

TRENDS IN FAILURE TO APPEAR RATES AT
A MONTHLY FOOT-CARE CLINIC

By

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Trends in Failure to Appear Rates at a
Monthly Foot-Care Clinic

Abstract

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Missed medical appointments are costly to health care organizations. A literature review showed research on patient reported issues related to missing appointments but none addressed possible patterns in missed appointments, information which may help health care organizations avoid or compensate for predictable trends in a particular clinic or geographic area. The methodology for this study was a retrospective review from 3 years of attendance records at a monthly foot-care clinic. The total sample was 1,728 scheduled morning and afternoon appointments. Each appointment counted as a show or failure to appear. The researcher used a descriptive design using trend analysis of missed appointment at any of the semimonthly foot-care clinics during the 3 year study period on an Indian Reservation in Washington State. Data was analyzed for factors that could be identified as trends.

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CHAPTER ONE

INTRODUCTION AND BACKGROUND

Statement of Problem

In any health care system where appointments are scheduled patients will miss their appointments. Scheduling considerations for appointments include preplanning for staffing, space and supplies. A problem occurs when patients are scheduled for appointments and do not appear. This is called failure to appear, or FTA. Failure to appear rates affect medical service because staff and supplies are planned and paid for, but are not needed. When a large number of FTA's occur during one day, other patients who could have been seen are unable to receive services during this time.

Among reasons for studying FTA rates are ineffectual cost expenditures. Ineffectual costs are an especially important issue for small clinics that provide services independent from a larger health care organization. Small organizations are more economically fragile and cannot afford the cost of providing staff and supplies when there is a high FTA rate, so administrators need to examine decreasing ineffectual cost due to FTA rates at appointments. Health care organizations have tried to correct these factors through measures such as reminder notices and free transportation, but clinics have limited control of patients missing appointments. They can, however, control cost related to staffing, space and supplies. If health care organizations continue to encounter high FTA rates then they may be forced to curtail already limited services.

A literature review revealed very little information about the trends in missed appointments. A trend, according to Webster's Dictionary (1999) is a prevailing or probable tendency. This study addressed that gap in the literature with a trend analysis of past FTA rates

at a semimonthly foot-care clinic. Trend analysis involves strategies to predict future trends from examination of past trends (Grove & Burns, 2005).

Statement of Purpose

The purpose of this study was to identify patterns or trends in FTA rates at a semimonthly foot-care clinic during the 3 year study period covering the years 2005, 2006 and 2007.

Conceptual/Theoretical Framework

The conceptual framework for this study was derived from nurse theorist Martha Rogers' theory, *The Science of Unitary Human Beings* (Rogers, 1994). The central phenomenon of Rogers' theory is the relationship between humans and their environment. This theory can be used to conceptualize continuous patterns resulting from human and environmental interactions (Bowles, 1999). The theoretical framework was derived from the assumption that there will be pattern repetition identified through trend analysis and that this data can be applied to future attendance by using the theory of predictability, another example of repeating patterns. The researcher also considered possible cultural or seasonal activities that may have affected attendance patterns.

Trend analyses and predictability theories are used in a variety of fields. Investment companies use trend analysis to predict the future movement of a stock based on past data. Trend analysis is based on the idea that what has happened in the past gives traders an idea of what will happen in the future (Investopedia, n.d.). The field of mathematics uses the predictability theory to enhance computer performance (Nelson, 1995). The Proximus Company is an example of how trend analysis can be used to identify pattern repetition in a way that can be used to predict future trends and make business decisions based on this data.

Customer service departments use trend analysis techniques to predict expected workload and makes recommendations for required resources to handle the predicted workload (Proximus, n.d.). This FTA analysis can be used in similar ways.

Literature Review

Literature on missed appointments contained studies that revealed important factors affecting patient willingness and ability to attend medical appointments. Three studies showed that the perception of need and patient's health status were significantly associated with patients keeping their medical appointments (Cashman, Savageau, Lemay, & Ferguso, 2004, McPherson, Lairson, Smith, Brody, & Jefferson, 2002 and Mojtabai, 2005). None of the studies stated a theoretical basis for their research and researchers used a variety of different study designs and instruments. One researcher used a six state survey of elders dually enrolled in both Medicaid and Medicare. Another study was prospective, and used linear regression analysis.

Researchers concluded that patient failure to appear at appointments were often due to forgetfulness, mis-understanding of appointment times and personal circumstances (Neal, Hussain-Gambles, Allgar, Lowlor, & Dempsey, 2005 and Lacy, 2005). Personal factors were identified as car problems, family illness and other commitments. Weakness with both of these studies was lack of a large sample and lack of a theory base. Two studies addressed attempts to decrease FTA rates by using technological approaches. Downer, Meara, & De Costa (2005) discussed the use of text messaging to remind patients of their upcoming appointments. This was shown to lower the FTA rate by 14.2 – 23.4%. Problems found in this approach were incorrect phone numbers and the patient's inability to use text messaging, which resulted in approximately 50% not able to contact rate (McEwen, Mehler, Steele, Witter 2006). These

same researchers assessed the use of computer generated appointment reminders. Once again, lack of correct phone numbers, working phones and incorrect addresses were a problem. The weakness of these approaches is that these interventions only apply to a specific portion of the population, people with phones, cell phones or people that receive and actually read their mail.

A study by Cashman et al (2004) found that patients who used tobacco had higher FTA rates. A study by Lacy (2005) found that "... when patients are made to wait, they may conclude that they are not respected and may not feel obligated to respect the system by calling to cancel an appointment." p. 29. An important finding noted in these two studies was that fear and anxiety related to what would happen at the next medical appointment was a significant factor in FTA rates at medical appointments. All of these studies were useful in determining the patient-related factors that contribute to FTA rates. In studies by Cashman et al (2004) and Lacy (2005) unique factors were revealed indicating that not all factors have been found in the studies done so far. For instance, the issue of missed appointments on a Native American reservation has not been addressed.

This literature revealed prominent personal factors that influence FTA rates and attempts from the medical service organizations to remind patients about their appointments. Attempts to correct missed appointments relied on technology which is not feasible in all populations, such as the population in the present study.

Research Formulation

Nursing theorists emphasize the need and importance for clinicians to identify observable problems and to practice from a scientific basis (Bowles, 1999). While providing services, over time nurses gain personal knowledge of situations and transform this knowledge into informal theories. These theories can lead to a framework for research which can be tested

by others and the results can be utilized in making decisions regarding providing services in the future.

Research Question

The research question for this study:

“What trends can be identified from an analysis of missed appointments during the last 3 years at a monthly foot-care clinic established for Native Americans?”

Variables were measured by either attendance or FTA, at a scheduled foot-care clinic open only to Native Americans. Analysis of the data showed repeated monthly patterns in FTA rates over the 3 year study period that correlated with specific cultural activities and seasonal activities.

Definitions of Terms

The operational definition of FTA was the failure of a person to arrive during the foot-care clinic on the scheduled day of the services. Conceptual definition of a trend was the prevailing tendency or a likely course of an occurrence (Trident Press International, 1999). Operational definition of a trend was the re-occurring patterns identifiable in non-attendance occurrences over the 3 years of the study. For the purpose of this study, a FTA rate of at least 30% was defined as a trend. For instance if three out of the nine afternoon appointments are FTA's then afternoon appointments for that day were determined to be significant for that day. If 64 afternoon appointments were missed out of the yearly 216 afternoon appointments, and then afternoon appointments were identified as a trend for that year.

Significance for Nursing

Based on this study, the ability to identify trends in FTA rates by assessing previous appointment data is possible. These findings can be applied to the field of nursing in such ways

as to allow the planning for more flexible nursing schedules. By assessing individual attendance data for an appointment-based system, more efficient decisions regarding staffing can be made. For some clinics the scheduling of appointments and the planning of staffing may fall under the duties of a nurse. In this instance the nurse may also be held responsible to address staffing and supply cost.

Failure to appear at a monthly foot-care clinic does not just affect the providing of services but it can also have negative effects on client's health status. These monthly clinics also offer the opportunity for clients to be informally assessed for many other health related issues such as medication problems, balance or falls, and changes in their health status. By having this monthly one on one opportunity with the same patient's changes in their health status can be noticed. If high FTA rates were to result in a decrease in monthly direct service opportunities then the opportunity for patients' health status to be noticed on an informal basis will also be decreased which could have negative results for individuals.

There is also a benefit that can be derived from an understanding and a creative use of FTA rates. If a limited number of staff is available but there are a large number of clients to be served then it may be beneficial to research individual FTA rates. These results could be used in such a ways as to fill in times where the schedule may have too much of a client load if all the clients were to keep their appointments. This could result in more of a balance between high service periods that could result in staff fatigue and high FTA period which result in ineffectual cost expenditures.

CHAPTER TWO

METHODOLOGY OF STUDY

Introduction

The primary goal of this study was to identify patterns in a sample of scheduled appointments at specific times over a 3 year period. Expectations were that the results would identify areas in which future research would be useful and to provide information about failure to appear patterns. With consideration for the data utilized in this study a descriptive design was chosen for analyzing the data.

Type of Design

“Descriptive design can be used to identify a phenomenon of interest.” (Burns & Grove, 2005, 734). The phenomenon of FTA variance is described using descriptive design. This study identified the phenomenon of FTA rate variances over a 3 year period, a specific month compared to the same month in another year and morning verses afternoon appointments. No intervention was implemented in this study.

Setting for Study

The study was conducted in a monthly foot-care clinic on an Indian Reservation in Washington State. The attendance records were kept in one appointment book covering five years of foot-care service appointment. To ensure that the attendance records were not lost during the data collection process an additional copy was made and kept locked in a separate location at the clinic.

Population and Sample

The study population consisted of scheduled appointments at foot-care clinics for Native American adults over the age of 50. The sampling criteria for this study were all

appointments scheduled during the years of 2005, 2006 and 2007 at the monthly foot-care clinic on a Washington State Indian reservation. People that came in for services without an appointment were not counted. There were a total of 1,728 appointments scheduled over the sample period. Out of these, 1,080 were morning appointments and 648 were afternoon appointments. The strength of this sampling method was that the data was easily available from past records and was unchanging since it was a retrospective sample. One of the weaknesses of this study was that the sample represented a limited population.

Instrumentation, Reliability and Validity

An excel spreadsheet was used to track the occurrences of FTA occurrences and kept appointments. The data was then compiled into a descriptive study. The only measurement obtained was attendance history. No previous studies examined in the literature reviews stated any statistical values that related to possible trends in FTA rates. This study provided statistics on identifiable trends in FTA rates for future studies. Strategies to reduce measurement error involved the verification of the attendance records by comparing FTA occurrences and kept appointments to the total number of appointments that were scheduled.

A threat to internal validity was the possibility of an incorrect count of the number of FTA at appointments. To control this threat, the total number of kept appointments was counted as well as FTA's. Failure to appear and kept appointments were totaled together and compared to the total number of appointments that were scheduled to verify the data conclusions. Another threat to internal validity was the possible variation in the definition of FTA. To control this threat the definition of FTA in this specific study setting was defined as non-attendance on the scheduled day of the appointment.

A threat to external validity was demographic issues. The setting of this study involved a service specifically for the elder population and is non-representational of the general population. This setting of this study also involved patients of only one population group, Native Americans despite the fact that the individuals in the study possessed unique individual characteristics such as beliefs, area of upbringing, and mental or physical status.

Data Collection Procedure

The total number of FTA appointments and the total number of scheduled appointments were compiled into a descriptive format which enabled comparison of month to month variances in FTA for both morning and afternoon appointments. Results of the average monthly FTA rates were displayed using a bar graph shown in the appendix labeled Table 1: 2005 – 2007 Monthly Averages of FTA Rates. An excel spread sheet was created for this study. This spread sheet was created by the researcher and reviewed by a consultant familiar with the software. For each foot-care clinic morning and afternoon appointments were assigned three tracking spots; no-show, kept appointments and total appointments. The daily total of appointments was also tracked. A sampling of data was entered into the form to verify validity and ease of use. The spread sheet is included in the appendix labeled Appointment Record.

Data Analysis

The percentage of FTA rates for each month over the 3 year period of the study was averaged together to obtain a total average FTA rate for each month. In addition FTA's at morning and afternoon appointments were averaged together to obtain a total average FTA rate for morning and afternoon appointments. The three months with the highest average of FTA will be discussed along with morning and afternoon results.

Human Subjects Considerations

Due to the descriptive design and non-identifiable data utilized in this study, the approval process involved an organizational consent to access attendance records and tribal approval only. Organizational consent was obtained from the Chief Executive Officer of the health clinic where the foot-care clinics were held. Tribal Administration approval was also obtained for this study through a Tribal Council Resolution. Since no identifiable characteristics were tracked, there was minimal risk to study participants. No direct participant consent forms were required since only attendance records of the foot-care clinic were reviewed not personal patient information. A benefit to the participants and society at-large comes in the form of statistical basis for future studies in a more generalized population and for other service organizations.

CHAPTER THREE

FINDINGS

Introductions

Sampling was purposive. The research question was the exploration of trends, this sample was appropriate for the study.

Sample Characteristics

The sampling characteristics for this study included all appointments scheduled during the years of 2005, 2006 and 2007 at the monthly foot-care clinics on a Washington State Indian reservation. Appointments at these clinics were only made for Native American adults over the age of 55 and the service population was generally of a more fragile health status.

Research Questions

The proposed research question “What trends can be identified from an analysis of missed appointments during the last 3 years at a monthly foot-care clinic established for Native Americans?” This research question was applicable to the results of this study. Resulting data did reveal that there were identifiable trends in missed appointments over the three year study period.

Discussion

The findings of this study demonstrated trends in FTA rates both in morning and afternoon appointments and from one month to another over the 3 year period of the study. During the study period, two foot-care clinics were held each month. Results from this study revealed that there was a higher FTA rate at the 1st clinic of the month verses the 2nd clinic, 44% versus 42%. One possible factor was that patients can attempt to receive services as a walk-in at the 2nd foot-care clinic. A second finding of this study was a lower FTA rate for the

morning appointments then the afternoon appointments, 48% versus 56%. A contributing factor to this result may be that as the day progresses for patients the possibility increases that a competing concern or other scheduling conflict may occur that keeps them from attending their appointment.

Results from this study are displayed in tables 1-4. Tables 1 and 2 show the comprehensive monthly results of FTA rates for each month of the three year study listed in ranking order from month with highest FTA rate to lowest. Table 3 shows the results of average FTA rates at the 1st clinic of each month compared to the 2nd clinic of each month, the average of the FTA rates at the morning verses afternoon appointments and list the monthly results of FTA rates. Table 4 shows the monthly breakdown of FTA rate for morning verses afternoon appointments and the 1st clinic versus the 2nd clinic for each of the 3 years through the study period.

Overall assessment of FTA rates revealed a higher average of missed appointments for the months of June, December, and September. The corresponding percentages were June at 51%, December 49% and September 48%. Holidays, weather and cultural activities could be contributing factors to these results. On the reservation where this study was conducted, the month of June is associated with the beginning of Pow-Wow and root-digging season. Since a large number of grandparents who attend the foot-care clinic are raising or involved in the care of their grandchildren, another contributing factor to Junes increase in FTA rates could be the end of the school season with readjustment to the summer schedule. High FTA rates in the month of December could be associated with Christmas holiday activities and the possibility of bad weather. The month of September is associated with Huckleberry picking season on the reservation.

The monthly averages of FTA rates ranged from 51% to 31%. The initial framework for this study involved the fact that the foot-care clinic is staffed by four nurses and each nurse covers 25% of the case load for the clinic. Each month during the study period had over a 25% FTA rate which correlates to the services of one nurses. Since each clinic was staffed by four nurses, these percentages mean that at every clinic the services of at least one nurse was not fully utilized. The cost issues resulting from these FTA rates are related to ineffectual staffing.

Speculations prior to the study was that there would be a greater than 25% FTA, based on witness attendance over a 12 year period of being a service provider on the reservation. There are many other factors that may have contributed to the high FTA rates. Some appointments each month are for clients that are new referrals from their doctor or another organization. Many of these referred appointments never attend a clinic and are dropped from the schedule after 3 months. Due to the age of the population many elderly clients are ill, hospitalized or are unwilling to leave their house during the hot month of June or the cold month of December. A second finding from this study is that the high FTA months were followed by a month with a lower FTA rate such as June at 51% then July at 41% or December at 49% and January at 36% and September at 48% followed by October at 32%. This could be attributed to the fact that if clients missed their appointment one month by the time that their next appointment was scheduled the need to receive the services was more of a motivating factor to keep their appointment. October at 32% has the lowest rate of FTA. This may be due to two factors, one is that the previous month of September has the third highest FTA rate at 48% and secondly during the month of October Influenza Vaccination is offered at the foot-care clinics. In the previous year's this has proven to be a much sought after services since it save the clients from having to go into the clinic to be immunized.

A factor that may contribute to a higher FTA rate at the first clinic of the month followed by a lower one at the second clinic of the month is the ability for clients to request services as a walk-in at the second foot-care clinic of the month. Failure to appear rates may be decreased if no walk in services were allowed at the second clinic of the month. Another approach to decrease FTA rates would be to charge for missed appointments. This may not be a feasible option for some populations due to inability to pay or the obligation of the service organization to provide services such as on the reservation.

Other service providers located on this reservation face the same cultural and seasonal factor that could also affect their FTA rates. Results from this study will be shared with the health care clinic that provides similar monthly services. Information can also be shared with other Native American Health Care Agencies. Submission of results can be considered for Native Life Magazine and a presentation can be planned for the tribal council.

CHAPTER FOUR

SUMMARY, CONCLUSION, RECOMMENDATIONS

Limitations

A limitation for this study was related to the specific service provided at the appointments. The service provided was foot-care and may not be easily generalized to other services. A second limitation of this study was that the service was specifically for the elder population and is non-representational of the general population. The setting of this study also involved patients of only one population group, Native Americans and may not be reflective of attendance patterns in other ethnic groups.

Implications

In almost any setting when there are appointments scheduled there will be resulting failure to appear occurrences. The implication of the results of this study is that by looking at past appointment records there is the possibility of identifying patterns in missed appointments that occur over time. Patterns may be identified that correspond to activities, events or issues that are specific to that clinic or population.

Recommendations for Future Research

The results from this study can be used as the theoretical framework for future studies of a more generalized population with varying age and race by showing that trends in FTA rates can be identified by looking at past attendance records. More studies would be needed to generalize trend information to organizations that provide services to other age groups and races. Future studies should be conducted assessing possible ways that times of high FTA may be utilized by service organizations in a more productive fashion. More generalized studies would produce information for larger scale analysis and application.

CONCLUSIONS

Any organization that utilizes scheduled appointment for services will encounter clients that fail to appear for their appointments. These failure to appear occurrences affect the business staff and other clients also through ineffectual cost expenditures, ineffectual staff use and the fact that other people are unable to receive services during this time due to the fact that appointment opportunities were taken up by people that did not attend their appointments. If businesses were to analyze past attendance records for patterns or trends in missed appointments over time then measures could be taken to address these issues during future times that have been shown to have a higher FTA rate. This study showed successfully that trends can be identified by looking at past attendance records. These times of higher FTA occurrences related to specific cultural events and seasonal times. By making internal changes in response to timer of high FTA occurrences the businesses may be able to reduce ineffectual cost and to continue to provide services to needing populations.

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<http://www.internetjournal.com>

Appendix

Table 1: 2005 – 2007 Monthly Averages of FTA Rates

June	51
December	49
September	48
April	44
February	42
August	42
July	41
November	39
May	39
March	38
January	36
October	32

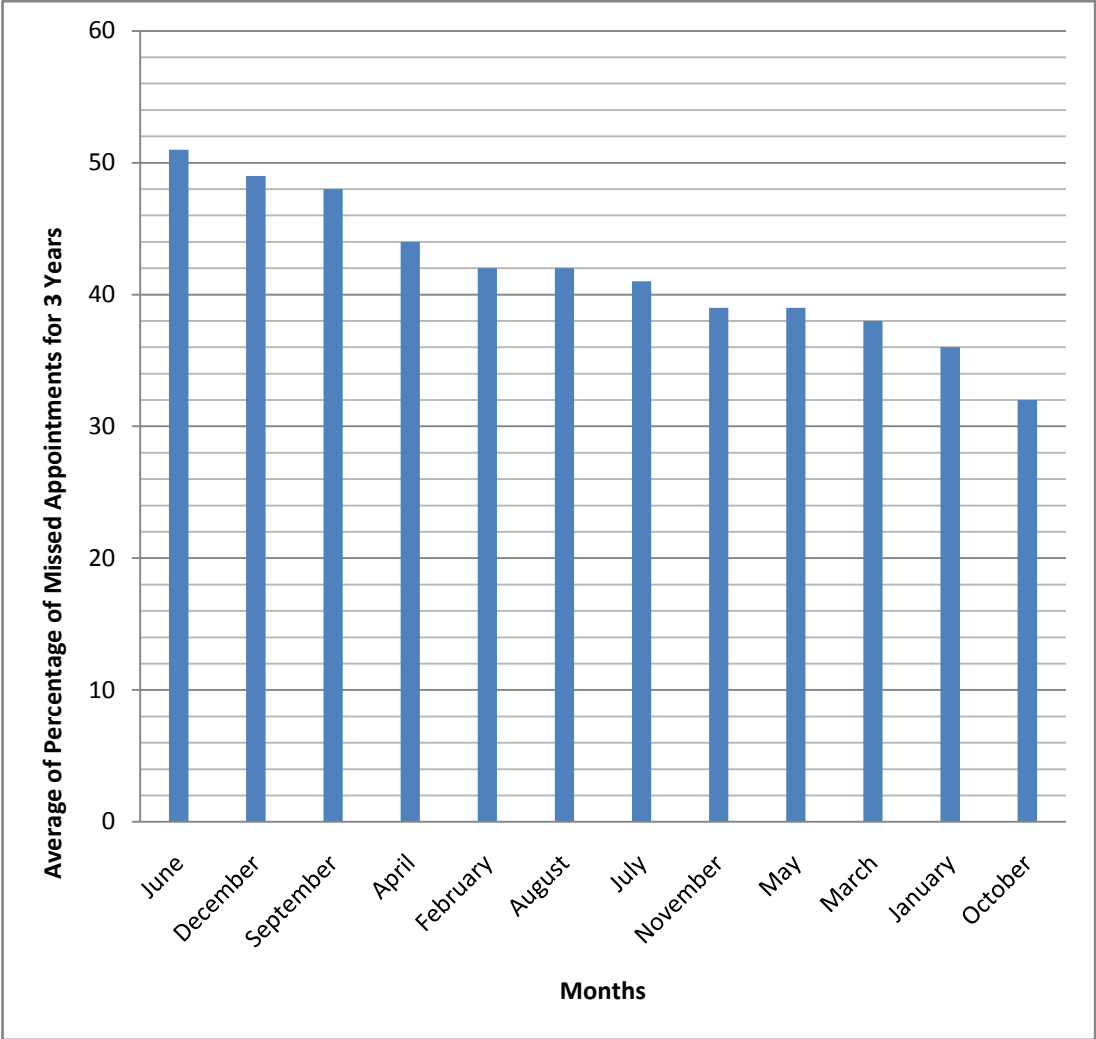


Table 2: Monthly Averages of the Percentages of Missed Appointments for the 3 Years of the Study

Table 3: Study Results Summary

More 1st Clinic appointments were missed than 2nd clinic appointments.

1st Clinic Average
44%

2nd Clinic Average
42%

More PM appointments were missed than AM appointments

PM Average
48%

AM Average
36%

Months with highest percentage of missed appointments

June	51
December	49
September	48
April	44
February	42
August	42
July	41
November	39
May	39
March	38
January	36
October	32

Total 4: Percentages of Failure to Appear at 1st and 2nd Clinics, AM and PM Appointments

with Highest Percentages for each Month Highlighted

<u>January</u>	1st Clinic	2nd Clinic	AM Percent	PM Percentages	Total for Month
2005	0	36	12	24	18
2006	52	36	25	63	44
2007	47	47	38	56	47
Total	50	40	25	48	36
<u>February</u>					
2005	0	48	22	26	24
2006	49	41	41	49	45
2007	66	50	50	67	58
Total	38	46	38	47	42
<u>March</u>					
2005	30	18	35	14	24
2006	37	47	44	40	42
2007	40	59	35	64	49
Total	36	41	38	39	38
<u>April</u>					
2005	42	35	43	35	39
2006	34	50	35	48	42
2007	42	60	37	66	51
Total	39	48	38	50	44
<u>May</u>					
2005	30	29	35	24	29
2006	42	49	38	52	45
2007	49	39	36	52	44
Total	40	39	36	43	39
<u>June</u>					
2005	43	44	45	42	43
2006	59	35	33	61	47
2007	55	70	47	78	62
Total	52	50	42	60	51

July

2005	30	43	38	35	36
2006	35	42	24	52	38
2007	49	48	44	53	48
Total	38	44	35	47	41

August

2005	47	33	34	46	40
2006	31	26	17	39	28
2007	64	50	40	73	57
Total	47	36	30	53	42

September

2005	47	16	22	41	32
2006	60	43	33	70	51
2007	66	54	51	69	60
Total	58	38	35	60	48

October

2005	34	29	27	36	31
2006	24	16	31	9	20
2007	56	36	48	44	46
Total	38	27	35	30	32

November

2005	45	0	33	13	23
2006	33	38	23	48	35
2007	67	53	65	56	60
Total	48	30	40	39	39

December

2005	0	36	13	23	18
2006	66	65	54	77	65
2007	57	72	64	64	64
Total	41	58	44	55	49

LITERATURE REVIEW

<u>Source</u>	1- Downer, Meara, Da Costa, (2005), Medical Journal of Australia Pyrmont
<u>Title</u>	1- Use of SMS text messaging to improve outpatient attendance
<u>Purpose</u>	1- To evaluate the effect of appointment reminders sent as short message service (SMS) text messages to patients' mobile telephones on attendance at outpatient clinics.
<u>Sample</u>	1- For this study 2,151 patients were scheduled to attend a clinic in September, 1,382 (64.2%) gave a mobile telephone contact number
<u>Theory</u>	1- None mentioned or implied
<u>Variables</u>	1- Natural monthly variation in FTA rates. Did the correct recipient receive the message. If the mobile number was correct, incorrect or outdated. Understanding of the message
<u>Design</u>	1- Cohort study with historical control. Control group of 2276 were scheduled to attend and 1482 (65.1%) gave a mobile telephone number
<u>Instruments</u>	1- Clinic tracking of FTA rate for study period
<u>Results</u>	1- Rates were lower for patients sent an SMS reminder than for the control group. The failure to attend (FTA) rate for individual clinics was 12%-16% for the trial group, and 19%-39% for the control group. Overall FTA rate was significantly lower in the trial group than in the control group (14.2% v 23.4%)

<u>Source</u>	2- Carle, Guse, Richardson, Schmidt, (2003), Journal of American Board of Family Practice
<u>Title</u>	2- The effect of exit-interview patient education on failure to appear rates at a family practice residency clinic.
<u>Purpose</u>	2- To examine the effect of exit-interview patient education on failure to appear rates at a family practice residency clinic.
<u>Sample</u>	2- All eligible new patients at St. Mary's Family Practice Center between February 1 st 1996 and April 30 th 1997 were offered study enrollment. One hundred forty-six patients were enrolled into the intervention and 297 into the control group.
<u>Theory</u>	2- None mentioned or implied
<u>Variables</u>	2- Age less than 18 years, commercial insurance, race, residence in a low median income zip code, and interaction terms with age.
<u>Design</u>	2- Prospective cohort study.
<u>Instruments</u>	2- Instruments used were X2 tests, Wilcoxon rank-sum tests, and logistic regression
<u>Results</u>	2- A 29% overall reduction in the odds of a missed appointment in the group of patients receiving the immediate post-visit exit interview.

<u>Source</u>	3- Lacy, (2005), Women's Health in Primary Care
<u>Title</u>	3- When Patients Don't Show Up: The "Fear Factor"
<u>Purpose</u>	3- To gather the broadest base of information as possible about why patients miss or don't attend their appointments.
<u>Sample</u>	3- Thirty-two women and 2 men
<u>Theory</u>	3- None mentioned or implied
<u>Variables</u>	3- Demo-graphic data, any cause reported by the respondents.
<u>Design</u>	3- Interviews
<u>Instruments</u>	3- Personal Interviews
<u>Results</u>	3- Forgetfulness and logistical problems, fear and anxiety about the visit. When patients were made to wait, they may conclude that they are not respected and may not feel obliged to respect the system by calling to cancel appointments.

<u>Source</u>	4- Blankenstein, (2003), Clinical Governance
<u>Title</u>	4- Failed appointments- do telephone reminders always work?
<u>Purpose</u>	4- To determine whether there would be a decrease in failed appointments by telephoning patients the day before their appointments.
<u>Sample</u>	4- 214 people were called and 131 people were contacted.
<u>Theory</u>	4- No theory was mentioned
<u>Variables</u>	4- If a person had a phone and whether a person could be contacted by phone.
<u>Design</u>	4- Telephone reminder system.
<u>Instruments</u>	4- Data on contact made from telephone calls
<u>Results</u>	4- The DNA did not attend rate was 34 percent with the telephone intervention versus 26 percent over the previous 9 months.

<u>Source</u>	5- Bor, Cabral, Lambert, Lasser, Mintzer, (2005), Journal of Health Care for the Poor and Underserved
<u>Title</u>	5- Missed appointment rates in primary care: the importance of site of care.
<u>Purpose</u>	5- The objective was to determine whether race, language, or gender concordance between primary care providers (PCPs) and patients is associated with lower missed appointment rates in neighborhood health centers. An additional objective was to determine whether site of care is a determinant of missed appointment rates.
<u>Sample</u>	5- 74,120 adult primary care patient visits by 13,882 patients to 58 primary care providers.

<u>Theory</u>	5- None mentioned or implied
<u>Variables</u>	5- Language, race and gender the same as their PCP. Age, insurance, language, individual PCP open access, session per week PCP in practice, and health center.
<u>Design</u>	5- E-mail survey regarding provider information, review of clinic appointment records, and chart review data.
<u>Instruments</u>	5- Statistical analyses using SAS for Windows, version 8.2, odds ratio test, multiple logistic regression analyses, generalized estimating equation approach in SAS PROCGENMOD15.
<u>Results</u>	5- Young publicly insured, and Haitian Creole-speaking patients were significantly more likely to miss appointments than were older, privately insured, English-speaking patients. Patients of PCPs at open access and patients who were proficient in the same language or were the same race as their PCP were less likely to miss primary care appointments.

<u>Source</u>	6- Allgar, Dempsey, Hussain-Gambles, Lawlor, Neal, (2005), BMC Family Practice
<u>Title</u>	6- Reasons for and consequences of missed appointments in general practice in the UK: questionnaire survey and prospective review of medical records.
<u>Purpose</u>	6- To determine the reasons for missed appointments and whether patients who miss an appointment subsequently consult their general practitioner.
<u>Sample</u>	6- One hundred and twenty two people who missed appointments and 223 in a comparison group responded resulting in 23 case-control matched pairs of participants.
<u>Theory</u>	6- None mentioned or implied
<u>Variables</u>	6- Physical factors, mental factors such as memory, life situation factors.
<u>Design</u>	6- Prospective design, comparison with a comparison group and use of a neutral place for correspondence.
<u>Instruments</u>	6- Free data questionnaire, General Health Questionnaire-12 and data from medical records.
<u>Results</u>	6- Most common reasons for missed appointments were misunderstandings or mistakes, illness or personal circumstance, forgot, other commitments and other reasons.

<u>Source</u>	7- McPherson, Lairson, Smith, Brody, Jefferson, (2002) Pediatrics
<u>Title</u>	7- Non-compliance with medical follow-up after pediatric intensive care.
<u>Purpose</u>	7- To describe the medical follow-up ordered, the health care utilization, the appointment compliance, and the risk factors associated with non compliance in patients who are discharged after a pediatric intensive care unit stay.
<u>Sample</u>	7- One-hundred eleven critically ill children, age 1 day to 16 year sold who were admitted to a PICU in an urban, tertiary-care, pediatric teaching hospital compared children who were compliant with medical follow-up with those who were not.

<u>Theory</u>	7- None mentioned or implied
<u>Variables</u>	7- Emergent and unscheduled physician visits during the first 6 weeks after hospital discharge, compliance with medical follow-up after hospital discharge, and comparisons of socioeconomic, demographic, and medical need factors between compliant and noncompliant children
<u>Design</u>	7-Prospective, analytic, cohort study
<u>Instruments</u>	7- Review of discharge orders for follow-up appointments from charts, and patient contact to determine medical follow-up.
<u>Results</u>	7- Results showed 28% were found to be noncompliant with follow-up. No socioeconomic or demographic factors were identified as factors between the two groups. Patient more compliant were those more severely ill, higher risk of pediatric mortality and longer PICU stays. Patients with 3 or more appointments were less likely to be compliant with follow-up.

<u>Source</u>	8- Cashman, Ferguson, Lemay, Savageau, (2004), Journal of Health Care for the Poor and Underserved
<u>Title</u>	8- Patient health status and appointment keeping in an urban community health center.
<u>Purpose</u>	8- To examine the relationship between patient health status and the likelihood of missing appointments in a community health center serving low-income patients.
<u>Sample</u>	8- Medical records of 465 adult patients scheduled to be seen during one week February 1999 were audited for an 18- month period.
<u>Theory</u>	8- None mentioned or implied
<u>Variables</u>	8- Attendance at scheduled appointments and patient health status issues.
<u>Design</u>	8- Linear regression analysis, multivariate analysis, prospective study.
<u>Instruments</u>	8- Chart review for health profile, demographic profile, Nurse abstractor inter-rater reliability analysis, simple frequency distributions, SPSS statistical software.
<u>Results</u>	8- Seventy-three percent failed to keep one or more appointments. Health status measures significantly associated with missing appointments including depression, anxiety/panic disorder and using tobacco.

<u>Source</u>	9- McEwen, Mehler, Steele, Witter, (2006) The internet journal of medical simulation and technology
<u>Title</u>	9- The effect of computer generated appointment reminders on compliance with clinic appointments.
<u>Purpose</u>	9- To evaluate the effectiveness of a computer generated reminder system on kept appointment rates in an inner city public hospital system.

<u>Sample</u>	9- 5,717 patients with appointments scheduled at least 72 hours ahead of time at 7 community health clinics over a period of 6 weeks. Of these, 3,048 were randomized to the reminder group and 2,669 to the control group.
<u>Theory</u>	9- None mentioned or implied (hypothesis) A computer generated reminder system would positively impact the kept appointment rates in primary care clinics.
<u>Variables</u>	9- Reminders were actually received by the person with the appointment, correct phone numbers and working phones, computer errors while processing the phone call, and the person being available to receive the message
<u>Design</u>	9- Analytical study
<u>Instruments</u>	9- Odds ratio test
<u>Results</u>	9- The kept appointment rate for the reminder group was 69.2% compared to a kept appointment rate of 64.1% in the control group. Shows an 8% positive increase in kept appointment rates.

<u>Source</u>	10- Mojtabai, (2005), Community mental health journal
<u>Title</u>	10- Compliance with mental health and other specialty care referrals among medicare/medicaid dual enrollees.
<u>Purpose</u>	10- To examine and compare non-compliance with mental health and other specialty referrals among low-income elderly.
<u>Sample</u>	10- The sample comprised 2,128 participants. Of those 1,125 were between 66-79 and 1,003 were 80 years old or older.
<u>Theory</u>	10- None mentioned or implied
<u>Variables</u>	10- Perceived barriers to arranging an appointment, did they try to arrange an appointment, were they able to arrange an appointment.
<u>Design</u>	10- Six state survey of elder dual enrollees in Medicare and Medicaid
<u>Instruments</u>	10- Stratified random sample
<u>Results</u>	10- The majority of this elderly indigent population was able to arrange a mental health or other specialty care appointment without difficulty. Participants referred to mental health professionals were less likely than those referred to other specialty care providers to follow through with their referrals, mainly because they did not perceive a need for such care.



Confederated Tribes and Bands
of the Yakama Nation

Established by the
Treaty of June 9, 1855

RESOLUTION

T-076-08

WHEREAS, the Yakama Nation is a federally recognized Nation pursuant to the Treaty of 1855 (12 Stat. 951), and

WHEREAS, the Yakama Tribal Council is the governing body of the Confederated Tribes and Bands of the Yakama Nation of the Yakama Reservation, Washington, by the authority delegated by Resolution T-38-56, and

WHEREAS, this includes a Health, Employment, Welfare and Youth Activities Committee which is responsible for the leadership, guidance and oversight to all health program and services, and

WHEREAS, missed appointments for the Elder's Nail Care Clinics may on occasion be as high as 50% and this affects staff moral and patient satisfaction, and

WHEREAS, missed appointments affect the cost of conducting the clinics through unnecessary staffing and purchase of excess supplies, and

WHEREAS, when staffing is assigned unnecessarily at a clinic they are unavailable to meet important patient needs in other areas, and

WHEREAS, when a person misses an appointment it can lead to a delay in care with the potential of worsening the problem, and

WHEREAS, when a clinic has a high no-show rate it can lead to a curtailment of those services, and

WHEREAS, it has been observed that there may be patterns in missed appointments and it may be beneficial for patient care and clinic operation to develop a method to analyze these patterns in order to be able to predict no-show rates to improve staffing and avoid unnecessary cost, and

WHEREAS, this method could be utilized by other Yakama Nation Tribal Clinics to improve services, and


WHEREAS, since this is a descriptive study based only on attendance patterns, no patient identifiers will be collected or used and the identity of the Yakama Nation will not be revealed.


NOW, THEREFORE, BE IT RESOLVED, by the Executive Board of the Yakama Tribal Council, acting under authority delegated by Section III A of the Rules of Procedures, approved by Yakama Tribal Council Resolution T-10-61, dated July 13, 1960, and meeting at the Governmental Headquarters of the Yakama Nation, approves the request by Lori Drews RN, BSN Home Health Program Manager to study and analyze this problem in her Master's level thesis "Identifying Trends in Missed Appointments" through Washington State University's Psychiatric Mental Health Nurse Practitioner Program.

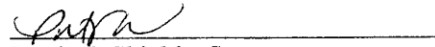
BE IT FURTHER RESOLVED, that any member of the Yakama Tribal Council Executive Board is authorized to negotiate and execute any agreements and amendments thereof, on behalf of the Yakama Tribal Council, as delegated by Section III A of the Rules of Procedures pursuant to T-10-61, as approved, provided further that any Executive Board Member may negotiate the contract.

BE IT FINALLY RESOLVED, that the Yakama Nation does not waive, alter, or otherwise diminish its Sovereign Immunity, whether expressed or implied, by virtue of this resolution for any and all administrative or legal action which may arise directly or indirectly from the same, nor does the Yakama Nation waive, alter, or otherwise diminish its rights, privileges, remedies or services guaranteed by the Treaty of 1855.

DONE AND DATED on this 30th day of January, 2008 by the undersigned members of the Executive Board of the Yakama Tribal Council.


Ralph Sampson, Jr., Chairman
Yakama Tribal Council


Lavina Washines, Vice-Chairwoman
Yakama Tribal Council


Portia J. Shields, Secretary
Yakama Tribal Council

Cc: file
HEW ca# 058-2008-4

Department of Human & Health Services

April 15, 2006

To whom it may concern;

Lori Drews has discussed her research project with me involving the study of possible trends in missed appointments at a monthly foot-care clinic over the past 3 years. I am giving my consent to this project with the understanding that all identifying information will be removed. This form will serve as an organizational consent from the Yakama Service Unit of Indian Health in Toppenish, Washington.



Donn Kruse, MD, CEO
CEO of Yakama Service Unit
Indian Health Services

Appointment
Record

	Jan. 2005	Feb.2005	Mar.2005	April2005	May 2005
MORNING					
No-show's	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Kept Appointments	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Total					
Total Appointments	_____	_____	_____	_____	_____
AFTERNOON					
No-show's	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Kept Appointments	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Total					
Total Appointments	_____	_____	_____	_____	_____
Days Totals					
No-show's	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Kept Appointments	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Total Appointments	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
June 2005					
MORNING					
No-show's	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Kept Appointments	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Total					
Total Appointments	_____	_____	_____	_____	_____
AFTERNOON					
No-show's	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Kept Appointments	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Total					
Total Appointments	_____	_____	_____	_____	_____
Days Totals					
No-show's	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Kept Appointments	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Total Appointments	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

	Nov. 2005	Dec.2005	Jan. 2006	Feb.2006	March2006
MORNING					
No-show's					
Kept Appointments					
Total					
Total Appointments	_____	_____	_____	_____	_____
AFTERNOON					
No-show's					
Kept Appointments					
Total					
Total Appointments	_____	_____	_____	_____	_____
Days Totals					
No-show's					
Kept Appointments					
Total Appointments					

	April 2006	May2006	June 2006	July 2006	Aug 2006
MORNING					
No-show's					
Kept Appointments					
Total					
Total Appointments	_____	_____	_____	_____	_____
AFTERNOON					
No-show's					
Kept Appointments					
Total					
Total Appointments	_____	_____	_____	_____	_____
Days Totals					
No-show's					
Kept Appointments					
Total Appointments					

	Sept. 2006	Oct 2006	Nov 2006	Dec 2006	Jan.2007
MORNING					
No-show's					
Kept Appointments					
Total					
Total Appointments	_____	_____	_____	_____	_____

AFTERNOON					
No-show's					
Kept Appointments					
Total					
Total Appointments	_____	_____	_____	_____	_____

Days Totals					
No-show's					
Kept Appointments					
Total Appointments					

	Feb. 2007	March2007	April 2007	May 2007	June2007
MORNING					
No-show's					
Kept Appointments					
Total					
Total Appointments	_____	_____	_____	_____	_____

AFTERNOON					
No-show's					
Kept Appointments					
Total					
Total Appointments	_____	_____	_____	_____	_____

Days Totals					
No-show's					
Kept Appointments					
Total Appointments					

	July 2007	Aug.2007	Sept. 2007	Oct. 2007	Nov.2007
MORNING					
No-show's					
Kept Appointments					
Total					
Total Appointments	_____	_____	_____	_____	_____
AFTERNOON					
No-show's					
Kept Appointments					
Total					
Total Appointments	_____	_____	_____	_____	_____
Days Totals					
No-show's					
Kept Appointments					
Total Appointments					

	Dec. 2007
MORNING	
No-show's	
Kept Appointments	
Total	
Total Appointments	_____
AFTERNOON	
No-show's	
Kept Appointments	
Total	
Total Appointments	_____
Days Totals	
No-show's	
Kept Appointments	
Total Appointments	

TO: MERRY ARMSTRONG and Lori Drews
FROM: Malathi Jandhyala (for) Kris Miller, Chair, WSU Institutional Review Board (3005)
DATE: 5/22/2008
SUBJECT: Approved Human Subjects New Protocol, IRB Number #10385-001

Your Human Subjects Review Summary Form and additional information provided for the proposal titled "Trends in Missed Appointments at a Monthly Nailcare Clinic", IRB File Number 10385-001 was reviewed for the protection of the subjects participating in the study. Based on the information received from you, the WSU-IRB approved your human subjects protocol on 5/22/2008. This protocol is given Full Board review category.

IRB approval indicates that the study protocol as presented in the Human Subjects Form by the investigator, is designed to adequately protect the subjects participating in the study. This approval does not relieve the investigator from the responsibility of providing continuing attention to ethical considerations involved in the utilization of human subjects participating in the study.

This approval expires on 5/20/2009. If any significant changes are made to the study protocol you must notify the IRB before implementation. Request for modification forms are available online at <http://www.irb.wsu.edu/forms.asp>.

In accordance with federal regulations, this approval letter and a copy of the approved protocol must be kept with any copies of signed consent forms by the principal investigator for THREE years after completion of the project.

Washington State University is covered under Human Subjects Assurance Number FWA00002946 which is on file with the Office for Human Research Protections.

If you have questions, please contact the Institutional Review Board at (509) 335-3668. Any revised materials can be mailed to the Office of Research Assurances (Campus Zip 3005), faxed to (509) 335-6410, or in some cases by electronic mail, to irb@mail.wsu.edu.

Review Type: New Protocol
Review Category: Full Board
Date Received: 4/28/2008
OGRD No.: N/A
Agency: N/A

Thank You,

Institutional Review Board

Malathi Jandhyala
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