

An Investigation of the Arbor Free Clinic and Determinants of Patient Satisfaction

Research to be undertaken during the following time periods:

Academic year: 2000-2001

Quarter: spring

25%

Academic year: 2000-2001

Quarter: summer

15%

Academic year: 2001-2002

Quarter: fall

30%

Academic year: 2001-2002

Quarter: winter

30%

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Human subject compliance is required for this project. Stanford's Institutional Review Board approved the survey instrument in the summer of 2001 (Approval number: 0001-576. Title: Arbor Free Clinic Community Survey).

I have read and accept all obligations related to assuring that all necessary compliances noted above will be met. In addition, I understand that the information in this proposal and a progress report may be provided to the donor of this project's funding.

Student signature:

Date:

Stanford faculty advisor signature:

Date:

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Introduction

The uninsured and underinsured in the East Palo Alto area have few options for accessing health care, particularly on the weekend. The Arbor Free Clinic, managed by Stanford medical students and staffed entirely by volunteers, was created to address the acute care needs of such individuals. Not only does Arbor provide free health care to patients, it provides medical students valuable and unique clinical experience, undergraduates exposure to the clinic environment, and physicians the opportunity to donate their services and teach eager students. The Arbor Free Clinic, like hundreds of other free and volunteer clinics in the United States, has operated for the last ten years with the goal of providing quality health care to its underserved community. Also, like many other free and volunteer clinics, a substantial evaluation of Arbor's services and the satisfaction of its patients has yet to be conducted. Recognizing this deficit as well as the need for quality patient demographic data, last spring Arbor created two steering committee positions that would be responsible for beginning such an assessment. With the results from the assessment, Arbor hoped to improve services at the clinic and to have sound descriptive statistics to use for grant applications. Through my work as one of these steering committee members, it soon became clear that the scope of the project that I envisioned to sufficiently meet these goals was far greater than the bounds of the responsibilities of a steering committee member alone. In response, I began exploring the opportunity to apply for Community Partners Medical Scholars funding that would allow me to expand the project and provide it with an academic context.

Project Description

The goals of the project are to 1) obtain quality data regarding the demographic make-up of Arbor's patient population, 2) quantify the ability of Arbor to meet the needs of its patient population, 3) assess patient satisfaction related to Arbor's general medical services as well as to their specific efforts at providing social services, specialist care, and patient education, 4) evaluate the factors that determine patient satisfaction at the Arbor Free Clinic, and 5) disseminate the information to Arbor, San Mateo County, and more broadly to other free clinics via the literature, as well as to work with Arbor to suggest specific changes based on the results. In addition, an underlying aim of this project is to 6) create a sound survey instrument and implementation protocol that will facilitate accomplishment of goals 1-5 and be available for use by other health clinics/providers serving similar populations.

Project aim/goal 6 has already begun to be addressed. A second steering committee member, Rebecca Weintraub, and I created a draft of a survey instrument last spring that would fulfill goals 1-5. We integrated advice from the literature with Ms. Weintraub's and my respective experience with survey design in the non-profit and academic/community health sectors to create a survey that would ask the statistical questions Arbor wished to answer. The instrument was reviewed by the Arbor Free Clinic management team and statistical consultants, and then underwent a five-week long pilot phase. Several changes

were made throughout this process according to the needs of Arbor, the advice of our statistician, and the lessons learned from the pilot phase. Stanford's Institutional Review Board approved the survey early in the summer of 2001. The survey was implemented throughout last summer and this fall with the help of several undergraduate Stanford students. To date, approximately 83 completed surveys have been collected.

The survey instrument is a two-part written questionnaire (please find the survey attached). The first part contains general questions related to ethnicity, primary language, housing situation, health insurance status, and major medical concerns. This section of the survey is given to the patient after he or she has checked in with the front desk, but before the medical examination. The second part of the survey asks more specific questions relating to the patient's experience at Arbor and is given to the patient after the completed medical exam. These questions address topics such as time spent in the waiting room; patients' use of the social worker, dermatologist, and/or patient education services; and their overall rating of their experience at Arbor. With the assistance of the CPMS program, I envision increasing the survey sample size to 175-200 patients.

Goals 1, 2, and 3 will be accomplished in part with general frequency and distribution analysis of the data collected from the surveys. The survey includes several demographic questions that gather information such as age, gender, ethnic identity, and primary language spoken at home. Frequency analysis of these results will address goal 1, "to obtain quality data regarding the demographic make-up of Arbor's patient population." Goal 2, "to quantify the ability of Arbor to meet the needs of its patient population," will be met through investigation in to whether or not Arbor provides all of the care that the clinic has available to every patient who indicates an acute need for that care. Finally, the survey attempts to "assess patient satisfaction related to Arbor's general medical services as well as to their specific efforts at providing social services, specialist care, and patient education," Goal 3, with three questions that ask the patient to indicate whether or not they felt comfortable with their healthcare provider and were taught something useful about caring for themselves, and to rate the overall services that they received at Arbor. I will further address Goal 2, as well as Goal 4, "to evaluate the factors that determine patient satisfaction at the Arbor Free Clinic" with my investigation of the research hypotheses listed in Appendix 2 and described in the Academic Context section of this proposal.

Goal 5 will be met with a paper summarizing the results of the statistical analysis of the data gathered and a context built with a literature review, as well as by my assistance in putting the results of the project into action according to Arbor's desires. I would like to conduct an extensive literature review of free clinics and construct an accurate picture of how the Arbor Free Clinic operates in the context of other like clinics. This perspective would further assist making recommendations for positive changes in the clinic. At the conclusion of the project (by the end of winter quarter 2002), I would write a formal paper describing the characteristics of the Arbor patient population and the clinic's services, the strengths and weaknesses of Arbor, the process evaluation protocol, and the results of my statistical analysis. Ideally, this paper would be of great use not only to Arbor in its growth, but also for other providers of health and social services to the Arbor community and to young free health clinics outside of our community. I also look forward to the opportunity to help Arbor make use of the results of this project and therefore plan on presenting the information at Arbor manager and steering committee meetings, as well as

working with the clinic throughout the year to implement specific changes indicated by the results and deemed feasible and important by the Arbor management team.

Academic Context

Free clinics have been an important source of high quality medical care for the underserved since their birth in the 1960's (Kelleher 1991). Even Congress has recognized the important role of volunteers in medical provision and other services, as demonstrated by the Volunteer Protection Act of 1997. The Act provided "certain protections to volunteers, nonprofit organizations, and governmental entities in lawsuits based on the activities of volunteers" (Federal law 105-19; June 18, 1997). The purpose of the law was "to sustain the availability of programs, nonprofit organizations, and governmental entities that depend on volunteer contributions by reforming the laws to provide certain protections from liability abuses related to volunteers serving nonprofit organizations and governmental entities." Kelleher describes three mechanisms that free clinics have used to provide quality care with few resources. These include solving access and transportation problems by being located in underserved neighborhoods, being flexible in structure so that they can make due with available resources (i.e. physical space), and using volunteers to provide the care. While he comments that these solutions are almost universal, Kelleher goes on to mention that there is little networking or information sharing between clinics. Thus, an important consequence of this project might be to share with similar clinics the results of testing the research hypotheses described below, a description of how the Arbor clinic operates, as well as with the provision of a sound survey instrument and protocol for implementation.

Informed by existing literature describing the experiences of other free and volunteer clinics, and theories surrounding populations that share some of the demographic characteristics of Arbor's patient populations, I transformed project goals 2, "to quantify the ability of Arbor to meet the needs of its patient population," and 4 "to evaluate the factors that determine patient satisfaction at the Arbor Free Clinic," into a series of testable hypotheses (please see Appendix 2). Following, I have included selected examples of these hypotheses along with the rationale for including them in the following paragraphs.

Because Arbor depends upon volunteers to provide care and donated medical supplies, the range of care that the clinic may provide is limited. Acknowledging this limitation is an important step in managing a free clinic. However, missed opportunities for providing available care remain a significant problem for many well managed free and volunteer clinics. Arbor strives to offer all of the care that the clinic is able to provide to every patient that would benefit from that care. This includes acute physician care, dermatological specialty services, in-house social worker consultation, and patient education materials. An important part of this investigation, related to goal 2, is to evaluate whether or not patients are fully taking advantage of the care Arbor is able to provide, and if this is not always the case, to determine if missed opportunities are more often associated with certain groups. A positive finding for the following frequency analyses would suggest that missed opportunities are occurring at Arbor:

- “Patients who wished to receive non-physician care at Arbor (i.e. see the social worker, a specialist, or to receive patient education materials) did not always do so.”
- “Patients with housing or health insurance needs were not always seen by the social worker.”

If missed opportunities are occurring at Arbor, further investigation will attempt to determine in which population they are most likely to occur. Hispanics typically use fewer general health services than Caucasians, perhaps because they face cultural or language barriers to service utilization (Rogler 1996). An important, and measurable, potential barrier – not speaking the same language as the health care providers – is measured on the survey as needing a translator throughout the exam. The following research hypotheses address whether or not Hispanics, specifically non-English speakers, at Arbor suffer more missed opportunities than English speakers:

- “The percentage of patients who required translators throughout the medical exam and wished to receive non-physician care that received such care is smaller than the percentage of patients who did not require translators and wished to receive non-physician care that received such care.”
- “The percentage of patients who required translators throughout the medical exam and had housing or health insurance needs that were seen by the social worker is smaller than the percentage of patients who did not require translators and had housing or health insurance needs that were seen by the social worker.”

Patient satisfaction has been thoroughly studied in the literature. Correlates of patient satisfaction have included waiting time (Barr 1995), gender (Weisman 2001), race (Bouknight 2000), and Spanish as primary language/translator use (Baker 1998; Kirkman-Liff 1991, Morales 1999). However, I was able to find less than 15 references to relevant articles from 1966 to the present when I used the Medline subject headings “patient satisfaction” in combination with “medical indigency” (4 references) or “poverty” (6 references); and even less when I used “patient satisfaction” in combination with the keywords “underserved” (3 references), “free [health] clinic” (1 references), or “volunteer [health] clinic (1 reference)”. Thus, another important product from this project might be to add to the literature regarding patient satisfaction in patient populations/clinics such as Arbor. The hypotheses related to indicators of patient satisfaction include those suggested

by the general patient satisfaction literature and issues specific to underserved patient populations, and are related to project goal 4:

- “Respondents who did not require a translator throughout the medical exam indicated higher levels of patient satisfaction than those who did require a translator.”
- “Respondents who used a translator to complete the survey indicated higher levels of patient satisfaction than those who did require a translator.”
- “Hispanic patients indicated a lesser level of patient satisfaction than other patients.”
- “Respondents who had a short waiting time indicated higher levels of patient satisfaction than those whose waiting time was long.”
- “Respondents who did not have health insurance indicated higher levels of patient satisfaction than those with health insurance.”
- “Respondents who were able to take advantage of the non-physician care opportunities at Arbor indicated higher levels of patient satisfaction than those who were not.”
- “Women indicated higher levels of patient satisfaction than men.”

The Stanford Arbor Free Clinic and its Interest in Process Evaluation/Needs Assessment

The Stanford Arbor Free Clinic, founded in 1990, is a student-run free clinic serving the mid-Peninsula San Francisco Bay Area. The Arbor Free Clinic’s mission is two-fold: to provide quality patient care and to provide a rich teaching environment. As such, Arbor’s model uniquely serves and cares for two distinct communities: the patient community and the Stanford student community. Arbor provides onsite acute medical care and is the only free clinic open on weekends in the East Palo Alto area. In addition, Arbor conducts health care screening events and health fairs at various locations within the community throughout the year. Arbor is open every Sunday and is housed in the VA Hospital in Menlo Park. In the year 2000, Arbor served over 1300 patients, an 83% increase from the previous year. Since January 2001, Arbor has already treated 1000 patients. Almost all patients are uninsured or underinsured. By partnering with community organizations, Arbor has built a network of medical and social care to follow-up with patient needs. These partnerships include For Eyes Optical, which provides low-cost eye exams and glasses so that Arbor can provide vouchers to our patients; Walgreen’s Pharmacy, whom Arbor contracts with to provide prescription vouchers; and others.

The Arbor Free Clinic is staffed entirely by volunteer physicians and students. Around 60 physicians volunteer at the clinic and approximately 90% of medical students volunteer at least once during their medical school careers. Undergraduate students also comprise a vital component of the volunteer staff. The management team includes Dr. Lars Osterberg, Medical Director, three student clinic managers, and a steering committee made up of 30 medical and graduate students.

The onsite services at Arbor include acute medical care and much more. Patients are greeted by the undergraduate student-staffed front desk. All patients are walk-ins and are seen on a first come, first serve basis. The undergraduates check in the patients and

perform a preliminary intake. Pre-clinical medical students then conduct the medical history and record the vital statistics of each patient. If present, a clinical student will address the patient needs and carry out the medical exam while reporting back to a physician. If there is not a pre-clinical student available, the physician will treat the patient directly. Either way, the pre-clinical student follows the patient throughout the patient visit. One Sunday each month, a Dermatologist is available to treat patients walking in that Sunday or those who have been referred from previous weeks. Dermatology has proven to be needed specialty care for our patients and the clinic was lucky enough to find a physician willing to provide such services once a month. Each Sunday, a social services representative is available to speak with patients about potential resources for which they may be eligible, including health insurance, housing and shelter options, and welfare. Every patient is encouraged to speak with the social worker as the clinic acknowledges that the majority of patients are in need of more than acute medical care and the visit to Arbor may be one of only a few opportunities the patient has to link up with such resources.

After more than ten years of operation and the addition of several services beyond core physician care, the Arbor Free Clinic is long overdue for an assessment and evaluation of its services and patient population. The Arbor management team created two steering committee positions last spring in order to address this issue. This project has evolved specifically to meet the needs of the clinic and the intended results should be of great relevance to Arbor in improving its services and defining its patient population for fundraising and finance allocation purposes.

Relevance to Community Health and Medical Practice

I anticipate that the results of investigating the research hypotheses listed in Appendix 2 will promote the efficacy of Arbor and community health in general. This might be accomplished by demonstrating what Arbor already does well to promote patient satisfaction and/or providing specific strategies to address deficits in factors influencing patient satisfaction. For instance, if analysis discovers that patients who required translators throughout the medical exam indicated a lower patient satisfaction than patients who did not require translators, this could suggest that the clinic could benefit from staffing more translators and/or training translators and medical personnel on how to more effectively communicate with patients. An additional extremely relevant investigation would be into how well Arbor is meeting patient needs. If the data suggests that missed opportunities are a problem at the clinic, Arbor will have the information on which to base goals for improving patient access to available services. In contrast, if the data suggests that Arbor patients have few missed opportunities, a description of the clinic process could serve as a model for other free clinics.

By the end of this project, I hope to not only produce data and conclusions that could improve services at the Arbor Free Clinic and to provide descriptive statistics. In addition, I aim to advance health policy in general with the contribution of the results and context to the current body of literature surrounding free and volunteer clinics, and quantitative knowledge about the population that Arbor and other organizations in the community serve. I anticipate that this research will have significance for Arbor, its local community (i.e. San Mateo county), and for free and volunteer clinics in other areas. Certain benefits of the project include collecting sound demographic statistics that Arbor may use in fundraising/grant applications, design of a survey instrument effective for use in a small free clinic setting, a formal description of Arbor and its methodologies, and a review of the

literature surrounding free and volunteer clinics. Other potential benefits include suggested changes for the operation of Arbor based on statistical analysis of patient satisfaction and missed opportunity data.

Student Background

In June 1998, I graduated from Stanford University with a Bachelor of Arts in Human Biology and an Area of Concentration in Health Policy. I earned departmental honors in Human Biology for my honors thesis entitled “Physician and Payer Responses to the National Cancer Institute’s Guideline for Mammography Screening of Women Ages 40-49.” For my honors thesis, I interviewed several experts in the field to learn about the history and political context behind the NCI decision, including the chairperson of the NCI committee that made the recommendation and the president of an influential breast cancer advocacy organization. In addition to these interviews, I conducted a survey of physicians and third party medical care payers in California to determine their responses to the new guideline. This research culminated in the production of an honors thesis as well as a short publication in the *American Journal of Preventative Medicine* (17(4): 315-6, 1999 Nov).

In the spring of 1998, I was one of three Stanford students awarded the John Gardner Public Service Fellowship. In accordance with my interest in the health issues of underserved populations, I elected to complete my Gardner Fellowship as an Affiliate Research Scholar at the Montana Office of Rural Health (MORH). During the year and a half that I spent at the MORH, I participated in, designed, and led several research and grass roots community health projects. These included a study of the results of pairing at-risk high school students with senior citizens from the community so that the students could act as computer teachers and the seniors as mentors; a design of a research protocol to investigate the health-related consequences of studying and/or working in an environmentally sustainable and livable teaching and laboratory facility planned for the local university; and a review of the literature regarding the relationship between spirituality and health.

In addition to my work with the MORH during this time, I volunteered at a reproductive health clinic and at the local community health clinic. At the request of the community health clinic, I began an investigation of the physician supply in the area in order to demonstrate the need for this donation-based clinic. I discovered that this area of Montana actually had a physician surplus according to federal guidelines, yet, it was also clear that there was a large population in the area without access to healthcare – the population that our clinic served. I began a specific investigation into the proportion of uninsured, underinsured, and Medicaid patients that had access to physician care. Using this novel approach, I was able to demonstrate that a population within the county – our target patient population – was suffering from a physician shortage, thus qualifying the clinic for federal funding and status as a Community Health Center.

These experiences in Montana reinforced my desire to pursue my medical career within the context of serving the underserved, particularly by practicing in, managing, or starting a free clinic in the community where I grew up. Thus, it made perfect sense when I began medical school to become extremely involved with the Arbor Free Clinic and start gaining relevant and valuable training. As a new member of the steering committee and with the

experience I had with needs assessment, I was assigned the specific role of Needs Assessment Coordinator last spring. Soon the project outgrew the size of the standard commitment of a steering committee member and thus it was suggested that I pursue funding from the Community Partners Medical Scholars program in order to the time and resources that it deserves.

Community Partner and Faculty Advisors

Dr. Lars Osterberg, the Medical Director of the Arbor Free Clinic, will be my Community Partner advisor. Dr. Osterberg is a fantastic mentor, teacher, and physician whose leadership and advice has already contributed to this project. In addition to his relevant background as a physician, Dr. Osterberg provides essential input into the project as the single continuous figure at Arbor, which makes him an important voice in conveying the goals and needs of Arbor from a long-term perspective.

Dr. Randy Stafford is an Assistant Professor of Medicine with a faculty appointment in the Stanford Center for Research in Disease Prevention. Dr. Stafford has broad expertise in health care management, epidemiology, and internal medicine, as well as familiarity with the management of community health centers, measurement of health care quality, and analysis of social surveys. His input will be invaluable for the data analysis and investigation of the academic context via the literature and his personal contacts.

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Appendix

1. 2-part questionnaire
2. List of possible research questions

Appendix 1: Arbor Community Survey

Thank you for completing this confidential survey. Information will be used to improve the health care services that you and your community receive from Arbor in the near future. All information provided is anonymous and will not affect your care today.

PLEASE COMPLETE THIS SECTION BEFORE THE MEDICAL EXAM: _____

1. Please indicate which of the following is most accurate:

- I am filling out this survey for myself.
- I am filling out this survey for a child.
- I am a translator filling out this survey for a literate adult.
- I am a translator filling out this survey for a non-literate adult.
- I am a translator filling out this survey for a child.

2. Which language do you primarily speak at home?

- English Mandarin Tongan
- Cantonese Samoan Other. Please specify:
- _____
- Fiji Spanish

3. Do you need a translator at Arbor today?

- No Yes

3a. If yes, is your translator

- a family member a friend an Arbor translator

4. Please indicate your age: _____

5. Please indicate your gender: Woman/Girl Man/Boy

6. Which of the following describes your ethnic identity? Check all that apply.

- African American Hispanic
- Asian American Native American
- Caucasian Pacific Islander
- Other. Please specify: _____

7. In what county do you live?

- San Mateo (East Palo Alto, Menlo Park, Redwood City)
- Santa Clara (Palo Alto, Mountain View, Sunnyvale, San Jose)
- Other. Please specify: _____

8. Which of the following describes your current housing situation?

- I own or rent my home. Please answer question 8a & b.
- I live (for more than 3 months) with family or friends. Please answer question 8a & b.
- I live temporarily (for less than 3 months) with family or friends. Please answer question 8a & b.
- I live in public housing. Please answer question 8a & b.
- I live in a shelter. Please skip to question 9.
- I live in a group or transitional home. Please skip to question 9.
- I am homeless. Please skip to question 10.
- Other. Please indicate your housing situation: _____

8a. How many people do you live with? _____

8b. How many bedrooms are there where you live? _____

9. Have you ever been homeless?

No Yes

10. Do you currently work outside of the home for pay?

No Yes, I work full time. Yes, I work part time.

11. Do you currently have any form of health insurance?

No Yes

11a. If yes, what type of health insurance do you have (i.e. MediCal, Well Program, VA, etc.)? _____

12. What is the highest level of education you have completed?

9th grade or less Vocational training
 High School College or more

13. Do you have access to an automobile?

No Yes

14. Do you have access to the Internet?

No Yes

15. How did you hear about Arbor?

16. Please check the statement(s) that best describes why you chose to come to Arbor. Check all that apply.

Arbor is free.
 I have no health insurance.
 My health insurance deductible or co-pay is too high.
 I knew of no other place open on Sunday.
 Arbor has treated me before.
 I was referred to Arbor. Please indicate by whom:

 I do not know of any other local option for me.
 Other. Please specify:

17. Where else, if anywhere, do you receive healthcare?

18. What are the primary medical issues or concerns that brought you to Arbor?

a.

b.

c.

19. What other health-related issues or concerns do you have in general?

a.

b.

c.

PLEASE COMPLETE THIS SECTION AFTER THE MEDICAL EXAM _____

19. Approximately how long did you wait in the waiting room today?
 0 – hour 1 – 1 hour more than 2 hours
 – 1 hour 1 – 2 hours

20. Did you visit the Arbor social worker today?
 Yes No

21a. If yes, please rate how useful this visit was for you on a scale of 1-5 (5=very useful, 1=not useful):

5 4 3 2 1

22b. If no, would you have liked to visit with a social worker to talk about signing up for public resources such as MediCal or housing options?

Yes No

23. Did you visit a specialist (i.e. the dermatologist) today?
 Yes No

23a. If yes, please rate how useful this visit was for you (5=very useful, 1=not useful):

5 4 3 2 1

23b. If no, would you have liked to visit a specialist today?

Yes No

23i. If yes, what type of specialty care would have been most useful to you?

24. Did you receive any patient education materials today?
 Yes No

24a. If yes, please rate how useful these materials were for you (5=very useful, 1=not useful):

5 4 3 2 1

24b. Would you have liked to receive other/any patient education materials?

Yes No

24i. If yes, what health-related education materials would you be interested in?

Public insurance eligibility (i.e. MediCal, Medicare, Well Program)

Community resources

Specific health topics (i.e. asthma, hypertension, etc.). Please specify:

_____ Other. Please specify:

25. Did you feel comfortable with your health care providers?
 Yes No

26. Did you learn something useful about caring for yourself?
 Yes No

27. Please rate the overall services you received at Arbor (5=great, 1=inadequate):
5 4 3 2 1

28. Please share any further comments that you may have regarding the health care services that you received, or would like to have received, at Arbor. Please use the backside of this page for more space. _____

Appendix 2: Research Hypotheses

I. The following analyses and testable hypotheses address project goal 6:

“To create a sound survey instrument and implementation protocol that will facilitate accomplishment of goals 1-5 and be available for use by other health providers serving similar populations.”

1. There is a high correlation between the survey’s three measures of patient perception of the clinic visit (and thus may be collapsed into one variable and called patient satisfaction).
 - a. Measuring perception:
 - i. Did you feel comfortable with your health care providers? (Q25: yes/no)
 - ii. Did you learn something useful about caring for yourself? (Q26: yes/no)
 - iii. Please rate the overall services you received at Arbor (Q27: 1-5).
2. Patients are more likely to give the overall services at the clinic a high rating (4 or 5) if they felt comfortable and gained knowledge at the visit than if they did not.
 - a. Comfort/learning:
 - i. Did you feel comfortable with your health care providers? (Q25: yes/no)
 - ii. Did you learn something useful about caring for yourself? (Q26: yes/no)
 - b. Rating:
 - i. Please rate the overall services you received at Arbor (Q27: 1-5).
3. Patients with an education level of 9th grade or less were less likely than those with more education to fully complete the survey.
 - a. Education:
 - i. What is the highest level of education you have completed (Q12: a-d)?
 - 9th grade or less
 - vocational training
 - high school
 - college or more
 - b. Survey completion determined by researcher evaluation.
4. Individuals who used a translator (non-parent) to complete their surveys were more likely than those who did not to fully complete the survey.
 - a. Translator status (Q1: a-e):
 - i. Please indicate which of the following is most accurate:
 - I am filling out this survey for myself.
 - I am filling out this survey for a child.
 - I am a translator filling out this survey for a literate adult.
 - I am a translator filling out this survey for a non-literate adult.
 - I am a translator filling out this survey for a child.

- b. Survey completion determined by researcher evaluation.

II. The following hypotheses address project goal 4:

“To evaluate the factors that determine patient satisfaction at the Arbor Free Clinic.”

- 5. Spanish speakers who needed translators throughout the visit perceive their visit as less satisfactory than individuals who did not need translators.
 - a. Translator status:
 - i. Did you need a translator at Arbor today? (Q3: yes/no)
 - b. Measuring perception:
 - i. Did you feel comfortable with your health care providers? (Q25: yes/no)
 - ii. Did you learn something useful about caring for yourself? (Q26: yes/no)
 - iii. Please rate the overall services you received at Arbor (Q27: 1-5).

- 6. Individuals who used a translator (non-parent) to complete their surveys indicate that their visit is more satisfactory than individuals who are able to complete the surveys without a translator.
 - a. Translator status (Q1: a-e):
 - i. Please indicate which of the following is most accurate:
 - I am filling out this survey for myself.
 - I am filling out this survey for a child.
 - I am a translator filling out this survey for a literate adult.
 - I am a translator filling out this survey for a non-literate adult.
 - I am a translator filling out this survey for a child.
 - b. Measuring perception:
 - i. Did you feel comfortable with your health care providers? (Q25: yes/no)
 - ii. Did you learn something useful about caring for yourself? (Q26: yes/no)
 - iii. Please rate the overall services you received at Arbor (Q27: 1-5).

- 7. Patient satisfaction is lower for Hispanic patients.
 - a. Hispanic ethnicity (Q6)
 - i. Which of the following describes your ethnic identity? Check all that apply.
 - 1. African American
 - 2. Asian American
 - 3. Caucasian
 - 4. Hispanic
 - 5. Native American
 - 6. Pacific Islander
 - 7. Other. Please specify:
 - b. Measuring perception:
 - i. Did you feel comfortable with your health care providers? (Q25: yes/no)

- ii. Did you learn something useful about caring for yourself? (Q26: yes/no)
 - iii. Please rate the overall services you received at Arbor (Q27: 1-5).

- 8. Patient satisfaction is highest among Caucasian patients.
 - a. Caucasian ethnicity (Q6)
 - i. Which of the following describes your ethnic identity? Check all that apply.
 - 1. African American
 - 2. Asian American
 - 3. Caucasian
 - 4. Hispanic
 - 5. Native American
 - 6. Pacific Islander
 - 7. Other. Please specify:
 - b. Measuring perception:
 - i. Did you feel comfortable with your health care providers? (Q25: yes/no)
 - ii. Did you learn something useful about caring for yourself? (Q26: yes/no)
 - iii. Please rate the overall services you received at Arbor (Q27: 1-5).

- 9. Patient satisfaction is higher when waiting time is reduced.
 - a. Wait time:
 - i. Approximately how long did you wait in the waiting room today (Q19: a-e)?
 - 0 - _ hours
 - _ - 1 hours
 - 1 - 1_ hours
 - 1_ - 2 hours
 - more than 2 hours
 - b. Measuring perception:
 - i. Did you feel comfortable with your health care providers? (Q25: yes/no)
 - ii. Did you learn something useful about caring for yourself? (Q26: yes/no)
 - iii. Please rate the overall services you received at Arbor (Q27: 1-5).

- 10. Patients without healthcare were more often highly satisfied with their visit than patients with other forms of healthcare.
 - a. Do you currently have any form of health insurance? (Q11: yes/no)
 - b. Measuring perception:
 - i. Did you feel comfortable with your health care providers? (Q25: yes/no)
 - ii. Did you learn something useful about caring for yourself? (Q26: yes/no)
 - iii. Please rate the overall services you received at Arbor (Q27: 1-5).

11. Patients who were able to take advantage of the non-physician care opportunities at Arbor had higher levels of patient satisfaction than those who were not able to do so.
 - a. Non-physician opportunities
 - i. Did you visit the Arbor social worker today? (Q20: yes/no)
 - ii. Did you visit a specialist (i.e. the dermatologist) today? (Q23: yes/no)
 - iii. Did you receive any patient education materials today? (Q24: yes/no)
 - b. Measuring perception:
 - i. Did you feel comfortable with your health care providers? (Q25: yes/no)
 - ii. Did you learn something useful about caring for yourself? (Q26: yes/no)
 - iii. Please rate the overall services you received at Arbor (Q27: 1-5).

12. Women indicated higher levels of patient satisfaction than men.
 - a. Gender (Q4: woman/man)
 - b. Measuring perception:
 - i. Did you feel comfortable with your health care providers? (Q25: yes/no)
 - ii. Did you learn something useful about caring for yourself? (Q26: yes/no)
 - iii. Please rate the overall services you received at Arbor (Q27: 1-5).

13. When the survey was filled out for a child, a higher level of patient satisfaction was indicated than if the survey was not filled out for a child.
 - a. Filling the survey out for a child (Q1: a-e)
 - i. Please indicate which of the following is most accurate:
 - I am filling out this survey for myself.
 - I am filling out this survey for a child.
 - I am a translator filling out this survey for a literate adult.
 - I am a translator filling out this survey for a non-literate adult.
 - I am a translator filling out this survey for a child.
 - b. Measuring perception:
 - i. Did you feel comfortable with your health care providers? (Q25: yes/no)
 - ii. Did you learn something useful about caring for yourself? (Q26: yes/no)
 - iii. Please rate the overall services you received at Arbor (Q27: 1-5).

II. The following frequency analyses and hypotheses address project goal 3:
“To quantify the ability of Arbor to meet the needs of its patient population.”

14. Patients with an obvious need of the social worker were always seen by the social worker.

- i. Measuring obvious need (Q8: a-h, Q8a, and Q8b)
- ii. Q8 – Which of the following describes your current housing situation?
 - I own or rent my home.
 - I live (for more than 3 months) with family or friends.
 - I live temporarily (for less than 3 months) with family or friends.
 - I live in public housing.
 - I live in a shelter.
 - I live in a group or transitional home.
 - I am homeless.
 - Other. Please indicate your housing situation.

individually)

- iii. Do you currently have any form of health insurance? (Q11: yes/no)

b. Seen by the social worker:

- i. Did you visit the Arbor social worker today? (Q20: yes/no)

15. Patients who wished to see the social worker, a specialist, or to receive patient education materials were always able to take advantage of these opportunities.

a. Patient wishes:

- i. If no [to Q20], would you have liked to visit with a social worker to talk about signing up for public resources such as MediCal or housing options? (Q22b: yes/no)
- ii. If no [to Q23], would you have liked to visit a specialist today? (Q23b: yes/no)
- iii. Would you have liked to receive other/any patient education materials? (Q24b: yes/no)

16. Patients who wished to see the social worker, a specialist, or to receive patient education materials and were able to take advantage of these opportunities were more satisfied than patients who had the same wishes but were not able to take advantage of these opportunities.

a. Wishes achieved:

- i. Did you visit the Arbor social worker today? (Q20: yes/no)
- ii. Did you visit a specialist (i.e. the dermatologist) today? (Q23: yes/no)
- iii. Did you receive any patient education materials today? (Q24: yes/no)

b. Wishes not achieved:

- i. If no [to Q20], would you have liked to visit with a social worker to talk about signing up for public resources such as MediCal or housing options? (Q22b: yes/no)
- ii. If no [to Q23], would you have liked to visit a specialist today? (Q23b: yes/no)
- iii. Would you have liked to receive other/any patient education materials? (Q24b: yes/no)

- c. Measuring perception:
 - i. Did you feel comfortable with your health care providers? (Q25: yes/no)
 - ii. Did you learn something useful about caring for yourself? (Q26: yes/no)
 - iii. Please rate the overall services you received at Arbor (Q27: 1-5).

- 17. Patients whose primary language was not English were not able to take advantage of non-physician opportunities with the same frequency as those whose primary language was English.
 - a. Language
 - i. Which language do you primarily speak at home? (Q2: a-h – could be grouped to English/Non-English)
 - b. Non-physician opportunities
 - i. Did you visit the Arbor social worker today? (Q20: yes/no)
 - ii. Did you visit a specialist (i.e. the dermatologist) today? (Q23: yes/no)
 - iii. Did you receive any patient education materials today? (Q24: yes/no)

- 18. Patients who required translators throughout the medical visit were not able to take advantage of non-physician opportunities with the same frequency as those did not require translators throughout the medical visit.
 - a. Translator status
 - i. Did you need a translator at Arbor today? (Q3: yes/no)
 - b. Non-physician opportunities
 - i. Did you visit the Arbor social worker today? (Q20: yes/no)
 - ii. Did you visit a specialist (i.e. the dermatologist) today? (Q23: yes/no)
 - iii. Did you receive any patient education materials today? (Q24: yes/no)

November 9, 2001

Proposal Review Committee
Community Partners Medical Scholars Program
Edwards R-109
Stanford University School of Medicine

Dear Sirs;

This letter offers my strong support for Marie Soller's proposal to study patient satisfaction at the medical student-run Arbor Free Clinic. Her impressive application to the Community Partners Medical Scholars program represents a well-thought out project with concrete objectives. Beyond these specific objectives, this project will meet three broad goals. First, it will provide a concrete product that will enable the Arbor Free Clinic to improve the patient care that they provide. Second, it will introduce student-doctor Soller (and others involved in the project) to the important connections between research and health care management. Finally, this project will allow Ms. Soller to acquire a specific set of academic skills that will serve her well in her medical career. For these reasons, this project deserves your support.

As a project advisor, I will assist Ms. Soller in activities related to analyzing the results of her planned survey, translating these results into specific operational initiatives, and preparing at least one academic manuscript describing the results of her study. To do so I will rely on my broad expertise in health care management, epidemiology, and internal medicine, as well as my familiarity with the management of community health centers, measurement of health care quality, and analysis of social surveys. As project advisor, I will have regular contact with Ms. Soller to discuss this project and will review materials that she prepares documenting the results of her project.

I am happy to help with this valuable project.

Sincerely,

Randall S. Stafford, MD, PhD