

LITERATURE REVIEW

For the Design and Validation of a Patient Satisfaction Survey
For HIV+ Clients in Ambulatory Care Settings
January 2002

TABLE OF CONTENTS

Introduction	3
Summary Articles	5
Survey Content.....	8
Survey Methodology.....	16
Correlates of Patient Satisfaction.....	26
Citations	38

Introduction

Reviewing the relevant literature was initiated by searching several library databases using common key phrases and acquiring those books and articles that were most relevant based on their abstracts. Table 1 summarizes the breadth and depth of the database returns. Databases returning fewer than 50 results yielded nearly 100% relevant articles, while databases returning greater than 50 articles yielded a 17% rate of relevant articles. In all, approximately 100 books and articles were acquired and reviewed in the process of survey design.

Table 1. Library database search and results for core survey.

<u>DATABASE</u>	<u>KEYWORDS</u>	<u>RESULTS</u>
Medline	patient satisfaction AND (HIV OR AIDS)	63
PsycINFO	patient satisfaction AND (HIV OR AIDS)	18
Health and Psychosocial Instruments	patient satisfaction AND HIV	2
Health and Psychosocial Instruments	patient satisfaction (in abstract)	74
Cochrane	patient satisfaction	106
CHID	patient satisfaction	79
General	patient satisfaction AND HIV	6
General	patient satisfaction AND HIV	8

An additional search was initiated for the purpose of drafting the modules. Based on analyses of the focus groups and key informant interviews, five modules were identified: case management, drug treatment, managed care, mental health, obstetrics and gynecology. This second database search was confined to Medline, using the key phrases of the first search along with each module phrase (e.g. “case management”). This search for literature related to the modules was very specific and produced far fewer results and articles for retrieval (25).

Table 2. Medline search and results for specific modules.

<u>MODULE</u>	<u>KEYWORDS</u>	<u>RESULTS</u>
Case management	(patient satisfaction AND AIDS or HIV)	6
	Case Management/ or Patient Care Planning	
Drug treatment	Tranquilizing Agents/ or Substance-Related Disorders/ or	1
	Alcoholism	
Managed care	Managed Care Programs	8
Mental Health	Mental health	5
Ob/gyn	Obstetrics/ or Gynecology/ or Pregnancy	3
unknown	patient satisfaction AND HIV	8

The study of patient satisfaction did not begin in earnest until the late 1970's and early 1980's. This might be attributed to the commercialization of medicine, and by increasing interest in "individual experience" among social scientists. This relatively recent literature addresses the broad areas necessary for designing, validating, and implementing a patient satisfaction survey: (1) summary articles, (2) survey content, (3) survey methodology, (4) correlates of satisfaction. These four chapters in the literature review provide a loose organization for how the articles were used in the design of the survey and the validation methodology. It is rarely the case that the aim and content of an article falls into just one of the four chapter headings.

Summary articles consist of broad discussions as well as more traditional reviews of the literature, and meta-analyses of findings across large samples of similar studies. Literature on survey content provided a clear starting point in drafting the individual items. In many cases, the actual survey items are reprinted in the article.

Survey methodology covers several different areas. Measurement theory engages discussions of the definition and of patient satisfaction, as well as the meaning of what is probably measured in studies of patient satisfaction. One can study needs, expectations, and satisfaction. Ironically, none of these are related to the quality of care provided, from a public health / medical perspective. Survey methodology also provides an overall approach to survey design and administration. Most importantly, this part of the literature described how responses could be affected by method of administration.

Correlates of patient satisfaction describe those things that predict satisfaction, or those things that are predicted by satisfaction. While thought to be purely of academic interest in many studies, correlates are central to this project in terms of validation. This literature documents and highlights all of the relationships between each measurable phenomenon and patient satisfaction. Part of our approach to validation will involve confirmatory replications of these established relationships.

What follows are approximately 50 detailed descriptions of the most useful articles from the 125 that were collected during the search. In each case, the article citation is **highlighted**, while a few of the most salient points are *offset and italicized*. At the end of the review is an alphabetized citation list.

Summary Articles

Sitzia, J. and Wood, N. (1997). Patient Satisfaction: A Review of Issues and Concepts. Social Science and Medicine, 45: 1829-1843.

Sitzia and Wood review the literature and suggest that patient satisfaction could be assessed by measuring 1) the degree to which patients believe that care possesses certain attributes and 2) the patient's evaluation of those attributes. They suggest that satisfaction is not single concept made up of multiple determinants, but that there exists three independent models of satisfaction, each associated with one determinant. Thus, there is the "need for the familiar," the "goals of help-seeking" and the "importance of emotional needs." Furthermore, there is evidence that there are two states of satisfaction, stable ones related to health care generally and dynamic ones related to specific health care interactions.

Components of satisfaction consist of: structural, technical and interpersonal aspects of care.

Expectations are critical as they form the basis for the subjective assessment of care that is the rating of satisfaction. There can be different expectations for different aspects of care and patients with lower expectations tend to be more satisfied. Satisfaction cannot be interpreted as a measure of quality of care and must be interpreted in the context.

The determinants of satisfaction are expectations, patient characteristics, and psychosocial determinants.

The structural aspects includes: access, physical setting, costs, convenience, treatment by non-clinical staff/insurers. The technical aspects includes knowledge, competence/quality of care, interventions, outcomes. The interpersonal aspects includes: communication, empathy, and education.

The "discrepancy model" posits that the general lack of variability in patient satisfaction scores indicates that researchers should explore what explains dissatisfaction, and not satisfaction.

Hall, J. and Dornan, M. (1990). Patient Sociodemographic Characteristics as Predictors of Satisfaction with Medical Care: A Meta-Analysis. Social Science and Medicine; 30(7): 811-818.

This paper reviews the evidence of the relationship between patient satisfaction and patient characteristics using quantitative meta-analytic techniques. The authors used standard and accepted methods for identifying published quantitative analyses of patient satisfaction where information on the association among patient characteristics and satisfaction were presented. One hundred and ten published reports were included in the analysis that met the authors' criteria for inclusion. For each study, each correlation was extracted and coded as to which of the 11 aspects of care it pertained to; the 11 aspects of care were: access, cost, overall quality of care, humaneness of providers, competence of providers, information given by providers, bureaucracy,

physical facilities, providers' attention to psychosocial problem, continuity of care and outcome of care.

More satisfied patients tended to be older, white, male and of higher social class, and married.

The paper also reports several interesting contrasts among variables, such as sex and ethnicity. The authors conclude by stating that in overall terms, it appears that patient satisfaction is associated with age and education and nearly significantly associated with social and marital status. The authors continue to state that the associations may be due to response patterns on the part of the groups identified or they may be mediated by events and processes that occur during the medical care encounter.

Inui, T. and Carter, W. (1985). Problems and Prospects for Health Services Research on Provider-Patient Communication. *Medical Care*; 23(5): 521-538.

In this review of studies of provider-patient communication, the authors assert that even with the vast knowledge available on biological processes and disease mechanisms, communication between health care provider and patient is an extremely important aspect of health care. Attempting to measure this, however, requires interdisciplinary activities, since merely measuring satisfaction at the conclusion of an interaction cannot measure all the nuances of communication (both verbal and non-verbal). They then spend some time describing the methods of systematic analysis of these interactions, citing that many of the methods have generic similarities: strategies utilized direct observation; emphasis on specific processes such as verbal communication; multiple classifications to categorize encounters; and an approach to quantify the events. The authors also argue that it is important to understand pre-encounter state in order to place post-encounter measures into perspective. This could include patient expectations of the encounter, degree of prior exposure to the health care provider, and demographic characteristics, all of which can ultimately effect how a patient interprets the encounter. The authors conclude that it is important to augment measures that categorize a specific type of interaction (the example they gave was verbal communication) with measures of other types of interaction, such as body language. They also point out that for chronic diseases, addressing symptoms and providing support rather than a "cure" is often the goal, once again pointing to the importance of communicating effectively with patients through the course of their treatment.

Hall, J., and Dornan, M. (1988). Meta-Analysis of Satisfaction with Medical Care: Description of Research Domain and Analysis of Overall Satisfaction Levels. *Social Science and Medicine*; 27(6): 637-644.

The authors conducted a meta-analysis of 221 studies to examine consumer satisfaction with medical care. The authors begin by describing the general characteristics that could describe satisfaction instruments. *Directness* of the question relates to how directly a patient was asked about their satisfaction (how satisfied were you vs. describe the care you received). *Specificity* refers to how general of an encounter is being measured, ranging from measures of a health system in general to measures of a specific visit. *Type of care* refers to the type of service being accessed (e.g. ambulatory care). *Dimensionality* refers to the aspects of the care being measured

(e.g. humaneness of provider). Overall, most studies in the meta-analysis had high rates of satisfaction.

Other results discussed included: patients were more satisfied with physicians with less experience; general satisfaction studies had lower satisfaction ratings than specific event focused studies; and higher satisfaction levels were found when utilizing patients from a health system rather than a community sample.

The authors then present theories for results found. Presumably patients were more satisfied with newer doctors because they spend more time with patients, and displayed more technical and interpersonal competence (supported by other literature). They presented several hypotheses for why more specific encounters were rated higher than studies focusing on satisfaction with health care in general. The first is related to temporality and cognitive process, in that negative experiences are remembered for a longer period of time. Since most general satisfaction surveys were not administered immediately after an encounter, they may be influenced by the more negative experiences of those being interviewed. Additionally, general satisfaction survey respondents may draw on more generic (and potentially negative) views of health care rather than a specific encounter with a health care provider, whereas patients' evaluations of "my care" specifically may have more positive views. In either case, these attitudes and perceptions could skew the results.

Survey Content

McDaniel, C. and Nash, J. (1990). Compendium of instruments measuring patient satisfaction with nursing care. Quality Review Bulletin; 182-188.

The authors summarize measures of patient satisfaction in nursing care. The authors utilized various techniques to compile a list of 21 instruments including: name of the tool, date developed and developer; purpose of the measure; a description of the measure; the psychometrics (reliability and validity) of the measure; and the availability of the measure.

Barr, D. and Vergun, P. (2000). Using a New Method of Gathering Patient Satisfaction Data to Assess the Effects of Organizational Factors on Primary Care Quality. Journal on Quality Improvement; 26(12): 713-723.

The authors of this article argue that conventional methods of assessing patient satisfaction are insufficient. Traditionally, a survey (e.g. the nine-item Visit-Specific Satisfaction Questionnaire (VSQ)) is administered either after the encounter or by telephone at a later date. However, such instruments cannot capture the patient's perspectives of the encounter or objective measurements of the system. The authors developed a means of collecting this information via a 67-item questionnaire (included in the article) that collected patient demographic information and health status, prior health care (continuity), and ancillary services utilized by the patient. Targeted to patients coming to a primary care office visit at a large multispecialty facility in northern California, the study achieved a response rate of 77.6 percent for a total sample size of 291.

Guyatt, G., Mitchell, A., Molloy, W., Capretta, R., Horsman, J., and Griffith, L. (1995). Measuring Patient and Relative Satisfaction with Level or Aggressiveness of Care and Involvement in Care Decisions in the Context of Life Threatening Illness. Journal of Clinical Epidemiology; 48: 1215-1224.

Researchers were attempting to develop a questionnaire that addressed two important aspects of patient and relative satisfaction with medical care: level of care received and the degree of involvement in healthcare decisions. Researchers generated items via literature reviews and interviews with patients, relatives of patients and healthcare providers, and included items in the final scale that were most identified as areas of dissatisfaction or of importance. Ultimately, three uni-dimensional 7-point (7 designated high satisfaction, 1 designated low) response scales were created: the 23-item Patient Satisfaction Index, the 34-item Relative of Competent Patient Satisfaction Index, and the 29-item Relative of Incompetent Patient Satisfaction Index.

The authors believe that their instruments measure satisfaction with the degree of participation in decision-making and satisfaction with the intensity of care provided” and hypothesize that the instruments may be appropriate for use with “younger chronically ill patients and their families”.

Halkitis, P. and Dooha, S. (1998). The Perceptions and Experiences of Managed Care by HIV-Positive Individuals in New York City. AIDS and Public Policy Journal; 13(2): 75-84.

This paper describes the experiences with managed care of HIV-positive patients living in New York City. The authors compares levels of patient satisfaction between those who are enrolled in managed care as compared with those in indemnity, fee-for-service or government sponsored plans, using qualitative research methods. The study sample consisted of a random sample of clients of Gay Men's Health Crisis (GMHC), stratified by health care plan, sex, sexual orientation, and race/ethnicity. The response rate was approximately 30%, resulting in 29 completed in-depth interviews. The sample was predominately male and approximately half were African-American or Latino.

Results indicated that satisfaction with managed care health care plans was very often situational or specific to a visit, rather than a global assessment of the plans.

Satisfaction was "mentioned in connection with one or more major sources: convenience, positive relationship with physician, and limited out of pocket expenses." In contrast, dissatisfaction was found to associated with both global and specific situations. There was general dissatisfaction with the "limited and inefficient HIV/AIDS services," the lack of knowledge about HIV/AIDS and the lack of compassion for and prejudice against people with HIV/AIDS. Satisfaction with convenience stemmed from the on-stop-shop aspect of managed care, while dissatisfaction resulted from forced choices of care providers, the policies of the plans that resulted in long delays in receiving care or barriers to treatment and a lack of knowledge about HIV/AIDS among managed care providers. In contrast to managed care plans, satisfaction with fee-for-service or governmental plans tended to be more global, focusing on the scope of coverage and the breadth of choices provided. Medicaid recipients were particularly satisfied with the number of services provided and the flexibility of care, while Medicare recipients were less so. Like managed care recipients, Medicaid and Medicare recipients were dissatisfied with the inefficiency of the government bureaucracy and the lack of clear information. Among indemnity plan recipients, dissatisfaction stemmed from high deductibles and delays in reimbursement. The authors conclude that while dissatisfaction among patients with government-sponsored plans tended to stem from the bureaucratic nature of the plans.

Managed care plan recipients tended be less satisfied due to the poorer quality of care received in the form of less knowledgeable and sensitive care providers.

Beedham, H. (1995). HIV and AIDS Care: Consumers' Views on Needs and Services. Journal of Advanced Nursing; 22: 677-686.

This study describes the health and social needs and views and opinions on services of HIV/AIDS care consumers and to compare these to responses among providers of HIV/AIDS care. Study participants were 85 clients attending a specialized NHS care clinic in London, England; the sample was stratified to represent the various subgroups of HIV/AIDS patients at the clinic. No participant had been diagnosed for less than 4 months. The face-to-face interview

combined open- and close-ended questions and resulted thus in both quantitative and qualitative data. The majority of study participants were men and all but three were younger than 45 years of age. Less than 20% were Black and two-thirds of the men in the sample had contracted HIV via sex with men. The interview assessed various aspects of the respondents' lives; this brief summary will focus on their opinions of and needs around their outpatient health care. Results indicate that respondents valued the interpersonal aspects of their health care more than the technical components of it. Over 95% of respondents reported appreciating the "friendliness and relaxed manner of staff" and over two-thirds valued "being given positive encouragement or reassurance" about their condition. Just a third of respondents appreciated discussing their information needs with their doctors and over half thought their doctors were receptive to questions. In contrast another third thought that the doctors were not forthcoming with information or receptive to questions. Regarding the use of specialist or generalist health care services, women and heterosexual men appreciated community support services and "rejected those facilities which seem to be predominantly designed for and used by gay males."

The authors conclude that when compared with the lack of attention and services to their social needs, HIV/AIDS patients were generally satisfied with the services dedicated to their health needs.

The authors emphasized the overwhelming housing needs of the study respondents and concluded that greater coordination of services is required.

Williams, S. and Calnan, M. (1991). Convergence and Divergence: Assessing Criteria of Consumer Satisfaction Across General Practice, Dental and Hospital Settings. *Social Science and Medicine*; 33(6): 707-716.

The authors begin by citing other work that suggests that while most consumers give high satisfaction ratings to general aspects of their health care experience, they are less likely to do so for specific aspects. They also note that certain aspects of satisfaction with health care are relevant regardless of the type of medical setting. To test this hypothesis, the authors sent out 735 questionnaires to a random sample of 18+ year olds who lived in two health districts in Great Britain. The survey, which achieved a response rate of 62 percent, collected demographic data, as well asking a range of satisfaction questions related specifically to their health care experience (medical, dental, or hospital) and general attitude towards medicine. All three types of health care received very high satisfaction ratings, as expected.

However, more dissatisfaction was expressed with specific aspects of the experience (a specific example was not being able to discuss problems of a personal nature with your physician).

The researchers also found that there were clear predictors of overall satisfaction across all settings—specifically, items that fell into the domains of professional competence and patient-health care provider relationship.

Hall, J. and Dornan, M. (1988). What Patients Like About Their Medical Care and how often they are asked: A Meta-Analysis of the Satisfaction Literature. Social Science and Medicine; 27(9): 935-939.

The authors conducted a meta-analysis of 221 studies to address the multidimensionality in satisfaction instruments. The authors developed 12 categories of dimensions that were addressed across all the studies.

These were overall satisfaction; satisfaction with: access; cost; overall quality; humaneness; competence; the amount of information supplied by the provider; bureaucratic arrangements and members of the bureaucracy; physical facilities; the provider's attention to psychosocial problems of the patient; continuity of care; and the outcome of care.

The authors then created a measure of level of satisfaction for each dimension from available data from the studies. Results indicated that overall quality ranked the highest in terms of satisfaction and satisfaction with attention to psychosocial problems ranking the lowest. However, it should be noted that only 7 of the 221 studies addressed this dimension of satisfaction. A majority of studies (65 percent) addressed humaneness. The authors discussed interpretations of why the rankings of the dimensions were distributed as described in the paper (patients gave lower satisfaction ratings to dimensions not related to physical needs (e.g. need for information) or to the provider (e.g. cost, access)). One interpretation was that the satisfaction ratings are actually accurately measuring what they are supposed to—performance of the system as a whole, with patients satisfied with technical aspects related to the provider and less satisfied with system related aspects. Another interpretation was that patients did not feel qualified to access the technical abilities of the provider (though the authors cite other literature that suggests this may not be the case). The authors conclude by stating that the nature of the studies made it difficult to operationalize the concept of satisfaction. For example, even though it is known that psychosocial problems are an important aspect of health, few studies have included it when measuring satisfaction, limiting the utility of measures of satisfaction. They also note that there is little standardization across studies in terms of the actual measures utilized, making it difficult to generalize about satisfaction with health care.

Nelson-Zlupko, L., Morrison-Dore, M., Kaufman, E., and Kaltenbach, K. (1996). Women in Recovery: Their Perceptions of Treatment Effectiveness. Journal of Substance Abuse Treatment; 13(1): 51-59.

This paper examines women's perceptions and experiences of substance abuse treatment services in Philadelphia, PA. The authors begin by reviewing the research that calls for gender-specific treatment programs and the evidence that very little actually exists. Further, the existing research reveals little about what women themselves think about the services in terms of their helpfulness or lack thereof. In order to address these issues, the authors interviewed 24 women who had received specialized and non-specialized services about their perceptions about and experiences of the services. Both quantitative and qualitative approaches were used during a 1½ hour face-to-face, interview. Results indicated that the services that were perceived to be most helpful,

transportation assistance, help obtaining food, clothes, etc., recreational activities, onsite health care, 12-step meetings and women's issues discussion groups, were often the least available.

Services that are often specific to women were unavailable much of the time.

For example, while women-only groups were available 56% percent of the time, onsite child care was available only 29% of the time and help obtaining child care only 21% of the time. From the qualitative data, several interesting themes emerged.

Women identified caring and respectful counselors as critical to their treatment continuation and recovery; outright sexual harassment and abuse is a problem for women in treatment settings; child care issues must be adequately addressed.

Other themes that emerged centered on the importance of race/ethnicity, gender politics, and reproductive health care.

The authors conclude that “despite over a decade of research pointing to the need for gender sensitivity in drug treatment” female patients still receive inappropriate services and harmful treatment.

Meredith, K., Delaney, J., Horgan, M., Fisher, E. and Fraser, V. (1997). A Survey of Women with HIV about Their Expectations for Care. AIDS Care; 9(5):513-22.

The authors of this paper recognize that most HIV medical care services have been built around the needs of those most affected at the start of the epidemic in the United States, gay white men. In contrast, women currently make up the fastest growing group of people with HIV in the US. Yet, there is a lack of a clear understanding of the expectations and preferences of women with HIV. Thus, the authors conducted a survey between June through August 1995, of 50 women with HIV receiving care from a stand-alone HIV medical-care center specifically for women. The interview focused on the nature of health care received, current expectations of care, and qualities they consider important in health care. Results indicated that in terms of their expectations and preferences, over half of women surveyed indicated that they wanted personalized care, respect, and staff support.

Women reported wanting emotional support (46%), wanting to be told the truth about their condition (46%), reduced barriers to care (40%), material social support (help with housing, finances, transportation; 36%), disease and treatment education (30%), and finally women reported wanting to receive care from a place where they can find hope and positive messages (24%).

There were some interesting differences among women in terms of their expectations and preferences; African-American women and women with a history of physical or sexual abuse

were more likely to desire emotional support than were others; African-American women, women with education less than a high school diploma and women with a CD4 count greater than 200 were also more likely to report a need for material social support than were others. Women with education greater than a high school diploma were more likely to report a need for reduced barriers to care (such as transportation and flexible hours). When asked to rank the importance of various services, the majority of women (92%) reported that seeing the doctor, learning about their condition, and being seen in a pleasant environment were very important. Finally, in terms of the care received by the women surveyed at the time of the interview, the majority of women reported feeling close to someone in the HIV care center; the majority (65%) felt close to social workers, nurses (60%) and a small group felt close to doctors (11%). The authors concluded that the results should be used to inform the development of specific responses to women's HIV-care related needs.

Beck, E., Griffith,R., Fitzpatrick,R., Mandalia,S., Carrier,J., Conlon,C., Mandel, B., Ong, E., Pazniak,A., Tang, A., Tomlinson,D. and Williams,I. (1999). Patient Satisfaction with HIV Service Provision in NPMS Hospitals: The Development of a Standard Satisfaction Questionnaire. AIDS Care; 11(3): 331-343.

This paper described the development of a self-administered patient satisfaction survey for individuals attending English HIV care clinics. The survey was designed by a working group comprised of clinicians from participating clinics, clients from the clinics, and representatives from the English Health Authority. Various dimensions of patient satisfaction, such as choice of treatment, staff attitudes and skills, cultural sensitivity and coordination of care, were identified. The available literature of patient satisfaction and HIV care was reviewed. In addition, open-ended interviews were conducted with service users of 3 HIV-specific voluntary organizations. These interviews informed the selection of items; once a draft survey was developed, the same individuals interviewed were asked to review the survey in terms of its applicability, comprehensiveness, design and wording. Once this was complete, the survey was revised and was tested on clients from another clinic. The final questionnaire contained 28 mainly multiple-choice items; some items covered demographic information and others were open-ended questions designed to identify other service needs and generate additional comments. The survey was then administered to 6 clinics, 3 in London and 3 outside of London, in May 1996. Two methods of survey return were evaluated; the first used a sealed box in the clinic area, while the second asked respondents to return the surveys using the postal service. The overall survey return rate was 54%; the sealed box method resulted in a return rate of 62% compared with 49% for the postal service method. Results of the survey indicated that most clinic clients were very satisfied with their treatment; however, respondents who waited more than 15 minutes to see the doctor were less satisfied than those who did not. Some differences emerged between the London and non-London sites, with London clinic clients being more satisfied with the clinic environment and clients in London being more satisfied in terms of seeing a preferred provider.

Within the London clinics there were no differences in satisfaction scores; however, men in non-London were less satisfied with access to services than were women in non-London clinics.

The authors conclude that the survey development and testing was conducted in accordance with commonly accepted standards and that the survey covered relevant dimensions of care and was easy to complete.

The greatest challenge in their opinion was encouraging people to participate in the survey.

Katz, M., Marx, R., Douglas, J., Bolan, G., Park, M., Jan Gurley, R. and Buchbinder, S. (1997). Insurance Type and Satisfaction with Medical Care among HIV-Infected Men. Journal of Acquired Immune Deficiency Syndromes; 14(1):35-43.

The major goal of this paper was to report results of a study designed to assess the impact of health insurance type on patient satisfaction among 593 HIV-infected gay and bisexual men in San Francisco. Patient satisfaction was assessed using the 42-item Patient Satisfaction Questionnaire short-form (PSQ-III-42). Used in the Medical Outcomes Study, the questionnaire taps 6 aspects of medical care, access and convenience, technical quality, interpersonal relations, communication, time spent with provider, and financial aspects; in addition there is a general measure of satisfaction. A 5-point scale ranging from strongly agree to strongly disagree is used. Results indicated that satisfaction levels were highest for interpersonal relations (3.7) and communication (3.7) and lowest for financial aspects (3.0) and general satisfaction (2.9). Men with no insurance were significantly less satisfied with access to care, as compared with those with fee-for-service, managed care or public insurance.

Bivariate analyses revealed that men with fee-for-service were less satisfied with financial aspects of care and more satisfied with the interpersonal relations aspect of care, as compared with men with managed care or public insurance.

In terms of predictors of satisfaction, men who received care in a public clinic, hospital or HMO-based clinic were significantly less satisfied with their access to care than those seen in a private office and men who received care in a hospital or HMO-based clinic were less satisfied in terms of time spent with provider. Higher premiums and out-of-pocket expenses were associated with less satisfaction with financial aspects of care.

Being older, a man of color and possessing a high income were associated with greater satisfaction with several aspects of HIV care. Education, injecting drug use and sample site were not associated with satisfaction.

Like many other studies all of the predictor variables together explained relatively little of the variance in patient satisfaction scores. The authors conclude that insurance type affects satisfaction with care among HIV-infected men, but that these differences were small when compared to the differences found between being insured and being uninsured. The authors

continue to state that the “correlations between the satisfaction scales in our study and the differential pattern of satisfaction with specific aspects of care indicate that clients can distinguish and rate their satisfaction with specific features of care.”

Survey Methodology

Ware, J. and Hays, R. (1988). Methods for Measuring Patient Satisfaction with Specific Medical Encounters. Medical Care; 26: 393-402.

Two studies measured visit-specific patient satisfaction in rural Illinois, Los Angeles, and the East coast. Study 1 included 136 outpatients in southern Illinois (rural) or Los Angeles who were visiting a fee-for-service clinic, while study 2, a generalizability study, included 363 outpatients attending three clinics at an east coast health maintenance organization (Internal Medicine, Medical and Surgical Specialties). The Visit Specific Questionnaire (VSQ) and additional items were administered whereby two item response forms were utilized: (1) the E5 evaluation scale with responses of 'excellent', 'very good', 'good', 'fair', and 'poor'; and (2) the S6 satisfaction scale with responses of 'extremely satisfied', 'very satisfied', 'somewhat satisfied', 'neither satisfied nor dissatisfied', 'somewhat dissatisfied', and 'very dissatisfied'. Both measures assessed four constructs—overall visit, technical quality of the physician, interpersonal qualities of the physician, and length of waiting time.

Using 'excellent', 'very good', 'good', 'fair', and 'poor' resulted in lower scores.

Stump, T., Dexter, P., Tierney, W., and Wolinsky, F. (1995). Measuring Patient Satisfaction with Physicians among Older and Diseased Adults in a Primary Care Municipal Outpatient Setting: An Examination of Three Instruments. Medical Care; 33(9): 958-972.

The Physician Satisfaction Questionnaire (PSQ), the American Board of Internal Medicine (ABIM) questionnaire, and the Medical Outcomes Study (MOS) were administered to sanokes if older, diseased adults. By utilizing a crosswalk design and factor analysis, the seven-item MOS and the ten-item ABIM were selected for administration in a random control trial (n=1050). Findings suggested that a 5, 7 or 9 item version of the MOS was best at capturing visit-specific satisfaction, while the 10-item ABIM was best as a global satisfaction measure. The researchers had three suggestions for those who are going to study patient satisfaction:

it is imperative that researchers understand how the instrument—whether off the shelf or newly designed—will interact with the target population, suggesting the importance of pre-testing the instrument;

avoid using 'negative' questions in an effort to vary the questionnaire—respondents may ignore the negatives; and

a pilot sample may forestall later psychometric problems.

Harris, L., Swindle, R., Mungai, S., Weinberger, M., and Tierney, W. (1999). Measuring Patient Satisfaction for Quality Improvement. Medical Care; 37: 1207-1213.

Developing an office-level, patient-focused quality improvement instrument involved mailing the 9-item Visit-Specific Questionnaire (VSQ) from the Medical Outcomes Study (MOS); the 12-item American Board of Internal Medicine Patient Satisfaction Questionnaire (with some modifications); and other questions created by their Quality Improvement Committee. Three satisfaction subscales were identified—provider, office and access—and were substantiated for both adults and children, utilizing factor analysis.

The authors highlight the importance of including all staff, including nurses and front desk personnel, in assessing quality and in improvement initiatives. The authors note a limitation that health status information was not collected, given its link to satisfaction in previous studies.

Munro, B., Jacobsen, B., and Brooten, D. (1994). Re-examination of the Psychometric Characteristics of the La Monica-Oberst Patient Satisfaction Scale. Research in Nursing and Health; 17(2): 119-125.

Secondary analyses were used to assess the psychometric characteristics of the LaMonica-Oberst Patient Satisfaction Scale in a new, nononcologic (unplanned cesarean births, childbearing diabetics, and women who had hysterectomies) sample. This scale, originally constructed as a modification of the Patient Satisfaction Instrument, was designed to retain the dimensions of the original scale (“technical-professional, trusting relationship, and education relationship”) while reflecting the expected acute care nursing behaviors from an oncologic population. Thirteen (of the 41) items were dropped, and two factors were identified: dissatisfaction, and interpersonal support/good impressions. The authors believed that the overall results indicated the scale’s utility for nononcologic patients.

Researchers must seek patient-input in expanding scales.

Harpole, L., Orav, E., Hickey, M., Posther, K., and Brennan, T. (1996). Patient Satisfaction in the Ambulatory Setting: Influence of Data Collection Methods and Sociodemographic Factors. Journal of General Internal Medicine; 11: 431-434.

The primary objective was to understand the effects of mode of survey administration (mail versus on-site) and patient demographics on satisfaction. The 23-item visit specific questionnaire was designed by the study hospital and “reflected three domains of service quality: courtesy of office staff, timeliness of care, and communication with the provider”. On-site data collection occurred during one week in August 1994 (602 were given the questionnaire to complete, with a final response rate of 69 percent). Alternatively, in September 1994, 606 patients were mailed questionnaires two weeks after their visit occurred (response rate was 42 percent). Analysis found that associations existed between both mode of administration and patient characteristics.

Consistent with prior research, mailed questionnaires yielded higher levels of dissatisfaction.

Consequently, the authors argue that statistically adjusting for these two factors could affect dissatisfaction rates, which could impact practice rankings.

Health Services Research Group . (1992). A Guide to Direct Measures of Patient Satisfaction in Clinical Practice. Canadian Medical Association Journal.

Concepts and issues related to the measurement of patient satisfaction are discussed in this article. First, patient satisfaction is introduced as a measure of the patient perspective of the encounter rather than a measure of quality assurance. The specific example given related to measuring time spent with the physician.

a quality assurance questionnaire would likely ask how long the patient spent with the physician whereas a patient satisfaction questionnaire may ask if the patient felt they had spent enough time with the physician.

Other issues discussed included: the lack of standardized measures to assess patient satisfaction, making inter-study comparisons difficult;

the lack of variability often seen in measures of patient satisfaction, with most rates above 90 percent;

Also discussed were the concern that some patients may overrate technical quality of care because of a positive perception of the physicians interpersonal characteristics; and the possibility that patient characteristics (e.g. demographic characteristics) and practice characteristics (e.g. continuity of care) may affect measures of patient satisfaction. Suggested guidelines for using patient satisfaction ratings in clinical practice included using standardized measures of satisfaction such as the Visit-Specific Satisfaction Questionnaire or the Client Satisfaction Questionnaire.

The authors cautioned against using orally administered scales since they tend to yield higher satisfaction scores than written scales.

The authors also suggested collecting demographic information (for reasons mentioned above) and a global rating of self-reported health, since little is known about the utility of patient satisfaction scales for complex medical encounters.

Weiss, B., and Senf, J. (1990). Patient Satisfaction Survey Instrument for Use in Health Maintenance Organizations. Medical Care; 28(5): 434-445.

The primary focus of this paper was to describe the development and use of an instrument that could effectively capture patient satisfaction with their prepaid health care plan, with the ultimate purpose of predicting disenrollment from the plan. 8,450 employees of a large university in the

Southwestern US were eligible to participate in the study, designed to collect data at two points in time. A pre-open enrollment questionnaire (open enrollment is the period of time during which employees were given the opportunity to change health plans if they chose to), and then another questionnaire after the open enrollment period. If responders reported changing HMO's during the open enrollment period, the second questionnaire tried to pinpoint the reasons for doing so. Ultimately, 2365 employees had pre and post open enrollment questionnaires completed and met all other criteria (e.g. belonged to an HMO prior to open enrollment). Overall, very few respondents changed plans (8 percent) and the majority of those did not site a single reason for switching plans. Individual items were analyzed to determine which were most predictive of changing health plans, leading to a 10-item questionnaire. Responses to the ten items were scored, and the scores were sorted lowest to highest. Results indicated that those at the lowest decile were statistically unlikely to change plans (1.8 percent) versus those at the highest decile (30.8 percent). The authors concluded that these results were consistent with other studies in that most patients were satisfied with their health care, and even when they weren't, they were unlikely to change health plans.

Moreover, they noted that even for those who stated in the pre-open enrollment questionnaire that they would change plans if given the opportunity (17.4 percent of respondents), the majority actually did not change plans, pointing to the complexity of interpreting 'patient satisfaction' as a meaningful (and measurable) construct.

Williams, B., Coyle, J., and Healy, D. (1998). The Meaning of Patient Satisfaction: An Explanation of High Reported Levels. *Social Science & Medicine*; 47(9): 1351-1359.

This paper addresses the issue of what patient satisfaction, high satisfaction in particular, actually means and represents from the perspective of the patient. The authors start by describing the lack of clarity as to what patient satisfaction is conceptually and its general lack of grounding in any theory. Generally, satisfaction is assumed to result from the fulfillment of expectations; however, according to the authors, there is little actual empirical evidence of this. Thus, the goal of this qualitative study was to assess whether recent mental health service recipients actually evaluate the services received; and, if so, to identify what mechanisms are involved in the process. Fifteen individuals newly referred to a community mental health team in North Wales, UK, were interviewed a week before their first interview and then again two weeks after their appointment. In need of further data, the study team interviewed 5 non-mental health service recipients and 8 clients who had stopped receiving services from the community mental health team in the past 8 months. In addition, to an in-depth interview, the participants were asked to rate the mental health services using the CSQ-18 (Client satisfaction Questionnaire 18B) and then to explain the discrepancy between the experiences they reported and their satisfaction ratings.

Findings revealed that clients reported various positive and negative experiences; however, the negative experiences did not always translate into negative evaluations of the services associated with the experiences.

Experiences were evaluated in terms of “duty,” or things that the service should or should not do, or “culpability,” or whether a service is to blame if it does or does not do things it should. A negative experience was not evaluated negatively if it was beyond the “duty” of the provider or service or if the provider was not “culpable” for the service’s failure. The authors conclude that the concepts of “duty” and “culpability” have some relation to the “expectations” that are believed to underlie satisfaction in so many other studies. Perceived “duty” constitutes a form of expectations “which embodies an individual’s perception of what his or her rights are in relation to the service, and what the service obligations are to him or her.” However, the authors clarify that duty differs from the “practical” and “ideal” expectations dichotomy and “suggests a more complex process of evaluation than the dichotomy allows.”

Locker, D. and Dunt, D. (1978). Theoretical and Methodological Issues in Sociological Studies of Consumer Satisfaction with Medical Care. *Social Science and Medicine*; 12: 283-292.

In this paper the theoretical and methodological issues involved in determining and measuring patient satisfaction are addressed. The author starts with the reality that patient satisfaction has become an important part of policy formulation and medical, in as much as it affects compliance and participation in care. The author begins with a review of the existing literature on patient satisfaction and concludes that the studies appear to indicate very high levels of patient satisfaction overall, while being more willing to report less satisfaction with specific aspects of care.

Overall, elderly patients are more satisfied with care and the relationships between satisfaction and social class is not clear.

Finally, communication of information appears to be the source of most dissatisfaction with care. The author concludes that because the studies reviewed do not use similar methods to assess patient satisfaction or its determinants, they provide the opportunity to compare methods and formulate principles for the measurement of patient satisfaction.

The author’s analysis indicates that direct investigation of specific aspects of care reveal more dissatisfaction, while unstructured question may reveal the relative importance of aspects of care; the author recommends using both approaches in measuring patient satisfaction.

In addition, the assessment of various aspects of care requires consideration; the author concludes that global approaches are less useful as the evidence indicates that patient satisfaction varies according to specific aspects of care; further, give no indication of what to change in a care situation. The alternative approaches, measuring satisfaction with specific aspects of care or

using these measures to create a composite measure, is flawed in that it assumes that all patients lend equal weight to each aspect of care. Thus, the author concludes that any measure of patient satisfaction “needs to take account of differential satisfaction with individual aspects of services, to employ a multi-dimensional scale for rating consumers’ response and to base these responses on actual experiences of care.”

Finally, the author discusses the potential use of patient satisfaction as a measure of consumer opinion.

Patient satisfaction may be used as an evaluation of quality of care, as an outcome variable, and as a method for quality improvement.

In terms of the first use, the author contends that as conceptualized presently patient satisfaction is not in and of itself an assessment of quality of care; a study with such an aim would have to first identify the criteria used by patients themselves to assess quality of care. At present, only aspects of care determined by researchers are deemed relevant for study; the author argues that the consumers’ role would need to be expanded considerably in order to actually measure consumer opinion of quality of care. In terms of patient satisfaction used as an outcome variable, the author concludes that is the best use at present. Finally, if used as a quality improvement tool, patient satisfaction measures must be service specific, based on consumers’ actual experiences with those specific services and be sufficiently detailed as to be able to provide concrete guidance to improve quality.

Linder-Pelz, S. (1982). Toward a Theory of Patient Satisfaction. *Social Science and Medicine*; 16: 577-582.

In this paper, the author also deconstructs the concept of patient satisfaction in order to develop a more coherent theory of the concept. The author starts by reviewing the various components that have been hypothesized to constitute patient satisfaction: accessibility/convenience, availability of resources, continuity of care, efficacy/outcomes of care, finances, humanness, information gathering, information giving, pleasantness of surroundings, and quality/competence. However, the author found no theoretical formulation of patient satisfaction and thus began her own theoretical work from theories of job satisfaction, as seemingly little ethnographic work on patient satisfaction had been conducted. Drawing on this work, the author concludes that patients’ satisfaction is an attitudes or affective response. However, as there was a question as to what theoretically patient satisfaction was, there was also a question as to what determines levels of patient satisfaction. Here the author turned to theories of attitudes and beliefs and found that the relationship between expectations (beliefs that something will happen) and whether they are met or not determine attitudes. Turning to the job satisfaction literature, the author found three theoretical formulations that could be used in understanding patient satisfaction. The first is discrepancy theory, which posits that satisfaction is the *perceived or relative* discrepancy between what an individual desires and what they receive. The second theory, fulfillment theory, is similar however it is not the relative but the absolute difference between what is desired and received that is important. Finally, equity theory holds that satisfaction is perceived equity, “or perceived balance of inputs and outputs.” An important component of this last theory is the comparison process that the individual uses to determine satisfaction. Based on these

theories, the author came up with five antecedent perception and attitude factors hypothesized to determine patient satisfaction: expectations (perception), value (attitudes), entitlement (perception), occurrences (perception) and interpersonal comparisons (perceptions).

Calnan, M. (1988). Towards a Conceptual Framework of Lay Evaluation of Health Care. *Social Science and Medicine*; 27: 927-933.

The major goal of this paper is to examine the adequacy of the concept of patient satisfaction. The author argues that the construct has suffered from conceptual weaknesses and that research, based on the poorly constructed concept, are thus often contradictory. The author also describes the various reasons that patient satisfaction has begun to be examined.

First, it is a measure of social acceptability and has been demonstrated to be related to health outcomes. Second, it is tied to a movement that attempts to democratize health services by incorporating the consumer's perspective. Third, it captures the fundamental principle that health care should serve the needs and desires of the patient.

Thus, while the integration of the concept of patient satisfaction into quality of care assessments can be justified, the actual construct suffers from both theoretical and methodological weaknesses. These include variable levels of satisfaction, depending upon how the questions are asked; the superficial nature of patient satisfaction; the fact that satisfaction levels can change over time; measures of it suffer from both “the halo effect” (consistently high ratings of patient satisfaction) and “managerial bias” (where providers’ and administrators’ concerns are assessed as opposed to patients’ concerns). The author suggests that a shift away from quantifying satisfaction and towards ethnographic methods will result in understanding lay persons action “in terms of his or her own logic, knowledge and beliefs which themselves are closely tied to the social context and circumstances” of every day life. The author suggests a framework for conceptualizing patient satisfaction that includes the following: specific reasons for care seeking, as opposed to expectations, are important; prior specific experiences with health care services; the values or ideology that supports the health care system within which the patient seeks care; and, the internalized understanding of “health” of individual patients (e.g., the lack of disease or the presence of health). The author concludes by reiterating the need for more rigorous conceptualization of the construct of patient satisfaction and the potential helpfulness of his own four-part framework for considering the issue.

Fitzpatrick, R. (1991). Surveys of Patient Satisfaction: I – Important General Considerations. *British Medical Journal*; 302: 887-889.

The author begins by answering the question: why conduct a patient satisfaction survey? The answer lies less in the desire to assess quality of care from the patient’s perspective and more in a managerial criticism of the NHS to use modern marketing techniques to assess consumer opinions. However, others began to argue for the former goal of measuring patient satisfaction; subsequently patient’s perspectives on the interpersonal aspects of care began to be investigated alongside other aspects, such as hospital food. The author contends that in addition, there are three other important reasons that patient satisfaction should be assessed: 1) it can be used as an

outcome measure, 2) it is useful in assessing consultations and communications patterns and 3) it enables choice between alternatives in the organization and provision of care. Why surveys should not be conducted include sensitizing staff to patients' perspectives and learning what is already known from existing studies.

However, there are several negative assumptions about patient satisfaction surveys that exist: 1) they will uncover widespread and general dissatisfaction, 2) answers are uninformed or whimsical, and 3) invalidity due to reporting bias or the halo effect.

The issue of reliability is difficult; using the test-retest method cannot distinguish between true change over time and unreliability. Internal consistency measures are commonly used to demonstrate the internal reliability of the measure. Finally, a detailed discussion of validity is determined to be beyond the scope of the article (see, Williams, 1994), but the following dimensions of patient satisfaction are listed: humaneness, informativeness, overall quality, competence, bureaucracy, access, cost, facilities, outcomes, continuity, and attention to psychosocial problems. Finally, the author cautions that thought should be given to how the results of any such patient satisfaction survey might be used.

Fitzpatrick, R. (1991). Surveys of Patient Satisfaction: II – Designing a Questionnaire and Conducting a Survey. British Medical Journal; 302: 1129-1132.

The author starts by pointing out that while there are some psychometrically sound measures of patient satisfaction, many studies use investigator-developed instruments. Measures of patient satisfaction may be general or episode specific; measures of general patient satisfaction tend to produce more negative evaluation and greater variability, as compared with those that focus on the specific aspects of care. There are direct and indirect ways of evaluating patient satisfaction; however. The author has no clear evidence of which approach is superior. Additionally, it is important to understand that patient satisfaction is multi-dimensional and that models of it must adjust for background characteristics. The scale of measurement is an important issue, with most measures opting not for dichotomous measures but for Likert response categories. The author continues to emphasize the critical importance of piloting the measure of patient satisfaction and being clear about the survey population.

Whether to use a census or sample are often largely issues of resource allocation.

If a sample is used, random sampling, via systematic sampling or quota sampling can both be appropriate. In terms of survey conduct, anonymity and/or confidentiality and data collector neutrality are very important to gathering accurate data.

Williams, B. (1994). Patient Satisfaction: A Valid Concept? Social Science and Medicine, 38: 509-516.

This paper questions the concept of patient satisfaction as a coherent and unitary concept. The author begins his critique by reviewing the reasons that the concept has been introduced into the study of quality of care. Like Calnan (1988), he observes that patient satisfaction is associated

with improved compliance and health outcomes; in addition, it reflects the larger consumer movement and a desire for accountability among health care providers. Finally, it is being used increasingly to gauge efficiency. However, the author argues that despite these current usages, the concept and measures of it have several hidden or implicit assumptions that bear further examination. First, it is assumed that satisfaction is the result of some prior process, however what that process is unclear; tests of theoretical explanations of these processes reveal limited support for the model (see Linder-Pelz).

Second, it assumed that expressions of satisfaction with specific aspects of care imply approval by the patient.

However, there is some evidence that expectation for care are independently associated with satisfaction, regardless of whether the expectations were met; thus, the assumption that satisfaction is specifically related to specific care may not be true. Finally, the existence of patients' expectations and values are assumed, as is their influence on satisfaction. The author points out that some patients may not feel entitled to expectations or values around health care, which may not be the case or may not be for all patients. The author concludes that patient satisfaction is an ungrounded concept in need of further, in-depth exploration of patients' understandings of roles, expectations. Further, it must be grounded "in people's everyday lives." Finally, the author argues that the overemphasis on quantifying patient satisfaction results in further reducing an already ungrounded and psychometrically questionable construct.

Kravits, R. (1998). Patient Satisfaction with Health Care: Critical Outcome or Trivial Pursuit? *Journal of General Internal Medicine*; 13: 280 – 282.

The author begins by asserting that based on the increasing number of times the term patient satisfaction has appeared in Medline between 1975 and 1997 measuring patient satisfaction "has become a major industry." However, the author queries: is patient satisfaction a concept worth measuring, what is the best way to measure it and how are the results to be used? The author couches the answer to first question in terms of a division between those who care about consumer opinion and client-centered care and those who believe attention and resources are best devoted to other issues such as over- and underutilization and health outcomes. However, the author observes that helping patients' to achieve their health-related goals is a fundamental aim of medicine. Further, the only way to gauge these goals is by asking patients. The question, however, of whether patient satisfaction can be reliably and meaningfully measured remains. The author argues that those measuring patient satisfaction must be clear that patient satisfaction is not a single, unitary concept but "a distillation of" perceptions (beliefs about occurrences) and values (the relative import of the occurrences). The author argues that the inability of some patient satisfaction measure items (e.g., how satisfied were you with the amount of time the doctor spent with you today) to distinguish perceptions from values.

The author argues that detailed questions about specific aspects of care have more utility for quality improvement, while being less psychometrically robust.

Additionally, in addressing the *purpose* of measuring patient satisfaction, the author describes the need to distinguish between using patient satisfaction measures as report cards or for quality

improvement purposes. In the latter case, using them as independent predictors of patient satisfaction reveals meaningful areas for improvement, while in the former controlling for background characteristics is appropriate. Finally, the author addresses the issue of how to use patient satisfaction measures and concludes that the “important question is whether they can stimulate genuine gains in patient-centered care.”

Correlates of Patient Satisfaction

Linn, L. (1975). Factors Associated with Patient Evaluation of Health Care. Health and Society. Milbank Memorial Fund Quarterly Health and Society; 4: 531-548.

The author relates satisfaction with health insurance coverage, healthcare provider, and “new” (at the time) non-physician health care providers (e.g. physician’s assistant), noting three commonalities in the research to date:

there were high levels of patient satisfaction;

there were inconsistent findings related to the relationship between social/cultural factors and satisfaction; and

the relationship between patient satisfaction levels and specific medical encounter characteristics had not been identified.

This paper presents data for an investigation whose goals were to measure the level of patient satisfaction and determine the relationship between patient characteristics, health care encounter characteristics, and patient satisfaction. A total of 1,739 patient-provider encounters in eleven Southern California ambulatory health care settings were evaluated. Measures of patient encounters (e.g. general characteristics such as physician time spent with the patient; services performed, such as x-ray; and disposition of service), patient characteristics (e.g. age, sex, etc.) and patient satisfaction were collected. Two measures of patient satisfaction were utilized—the 6-item General Evaluation Index (attitudes towards the entire visit) and the 4-item Index of Satisfaction (encounters with physician). Results indicated high levels of patient satisfaction, consistent with prior research. There were also detailed findings related to the relationship between patient characteristics and the characteristics of the health care encounter, which are summarized later in this review.

Tsasis, P., Tsoukas, C., and Deutsch, G. (2000). Evaluation of Patient Satisfaction in a Specialized HIV/AIDS Care Unit of a Major Hospital. AIDS Patient Care; 14(7): 347-349.

The purpose of this study was to identify factors that contribute to patient satisfaction among patients with HIV/AIDS receiving care in a specialized HIV/AIDS care unit in a major hospital in Canada. A random sample of 193 patients was surveyed via a self-administered questionnaire in 1996 and 1997. Quality of care ratings were assessed on the following domains: respect, friendliness, responsiveness, courtesy, perceived competence of clinical interventions, extent of involvement in care decisions and support of patient by professional staff. Patients were asked to rate each aspect of care using a Likert scale system. The response rate was 95%; 91% of the sample was male, 79% between the ages of 30 and 49 years, 47% with a university education, and 75% with an annual income of less than 35K. Patient satisfaction ratings ranged from 88 to 92%. Principal components analysis revealed that perceived overall quality of care to be the factor that explained 71% of the variance on patient satisfaction. Patient support from professional staff, patient involvement in decision-making and self-perceived health status were

all significantly correlated with overall quality of care. The authors conclude that the finding around support from professional staff may be used to improve patient satisfaction in similar settings.

Stein, M., Fleishman, J., Mor, V., and Dresser, M. (1993). Factors Associated with Patient Satisfaction Among Symptomatic HIV-Infected Persons. *Medical Care*; 31: 182-188.

This study examined the association among patient satisfaction ratings, sociodemographic factors, clinical care and health care system characteristics among symptomatic HIV-infected persons. The 1,031 study participants were clients of the AIDS Health Services Program and were recruited from local community-based service organizations and outpatient clinics in nine cities in the US. Data was collected between November of 1988 and April of 1989. Patient satisfaction was measured using the Patient Satisfaction Questionnaire, which measures three dimensions of satisfaction: access to care, interpersonal relationships and overall or global satisfaction.

Results indicated that patient satisfaction scores were generally high and that demographic characteristics were unrelated to satisfaction, with the exception of more educated people being less satisfied with their care. Individuals with public insurance coverage and without coverage were significantly less satisfied with the access to care dimension than were people with private insurance. Those reporting intravenous drug use were significantly less satisfied on the interpersonal relations dimension as compared with non-drug users. Symptom intensity was significantly and inversely related to all satisfaction dimensions while function was unrelated to satisfaction. The authors conclude that because the specific dimensions of satisfaction correlated with specific patient-level variables, the findings lend support to the construct validity of the measure of patient satisfaction; for example, insurance status was associated with the access to care dimension and not the interpersonal relations dimension.

The authors conclude that the major findings of the study are: less satisfaction with interpersonal care among drug users and less satisfaction with access to care among those with public or no insurance.

The authors discuss the latter findings in light of the significant barriers to obtaining or maintaining health insurance coverage among PWAs and the role of bias and discrimination in the provision of health care to intravenous drug users.

Jackson, J., Chamberlin, J., and Kroenke, K. (2001). Predictors of Patient Satisfaction. *Social Science and Medicine*; 52(4): 609-620.

Correlates of patient satisfaction were measured over time. Participants were 500 patients presenting to the general medical care clinic of a large military (Walter Reed Medical Center) medical center. Patients were surveyed immediately before their medical care visit, immediately after the visit, and two-weeks and three-months post-visit. Patient satisfaction was measured immediately post-visit with the Medical Outcomes Study (MOS) 9-item satisfaction scale that covered satisfaction with general and specific areas of care. At two-weeks post-visit patients were mailed a questionnaire that assessed satisfaction with only the general area of care. The

average age of patients surveyed was 55, half were women and half were African-American. Results indicated that immediately post-visit, just over half of all patients rated their overall care as excellent; these proportions increased to 59% at two-weeks post-visit and 63% by three-months post-visit. Multivariate analysis revealed that immediately post-visit satisfaction was associated with having no unmet expectations, receiving a causal explanation of symptoms, and being older than 65.

These factors explained just 26% of the variance in patient satisfaction. At two-weeks and three-months post visit, multivariate analysis revealed that satisfaction was associated with symptom improvement, reporting no residual expectation, neither requiring nor anticipating another doctor visit and improved function. These factors explained 38 and 40% of the variance in patient satisfaction scores at two-weeks and three-months post-visit.

The authors note that if patient satisfaction is assessed at any time later than immediately after the visit, then function and symptom-specific improvement should be taken into account and attention should be paid to the time intervals at which satisfaction is measured. The importance of symptom improvement was highlighted when comparing patients who were fully satisfied immediately after the visit and did not experience symptom improvement with those who were also satisfied post-visit and did experience symptom improvement. The latter group was significantly less satisfied than the former group. Conversely, patients less satisfied immediately post-visit, but whose symptoms improved were more satisfied at later time points as compared with those who were also less satisfied immediately post-visit and whose symptoms did not improve. Finally, while physician communication factors were significantly related to patient satisfaction immediately after the visit, by two-weeks and three-months post-visit, satisfaction was related to the course and impact of the underlying symptom. The authors conclude that satisfaction measures taken outside the context of a visit may be a proxy for functional status or symptom improvement.

Finally, they report that immediate post-visit satisfaction appears to be more associated with provider-level communication factors than symptom factors, while patient age and function are associated at both time points.

Brown, J., Boles, M., Mullooly, M., and Levison, W. (1999). Effects of Clinician Communication Skills Training on Patient Satisfaction: A Randomized, Controlled Trial. *Annals of Internal Medicine*; 131(11): 822-829.

The purpose of this study was to test the effects of a common communication skills building program designed to increase physician's listening and communication skills on patient satisfaction ratings of provider communication during specific medical care encounters. The program consisted of a 10-hour, two-part training. Physicians were recruited from the Kaiser Permanente Northwest Division in Portland, Oregon and in the usual way for a continuing education program. Once providers indicated their interest in the course, they were invited to participate in the study; providers were assigned to the intervention or control group. The intervention group simply attended the program in advance of the control group. Patient satisfaction was assessed using the Art of Medicine Survey and assessed patients' satisfaction

with communication skills during a specific encounter and overall with care received from the clinician. Anonymous self-administered questionnaires were sent to patients within 10 days of their visit to the ambulatory care facility; data were collected during one year in 1995 and 1996. General estimating equations were created, controlling for baseline patient satisfaction scores and results indicated that while patient satisfaction scores were higher among the intervention group, the difference was not statistically significant. Providers in the intervention group reported improvements in communication skills and lower frustration with visits. The authors concluded that while communication has been determined to be related to patient satisfaction it is unrealistic to expect a single brief continuing education course to improve general patient satisfaction in the “contemporary health care environment.”

“Lengthened and intensified training, performance incentives, ongoing feedback and practice restructuring may all be needed before the broader benefits of improved communication can be realized.”

Sullivan, L., Stein, M., Savetsky, J., and Samet, J. (2000). The Doctor-Patient Relationship and HIV-Infected Patients’ Satisfaction with Primary Care Physicians. *Journal of General Internal Medicine*; 15(7): 462-469.

The goal of this study is to determine the extent to which perceptions of specific aspects of the doctor-patient relationship are related to overall patient satisfaction. Data were collected from patients seeking first time care at two, urban, HIV care centers in Boston, Massachusetts and Providence, Rhode Island in between 1994 and 1996. Data was collected at baseline and six-months post initial visit; of the 276 eligible patients, 203 completed the baseline interview and 146 (72%) completed the six-month interview. Significantly more white patients than Creole or Latino/a patient enrolled in the study.

Bivariate analysis indicated that women, patient with lower incomes, those classified as heterosexual HIV risk, people with no history of injecting drug use, those with lower drug use composite scores and those with better health status were more satisfied with patient care than others.

Patients who found clinic hours to be more convenient were more satisfied. Finally, in multivariate models of doctor-patient factors and patient satisfaction, results indicated that patients who were more comfortable discussing personal issues with their physicians, who perceived their physicians as more empathic and who perceived their physicians as more knowledgeable were more satisfied, when controlling for patient and primary care characteristics. Doctor-patient factors explained 56% of patient satisfaction in this study; in general patient satisfaction among HIV-positive patients was not associated with demographic, HIV risk, alcohol or drug use, health status, quality of life factors or sex- or race-matching by provider and patient. The authors conclude that unlike other studies of patient satisfaction, they found that patient sociodemographic characteristics and primary care features fail to explain patient satisfaction when patient-provider relationship factors are taken into account.

Roter, D., Stewart, M., Putnam, S., Lipkin, M., Stiles, W., and Innui, T. (1997). Communication Patterns of Primary Care Physicians. JAMA; 277(4): 350-356.

The authors studied communication patterns and their relationships with patient satisfaction. Study participants were 127 physicians and 537 patients from 11 ambulatory care clinics and private practices in the US. Patient satisfaction was measured using a 43-item measure designed by the authors that taps 5 distinct and reliable dimensions of patient satisfaction: task-directed skill, attentiveness, interpersonal skill, emotional support, and physician-patient partnership. Communication patterns were analyzed using Roter Interactional Analysis System, an analysis system that codes phrases and complete thoughts into one or 34 exclusive and exhaustive categories. Results indicated that of visits fell into one of the following five provider communication patterns: narrowly biomedical, expanded biomedical, biopsychosocial, psychosocial and consumerist. Patient satisfaction was related to communication pattern; in multivariate models, patient satisfaction was significantly higher for patients in the psychosocial pattern of communication. The lowest ratings were for the narrowly and expanded biomedical model patterns, followed by the biopsychosocial and the consumerist. Interestingly physicians were also dissatisfied with the narrowly biomedical pattern of communication.

The authors conclude that communication patterns are critical to patient satisfaction.

Brody, D., Miller, S., Lerman, C., Smith, D., Lazzaro, C., and Blum, M. (1989). The Relationship between Patients' Satisfaction with Their Physicians and Perceptions about Interventions They Desired or Received. Medical Care; 27: 1027-1035.

The purpose of this study was to determine the relationship between patient satisfaction, intervention types and congruence between intervention types and desires for specific interventions. Study participants, 118 of 130 eligible adult symptomatic primary care patients, completed self-administered questionnaires immediately before and after the care encounter. Patient satisfaction was measured with the Ware Satisfaction Scale. Expected and desired interventions were assessed by asking patients to check off interventions from a list of possible interventions before the encounter and then having them indicate which intervention they had received after the visit. One-way ANOVAs were used to assess differences in levels of patient satisfaction among patients who received each type of intervention and those who did not and stepwise multiple regression was used to measure the relative impact of congruence on interventions on patient satisfaction ratings. Results indicated that patients who reported received any one of three non-technical interventions, education, stress counseling and discussing their ideas, were significantly more satisfied than those who did not receive such interventions. Those three variables explained, 13, 4 and 8% of the variance in patient satisfaction scores, respectively. None of the technical interventions were associated with patient satisfaction. In addition, patients often received the intervention the desired; when previsit desires were matched to interventions received, the following variables were associated with greater patient satisfaction: receiving negotiation, where it was not initially desired, receiving education, where it was initially desired, not receiving education, where it was initially desired, not receiving nondrug treatment, where it was initially desired, receiving and desiring stress counseling. Finally, when all nontechnical interventions were added to the model of patient satisfaction that included all technical intervention variables, they explained 23% of the variance;

however, when technical intervention variables were added to the model of patient satisfaction that included all nontechnical interventions variables, there was no significant improvement in the model.

The authors conclude that that non-technical aspects of care drive patient satisfaction scores in part because: patients are unable to assess technical care; patients may perceive technical care as so uniformly good that there is very little variability; or that nontechnical aspects of care are simply more meaningful to patients.

Rohland, B., Langebehn, D., and Rohrer, J. (2000). Relationship Between Service Effectiveness and Satisfaction Among Persons Receiving Medicaid Mental Health Services. Psychiatric Services; 51(2): 248-250.

The authors of this paper theorize that there is a relationship between satisfaction with services on the one hand and mental health status and increased life satisfaction on the other. Participants were selected from a sample of 18-64 year-old Medicaid recipients who received mental health services in Iowa in 1993. The random sample was selected within each category of the following stratifications: diagnosis (schizophrenia, affective disorders, anxiety disorders, and adjustment disorders), severity of illness, and Urban/rural County of residence. Surveys, sent to 2,530 patients and returned by 815 persons (32.3 percent response rate), assessed life satisfaction, satisfaction with services (focusing on the quality of interpersonal experience), and self-reported mental health status. Schizophrenics had higher levels of satisfaction with services and life than others, and a statistically significant relationship was found between life satisfaction and service satisfaction for schizophrenics, and those with affective and adjustment disorders.

The authors' conclude that perhaps service satisfaction is not a valid measure for those with cognitive impairments due to mental illness, suggesting that schizophrenics may overrate satisfaction while those with affective disorders may underrate satisfaction.

Linder-Pelz, S. and Struening, E. (1985). Journal of Community Health; 10(1): 42-54.

The primary objective of this study was to test the hypothesis that patients evaluate satisfaction with health care received on multiple dimensions, rather than just globally. A 22 item questionnaire, developed by the authors after extensive reviews of satisfaction literature, was administered to patients (self-administered, though one investigator helped if necessary) after seeing their physician and while waiting for their next appointment. Patients new to the clinic (primary care clinic in uptown Manhattan, New York) from August – October 1978 were asked to complete the questionnaire (n = 155). As expected, the patients were more satisfied than dissatisfied.

Three scales were identified in subsequent analysis: conduct of the doctor (found to be the most important determinant of satisfaction with the encounter), general satisfaction, and convenience.

The authors conclude that using a multidimensional approach may better capture patient satisfaction than simply asking global questions.

Fox, J. and Storms, D. (1981). A Different Approach to Sociodemographic Predictors of Satisfaction with Health Care. *Social Science and Medicine*; 15A: 557-564.

The authors' discuss a theoretical model they have developed that could establish (and explain) the relationship between sociodemographic characteristics and satisfaction. They hypothesize that every individual has an assumption about what constitutes appropriate (and therefore high quality) health care. They also posit that health care providers also have orientations that manifest themselves in how they treat patients. It is when the patient's expectations for appropriate care are congruent with the health care provider's approach that we would expect to see high levels of satisfaction. They argue that these factors, rarely measured in studies, are modifying the relationship between sociodemographic characteristics and satisfaction, resulting in conflicting reports about the importance of sociodemographic characteristics to satisfaction. Thus, they hypothesized, controlling for patient expectations and health care provider orientation should better define the relationship between sociodemographic characteristics and satisfaction. To test this hypothesis, they interviewed (via telephone) 2582 (of 3398 in the sample—a response rate of 78 percent) residents who lived in the Baltimore metro area in late 1974 through early 1975. Respondents who reported receiving medical care within the prior 12 months were asked to rate their level of satisfaction with the medical care they received on a scale of 1 to 10. 79.9 percent of the sample had received care in the designated period.

Results demonstrated that controlling for patient expectations and health care provider orientation resulted in all demographic variables becoming non-significant in the model, except age and gender.

The authors suggest that this is the case because these two variables are the strongest demographic predictors of utilization of health care. If validated further, the authors state that the model “may redefine the importance of the current methodological search for dimensions of satisfaction”.

Carlson, M. and Gabriel, R. (2001). Patient Satisfaction, Use of Services, and One-Year Outcomes in Publicly Funded Substance Abuse Treatment. *Psychiatric Services*; 52(9): 1230-1236.

The primary purposes of this study were: to determine whether those in publicly funded substance abuse treatment received more treatment (i.e. participated more) if they were more satisfied with the services; and to determine whether satisfaction with services could predict other outcomes. The sample consisted of 310 patients in Oregon and Washington State (of 502 participants) who were interviewed three times, and had chart reviews conducted by the

researchers. Satisfaction measures addressed satisfaction with: access to services, treatment effectiveness, and overall care (global measure). Dichotomous outcome measures were created covering the time period 30 days prior to the interview and included: abstinence from alcohol/drugs, presence of psychiatric symptoms, and employment. The chart review was utilized to measure service usage. As expected, satisfaction rates were high across the three measures. At six months, satisfaction with access and effectiveness predicted service use. There was a significant relationship between abstinence at one year and service use and satisfaction with access and effectiveness. Patient satisfaction was not related to other outcomes.

As the authors note “...this study suggests that patients who are more satisfied receive more therapy and are more likely to be abstinent from the use of alcohol or other drugs one year after starting treatment”.

Ross, C., Steward, C., and Sinacore, J. (1993). The Importance of Patient Preferences in the Measurement of Health Care Satisfaction. *Medical Care*; 31(12): 1138-1149.

The authors of this paper theorize that one aspect of patient satisfaction that is not often measured—the patient’s preference as to which patient care dimensions are most important—could be an important determinant of satisfaction with health care. They hypothesize that the *linear compensatory model* (i.e. overall satisfaction is comprised of multiple dimensions that may “compensate” for each other when some dimensions may be rated more highly than others based on patient preference) will be the basis for the relationship between satisfaction and patient preference, if one exists. A randomly selected sample of 308 patients seeking ambulatory services at a Veterans Hospital were identified as eligible for the study; ultimately 233 completed the interview. Patient satisfaction was measured utilizing the 29-item Patient Satisfaction Questionnaire (PSQ), which yields six dimensions of health care: access to care; availability of services; technical quality of care; interpersonal care; communication; financing of care; and overall satisfaction. The 138-item Sickness Impact Profile was used to measure psychological, physical and overall function due to health, and an importance ranking was developed to allow patients to prioritize their perceived importance of the six dimensions measured by the PSQ.

Utilizing stepwise multiple regression, the researchers determined that most of the variance in the model (63 percent) was due to three dimensions: interpersonal care, technical quality and access to care.

In terms of preferences, four subgroups of patients were found: those who felt that interpersonal care was most important; those who thought access to and quality of care were most important; those who thought only access to care was important; and those who thought only quality of care was important.

Though there were some consistencies in terms of the relationships between these subgroups and satisfaction, the authors concluded that “patient satisfaction in this sample is best measured by quality evaluations of satisfaction dimensions without regard to preferences for care”.

Kane, R., Maciejewski, M., and Finch, M. (1997). The Relationship of Patient Satisfaction with Care and Clinical Outcomes. *Medical Care*; 31(7): 714-730.

The authors of this study assert that patient satisfaction is not only important as an outcome of the patient's experience with the health care encounter, but as an important determinant of health-related outcomes. They argue that patients that had a more positive health care experience may be more likely to comply with treatment or to keep follow-up appointments that are a component of continued care. Patients in 53 hospitals in Minnesota who had either open or laparoscopic elective cholecystectomy were eligible to participate. The ultimate sample of 2,116 had data from two points in time—an initial interview that measured health status prior to surgery, and a questionnaire administered six months after surgery that assessed health status and satisfaction. Satisfaction was measured utilizing an 11-item scale that resulted in the following factors: the quality of the care received, the hospital setting, and time spent with medical staff. Because of the measures used, the researchers could assess both absolute health (how the patients felt after the surgery) and relative health (the degree of improvement in health status from pre to post surgery).

A key result was that “patient satisfaction indeed is related to the outcomes of care, but that the relationship is stronger for absolute outcome than for the relative ones”.

This suggests that how a patient is feeling when assessed is more important to patient satisfaction than the degree of improvement in health status over time. The authors conclude by suggesting that this has important implications for organizations that use measures of patient satisfaction as a “report card” since it may reward institutions that have less severely ill patients.

Rubin, H., Gandek, B., Rogers, W., Kosinski, M., McHorney, C., and Ware, J. (1993). Patients' Ratings of Outpatient Visits in Different Practice Settings: Results from the Medical Outcomes Study. *JAMA*; 270(7): 835-840.

The authors argue that as more health care consumers are being encouraged (or pushed) to utilize HMO's and capitated fee organizations, measuring quality of care is becoming extremely important. Using results from the Medical Outcomes Study from Boston MA, Chicago IL, and Los Angeles CA, the authors assess patient ratings of outpatient visits across five types of health systems—prepaid HMO's, prepaid and fee for service multispecialty groups, and prepaid and fee for service single-specialty small groups. Practice groups that met entry criteria and were willing to participate were asked to have patients aged 18 and older complete a short questionnaire (final n = 17,671 patients) after the visit was completed and before leaving the office. All patients were asked to complete global measures of satisfaction, and half were randomly selected to complete an additional 8-items that asked more specific questions related to the provider.

HMO patients rating their visits the worst and fee for service single-specialty small groups being rated the best.

They also found that physicians with ratings in the bottom fifth were much more likely to have patients leave their practice within 6 months relative to those at the top fifth, suggesting that it was possible to adequately measure satisfaction within specific health care systems.

Avis, M., Bond, M., and Arthur, A. (1997). Questioning Patient Satisfaction: An Empirical Investigation in two Outpatient Clinics. *Social Science and Medicine*; 44(1): 85-92.

Using a semi-structured interview, the researchers explored patients' assessments of their first visit to either an outpatient cardiology clinic or a respiratory clinic. A total of 89 patients were studied. Phase one involved an interview pre and post visit, observation of the consultation, and the administration of an adapted version of the Medical Interview Satisfaction Scale (MISS), which "measures attitudes to the cognitive, affective and behavioural dimensions of the consultation". For phase 2, a subsample of patients were followed to assess whether there was a change in the perception of care received over time (n = 33). The semi-structured interviews revealed that patients were not prepared for the consultation prior to the visit by their referring doctors, desired a degree of certainty in their interaction, and, in spite of the desire for certainty, were fearful of taking up the doctors time. The observations of the consultations revealed that some patients were restricted to simply answering questions during the consultation, and that nearly half, though actively questioning staff, did not play an active role in the consultation itself or the decision making process. Though the measures of satisfaction (through the MISS) were high, patients recognized that ultimate satisfaction could depend on their progress in the following weeks, as was demonstrated by the follow-up interviews. The authors concluded by making several relevant observations. First, they argued that a measure of satisfaction might be too simple a concept to capture the complexity of the patient encounter.

They also state that satisfaction may actually be "a response to other psycho-social aspects of the health care encounter, such as relief, gratitude, fear of wasting the doctor's time, or confidence in the consultant".

Temporality was also important, in that satisfaction measured after the encounter may be capturing relief that the encounter took place, whereas satisfaction measured at a later date may reflect the results of the encounter. Finally, they argue that qualitative measures of the physician-patient encounter may capture aspects of satisfaction that an instrument alone would not be able to.

Avery, A., Hellman, R., and Sudderth, L. (2001). Satisfaction with Mental Health Services among Sexual Minorities with Major Mental Illness. *American Journal of Public Health*; 91(6): 990-991.

The brief report examines patient satisfaction among two groups of adults receiving in- or outpatient psychiatric services in New York City. Sixty-seven lesbian, gay, bisexual or transgendered (LGBT) people were compared with 301 individuals, presumably largely heterosexual, in terms of patient satisfaction. The two groups were not matched and differed in significant ways.

Results indicated that LGBT individuals were significantly less satisfied with the mental health services they received and that dissatisfaction was particularly high among women, African-Americans and other racial/ethnic minorities (Latina/os, Asian American, Native American, etc.) and those living alone.

The authors suggest that services be tailored to such patients' specific needs.

Linder-Pelz, S. (1982). Social Psychological Determinants of Patient Satisfaction: A Test of Five Hypotheses. Social Science and Medicine; 16: 583-589.

Based on her review of the theoretical and empirical literature of patient and job, the author derived five hypotheses regarding the social psychological determinants of patient satisfaction. These were: 1) satisfaction is directly related to the sum of the products of beliefs and values scores regarding different aspects of health care, 2) satisfaction is directly related to the extent to which occurrences concur with prior expectations (fulfillment theory), 3) satisfaction is directly related to the occurrence score minus the expectation score divided by the expectation score (discrepancy theory), 4) satisfaction is directly related to the concurrence of occurrences and expectations, only when the component is valued, and 5) satisfaction will be highest among those with positive expectations and positive occurrences. The hypotheses were tested on a group of 125 patients attending primary care clinics in a large metropolitan hospital (Columbia Presbyterian, New York City). Satisfaction was measured with a scale where three factors were identified: doctor behaviors, convenience of visit and general satisfaction. The results revealed little support for the first hypothesis, which tested whether satisfaction is an attitude (the product of beliefs and values). In terms of Hypotheses 2 and 3, satisfaction was found to unrelated to fulfillment and inversely related to discrepancy. Thus, hypothesis 3 was supported, while hypothesis 2 was not. Hypothesis 4, which was a variation of fulfillment and discrepancy theories (that discrepancies effect satisfaction only when the aspect of care is valued), was not supported. Finally, hypothesis 5, which stated that the most satisfied are those whose positive expectations were met, was clearly supported. The author concludes that while expectation, values and occurrences have independent effects on patient satisfaction, they account for less than 10% of the variation in satisfaction scores.

Feelings of entitlement have no relation to satisfaction and while the discrepancy between expectations and occurrences is inversely associated with satisfaction, values do not affect this relationship.

Stone, V., Weissman, J. and Cleary, P. (1995). Satisfaction with Ambulatory Care of Persons with AIDS: Predictors of Patient Ratings of Quality; Journal of General Internal Medicine; 10: 239-245.

The purpose of this paper is to report finding from an investigation into the predictors of low levels of patient satisfaction among people with AIDS (PWA) receiving care in various ambulatory settings in Massachusetts. All active patients and new patients (n=505) were recruited into the study between February 1990 and during the subsequent 13 months. Of those eligible (n=505), 60% or 305 chose to participate; participants were more likely to be

homosexual. The study authors used the patient-rated quality of care (PRQC) scale, which assesses satisfaction with physician and nursing care, medical decision involvement, and overall quality of care.

Bivariate analyses revealed that patients who were women, Black, on Medicaid, injecting drug users, seen in an HIV clinic attached to a hospital (as opposed to a group medical practice or an HMO), and patients without a primary nurse either rated their care quality significantly lower or were more likely to be categorized as having low PRQC scores.

Multivariate analyses indicated that patients who were injecting drug users, Black, reported poor health status, and did not have a primary care nurse were significantly less satisfied than were others. The finding that injecting drug users and those with lower reported health status are less satisfied with care is consistent with previous research (Stein, Fleishman, Mor and Dresser, 1993). The authors conclude that the results “suggest that ambulatory AIDS care may be less effective in meeting the expectations of PWAs who are Black or who are injecting drug users.”

Citations

Avery, A., Hellman, R., and Sudderth, L. (2001). Satisfaction with Mental Health Services among Sexual Minorities with Major Mental Illness. *American Journal of Public Health*; 91(6): 990-991.

Avis, M., Bond, M., and Arthur, A. (1997). Questioning Patient Satisfaction: An Empirical Investigation in two Outpatient Clinics. *Social Science and Medicine*; 44(1): 85-92.

Barr, D. and Vergun, P.(2000). Using a New Method of Gathering Patient Satisfaction Data to Assess the Effects of Organizational Factors on Primary Care Quality. *Journal on Quality Improvement*; 26(12): 713-23.

Beck, E., Griffith,R., Fitzpatrick,R., Mandalia,S., Carrier,J., Conlon,C., Mandel, B., Ong, E., Pazniak,A., Tang, A., Tomlinson,D. and Williams,I. (1999). Patient Satisfaction with HIV Service Provision in NPMS Hospitals: The Development of a Standard Satisfaction Questionnaire. *AIDS Care*; 11(3): 331-343.

Beedham, H. (1995). HIV and AIDS Care: Consumers' Views on Needs and Services. *Journal of Advanced Nursing*; 22: 677-686.

Brody, D., Miller, S., Lerman, C., Smith, D., Lazzaro, C., and Blum, M. (1989). The Relationship between Patients' Satisfaction with Their Physicians and Perceptions about Interventions They Desired or Received. *Medical Care*; 27: 1027-1035.

Brown, J., Boles, M., Mullooly, M., and Levison, W. (1999). Effects of Clinician Communication Skills Training on Patient Satisfaction: A Randomized, Controlled Trial. *Annals of Internal Medicine*; 131(11): 822-829.

Calnan, M. (1988). Towards a Conceptual Framework of Lay Evaluation of Health Care. *Social Science and Medicine*; 27(9): 927-933.

Carlson, M. and Gabriel, R. (2001). Patient Satisfaction, Use of Services, and One-Year Outcomes in Publicly Funded Substance Abuse Treatment. *Psychiatric Services*; 52(9): 1230-1236.

Fitzpatrick, R. (1991). Surveys of Patient Satisfaction: I – Important General Considerations. *British Medical Journal*; 302: 887-889.

Fitzpatrick, R. (1991). Surveys of Patient Satisfaction: II – Designing a Questionnaire and Conducting a Survey. *British Medical Journal*; 302: 1129-1132.

Fox, J. and Storms, D. (1981). A Different Approach to Sociodemographic Predictors of Satisfaction with Health Care. *Social Science and Medicine*; 15A: 557-564.

- Guyatt, G., Mitchell, A., Molloy, W., Capretta, R., Horsman, J., and Griffith, L. (1995). Measuring Patient and Relative Satisfaction with Level or Aggressiveness of Care and Involvement in Care Decisions in the Context of Life Threatening Illness. *Journal of Clinical Epidemiology*; 48: 1215-1224.
- Halkitis, P. and Dooha, S. (1998). The Perceptions and Experiences of Managed Care by HIV-Positive Individuals in New York City. *AIDS and Public Policy Journal*; 13(2): 75-84.
- Hall, J., and Dornan, M. (1988). Meta-Analysis of Satisfaction with Medical Care: Description of Research Domain and Analysis of Overall Satisfaction Levels. *Social Science and Medicine*; 27(6): 637-644.
- Hall, J. and Dornan, M. (1988). What Patients Like About Their Medical Care and how often they are asked: A Meta-Analysis of the Satisfaction Literature. *Social Science and Medicine*; 27(9): 935-939.
- Hall, J. and Dornan, M. (1990). Patient Sociodemographic Characteristics as Predictors of Satisfaction with Medical Care: A Meta-Analysis. *Social Science and Medicine*; 30(7): 811-818.
- Harpole, L., Orav, E., Hickey, M., Posther, K., and Brennan, T. (1996). Patient Satisfaction in the Ambulatory Setting: Influence of Data Collection Methods and Sociodemographic Factors. *Journal of General Internal Medicine*; 11: 431-434.
- Harris, L., Swindle, R., Mungai, S., Weinberger, M., and Tierney, W. (1999). Measuring Patient Satisfaction for Quality Improvement. *Medical Care*; 37: 1207-1213.
- Health Services Research Group . (1992). A Guide to Direct Measures of Patient Satisfaction in Clinical Practice. *Canadian Medical Association Journal*.
- Inui, T. and Carter, W. (1985). Problems and Prospects for Health Services Research on Provider-Patient Communication. *Medical Care*; 23(5): 521-538.
- Jackson, J., Chamberlin, J., and Kroenke, K. (2001). Predictors of Patient Satisfaction. *Social Science and Medicine*; 52(4): 609-620.
- Kane, R., Maciejewski, M., and Finch, M. (1997). The Relationship of Patient Satisfaction with Care and Clinical Outcomes. *Medical Care*; 31(7): 714-730.
- Katz, M., Marx, R., Douglas, J., Bolan, G., Park, M., Jan Gurley, R. and Buchbinder, S. (1997). Insurance Type and Satisfaction with Medical Care among HIV-Infected Men. *Journal of Acquired Immune Deficiency Syndromes*; 14(1): 35-43.
- Kravits, R. (1998). Patient Satisfaction with Health Care: Critical Outcome or Trivial Pursuit? *Journal of General Internal Medicine*; 13: 280 – 282.

- Linder-Pelz, S. (1982). Toward a Theory of Patient Satisfaction. *Social Science and Medicine*; 16: 577-582.
- Linder-Pelz, S. (1982). Social Psychological Determinants of Patient Satisfaction: A Test of Five Hypotheses. *Social Science and Medicine*; 16: 583-589.
- Linder-Pelz, S. and Struening, E. (1985). *Journal of Community Health*; 10(1): 42-54.
- Linn, L. (1975). Factors Associated with Patient Evaluation of Health Care. *Health and Society. Milbank Memorial Fund Quarterly Health and Society*; 4: 531-548.
- Locker, D. and Dunt, D. (1978). Theoretical and Methodological Issues in Sociological Studies of Consumer Satisfaction with Medical Care. *Social Science and Medicine*; 12: 283-292.
- McDaniel, C. and Nash, J. (1990). Compendium of instruments measuring patient satisfaction with nursing care. *Quality Review Bulletin*; 182-188.
- Meredith, K., Delaney, J., Horgan, M., Fisher, E. and Fraser, V. (1997). A Survey of Women with HIV about Their Expectations for Care. *AIDS Care*; 9(5):513-22.
- Munro, B., Jacobsen, B., and Brooten, D. (1994). Re-examination of the Psychometric Characteristics of the La Monica-Oberst Patient Satisfaction Scale. *Research in Nursing and Health*; 17(2):119-25.
- Nelson-Zlupko, L., Morrison-Dore, M., Kaufman, E., and Kaltenbach, K. (1996). Women in Recovery: Their Perceptions of Treatment Effectiveness. *Journal of Substance Abuse Treatment*; 13(1): 51-59.
- Rohland, B., Langebehn, D., and Rohrer, J. (2000). Relationship Between Service Effectiveness and Satisfaction Among Persons Receiving Medicaid Mental Health Services. *Psychiatric Services*; 51(2): 248-250.
- Ross, C., Stewart, C., and Sinacore, J. (1993). The Importance of Patient Preferences in the Measurement of Health Care Satisfaction. *Medical Care*; 31(12): 1138-1149.
- Roter, D., Stewart, M., Putnam, S., Lipkin, M., Stiles, W., and Innui, T. (1997). Communication Patterns of Primary Care Physicians. *JAMA*; 277(4): 350-356.
- Rubin, H., Gandek, B., Rogers, W., Kosinski, M., McHorney, C., and Ware, J. (1993). Patients' Ratings of Outpatient Visits in Different Practice Settings: Results from the Medical Outcomes Study. *JAMA*; 270(7): 835-840.
- Sitzia, J. and Wood. N. (1997). Patient Satisfaction: A Review of Issues and Concepts. *Social Science and Medicine*; 45: 1829-1843.

Stein, M., Fleishman, J., Mor, V., and Dresser, M. (1993). Factors Associated with Patient Satisfaction Among Symptomatic HIV-Infected Persons. *Medical Care*; 31: 182-188.

Stone, V., Weissman, J. and Cleary, P. (1995). Satisfaction with Ambulatory Care of Persons with AIDS: Predictors of Patient Ratings of Quality. *Journal of General Internal Medicine*; 10: 239-245.

Stump, T., Dexter, P., Tierney, W., and Wolinsky, F. (1995). Measuring Patient Satisfaction with Physicians among Older and Diseased Adults in a Primary Care Municipal Outpatient Setting: An Examination of Three Instruments. *Medical Care*; 33(9): 958-972.

Sullivan, L., Stein, M., Savetsky, J., and Samet, J. (2000). The Doctor-Patient Relationship and HIV-Infected Patients' Satisfaction with Primary Care Physicians. *Journal of General Internal Medicine*; 15(7): 462-469.

Tsasis, P., Tsoukas, C., and Deutsch, G. (2000). Evaluation of Patient Satisfaction in a Specialized HIV/AIDS Care Unit of a Major Hospital. *AIDS Patient Care*; 14(7): 347-349.

Ware, J. and Hays, R. (1988). Methods for Measuring Patient Satisfaction with Specific Medical Encounters. *Medical Care*; 26:393-402.

Weiss, B., and Senf, J. (1990). Patient Satisfaction Survey Instrument for Use in Health Maintenance Organizations. *Medical Care*; 28(5): 434-445.

Williams, B. (1994). Patient Satisfaction: A Valid Concept? *Social Science and Medicine*; 38: 509-516.

Williams, S. and Calnan, M. (1991). Convergence and Divergence: Assessing Criteria of Consumer Satisfaction Across General Practice, Dental and Hospital Settings. *Social Science and Medicine*; 33(6): 707-716.

Williams, B., Coyle, J., and Healy, D. (1998). The Meaning of Patient Satisfaction: An Explanation of High Reported Levels, *Social Science & Medicine*; 47(9): 1351-1359.