1% 10% <ul style="list-style-type: none"> • 0.7% • 8.7% • 0.7%

The actual patient perspectives of their healthcare system are focused into three sections dealing with their access to healthcare, their interactions with the staff at these facilities, i.e. nursing and clerical, and their interactions with their primary healthcare provider, i.e. physician, physician assistant, or nurse practitioner.

First dealing with the access to the healthcare, the time needed to get an appointment, distance needed to travel and the type and location of facilities that the patients tend to go to were all considered as their access. If a referral were to be necessary, the location of that referral was also noted (**Table 2**). As seen below, the majority were able to secure an appointment within 2 days, traveled up to 30 miles to reach that appointment, went to a private practice or satellite clinic within Bradford County and if a referral was issued, that new appointment was either within the same facility or within the county.

Table 2: Access to Healthcare (n=300).

Time Span Until Appointment	<2 days	54.7%
	2-5 days	19.7%
	5-7 days	9.7%
	>7 days	15.3%
	No Response	0.6%
Distance Traveled	<5 miles	38%
	5-15 miles	34.7%
	15-30 miles	20%
	>30 miles	7%
	No Response	0.3%
Office Type	Private Practice	26.7%
	Satellite Clinic	46.3%
	Small Hospital	2%
	Large Hospital	25%
Office Location	Within Bradford County	88.7%
	In State/Outside Bradford C.	5%
	Out of State	6.3%
Location of Referral, if Needed	Within Office/Hospital	26.7%
	Within Bradford County	56.7%
	In State/Outside Bradford C.	9.7%
	Out of State	7%

The participants were then asked about their experiences at the offices and with the staff at these offices. First, time spent waiting to speak to a staff member on the phone and at the front desk (**Table 3**). Here it was found that few were on hold more than five minutes and there was rarely a line at the front desk. The staff members themselves were then assessed. They were sub-divided into clerical and nursing staff. The information looked at was the adjective to best describe each and the overall satisfaction with those personnel (**Tables 4 and 5**). It was found that the clerical staff was generally regarded as courteous, helpful, friendly, and knowledgeable and 57% of patients were very satisfied with their quality of service. The nurses were considered to have the same qualities and 69.3% of patients were very satisfied. When utilizing the Mann Whitney comparison, this percentage of difference was found to be significant at 0.0014.

Table 3: Waiting Times (n=300)

Time spent on hold on the telephone	Not put on hold	58.3%
	<5 minutes	37.3%
	5-10 minutes	3.3%
	>10 minutes	0.6%
	No response	0.3%
Time spent waiting in line at the desk	No line	78.7%
	<5 minutes	17.3%
	5-10 minutes	2.3%
	>10 minutes	1.3%
	No response	0.3%

Table 4: Clerical Staff Statistics

Description (n=299 for each row due to one no response)	Courteous	93%	Rude	6.7%
	Helpful	94.3%	Unhelpful	5.3%
	Friendly	94.3%	Unfriendly	5.3%
	Knowledgeable	89%	Uninformed	10.7%
Level of Satisfaction (n=300)	Very Unsatisfied		1.7%	
	Unsatisfied		3%	
	Indifferent		10%	
	Satisfied		28%	
	Very Satisfied		57%	
	No response		0.3%	

Table 5: Nursing Staff Statistics

Description (n=299 for each row due to one no response)	Courteous	99%	Rude	0.7%
	Helpful	99.3%	Unhelpful	0.3%
	Friendly	99.7%	Unfriendly	0%
	Knowledgeable	96.3%	Uninformed	3.3%
Level of Satisfaction (n=300)	Very Unsatisfied		0.3%	
	Unsatisfied		0	
	Indifferent		4%	
	Satisfied		26%	
	Very Satisfied		69.3%	
	No response		0.3%	

The staff was lumped together when choosing what they felt was the most important trait for a staff member to have. 41.7% felt competency was most important followed by knowledge with 25.7%, friendliness with 12.3%, honesty with 19.7% and 0.7% not responding.

Moving on to the primary healthcare providers, the first question was to what type of primary care provider do they most often see. 81.7% see a doctor, 6.3% see a physician assistant and 11.7% see a nurse practitioner. Participants were then asked about the length of time spent waiting to be seen both in the waiting room and in the examining room, after the nurse had seen them. It was found that the majority spent greater than 10 minutes in the waiting room after their scheduled time and another five to 10 or greater than 10 minutes in the examining room (**Table 6**). The description of the healthcare providers, what trait the patients feel to be the most important, and the level of satisfaction with them was then asked. It was found that they also consider the providers to be courteous, helpful, friendly and knowledgeable. Here, 46.7% of the interviewed felt competency to be most important followed by knowledge at 36.3%. The overall satisfaction level was assessed as 77.3% of patients being very satisfied with their healthcare providers. This is again significantly different from the clerical staff, but this time with a significance level at 0.000. The difference in satisfaction between the providers and the nurses, however, was not significantly different in the Mann-Whitney test (0.1285). One very interesting question posed to the patients was as to what they would do if they were unhappy with their visit for any reason. 58% said that they would

tell their healthcare provider, 23% said that they would stay quiet and hope that their next visit was better and 18.3% said that they would stay quiet and simply not return to that office next time they needed medical care.

Table 6: Healthcare Provider Statistics (n=300)

Type of primary care provider most often seen	Physician Physician Assistant Nurse Practitioner No response	81.7% 6.3% 11.7% 0.3%
Time spent waiting in the waiting room after the time of appointment	No wait <5 minutes 5-10 minutes >10 minutes No response	5% 7% 19% 68.7% 0.3%
Time spent waiting in the exam room after the nurse leaves	No wait <5 minutes 5-10 minutes >10 minutes No response	5.3% 21.3% 37% 36% 0.3%
Description (n=299 for each row due to one no response)	Courteous 99% Helpful 98.3% Friendly 99.3% Knowledgeable 99%	Rude 0.7% Unhelpful 1.3% Unfriendly 0.3% Uninformed 0.7%
Most important trait	Competency Knowledge Honesty Friendliness No response	46.7% 36.3% 13.3% 3% 0.7%
Level of Satisfaction	Very Unsatisfied Unsatisfied Indifferent Satisfied Very Satisfied No response	0.3% 1.3% 4% 16.7% 77.3% 0.3%

Discussion:

There were some difficulties to overcome in the experimental procedure. The obvious similarity between the terms “competent” and “knowledgeable” had to be delineated many times. For consistency sake, knowledge was generally described as a foundation of information needed to do the job and competency was described with that same foundation in addition to the abilities by which to apply that knowledge as effectively as possible in the treatment of the patients. Other problems had to do with the rural nature of Bradford County. Though there are 16 three digit exchanges in Bradford County, many of these are not full and therefore much of the time spent on the telephone was listening to a recording saying that a number did not exist. There were also problems dealing with the vector for administration of the survey. Frequently, elderly persons were

unable to hear or did hear the words “health insurance information” and immediately hung up. This was somewhat relieved by adding the phrase “literally whether you have insurance or not and if it is through an employer,” after the insurance line in the pre-survey script. There were also many who said that if I mailed them a survey they would do it that way.

Conclusions:

As is evident from the above data, the healthcare system in Bradford County is meeting most of the expectations of its patient population. A few areas lacking seem to be the excessive waiting times and the satisfaction discrepancy with the clerical staff.

As I conducted the interviews, many of the participants felt that they wanted to further inform me of specific likes and dislikes with the system. From their accounts, the perceptions were that Bradford County’s cancer detection and treatment are very good, especially with the number of cancer survivors I spoke to. Things that are not clearly depicted were the actual waiting times. Because of the greater than ten minute maximum category, I was unable to portrait some of the waiting times greater than 30 minutes and those that waiting a half hour in both the waiting room and the exam room. Other areas, which seemed to be unpleasing to the patients, were the apparent hole in mental health and neurological treatment in such areas as child psychology and ALS. One woman spoke to me for about 30 minutes regarding the former. So in conclusion, the patients have relatively easy access to their healthcare, tend to have health insurance, and are very satisfied with their primary providers but their satisfaction wanes when the staff is considered, especially the clerical staff.

The results of this project are to be made available to the local healthcare providers in hopes that they will take the information into consideration when looking for ways to improve the Bradford County healthcare systems.

References:

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