

## EVALUATION OF CLIENT SATISFACTION IN A COMMUNITY HEALTH CENTRE: SELECTION OF A TOOL

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**Abstract:** Community health centres (CHCs) have emerged as sites in which services based on a primary health care (PHC) model are delivered. In the evaluation of the newly established Northeast CHC in Edmonton, Alberta, client satisfaction was a significant part of the evaluation component on community participation. A reliable and valid tool was sought to measure the dimensions of client satisfaction appropriate for a CHC that is based on the principles of PHC. Using criteria established to assist the evaluators in choosing an appropriate tool, the Service Satisfaction Scale was selected because it was comprehensive, appropriate, and psychometrically acceptable. Refinement on the basis of client and provider input led to a revised client satisfaction tool that is currently being tested. The authors suggest that, congruent with the PHC model, a multimethod approach that incorporates focus groups and individual interviews should be employed in evaluation of client satisfaction to add useful information about client perspectives.

**Résumé:** Les centres de santé communautaire (CHC) offrent des services fondés sur un modèle de soins de santé primaire (PHC). La satisfaction de la clientèle était une composante importante pour la participation communautaire lors de l'évaluation du nouveau CHC Nord-Est, Edmonton, Alberta. Un instrument valide et fiable a été recherché afin de mesurer les dimensions de satisfaction de la clientèle appropriées pour un CHC fondé sur des principes de soins de santé primaire. Tenant compte des critères établis pour les évaluateurs afin de choisir un instrument approprié, le «Service Satisfaction Scale» (Attkisson & Greenfield, 1994; Greenfield & Attkisson, 1989) a été choisi car

il est compréhensif, approprié et psychométriquement acceptable. L'instrument a été révisé selon les commentaires des pourvoyeurs et des clients. Une évaluation de l'instrument révisé est présentement en cours. Les auteurs suggèrent une approche multi-méthodes, congruente avec le modèle PHC, qui devrait comprendre des groupes de consultation ainsi que des entrevues individuelles afin d'évaluer la satisfaction de la clientèle. Cette approche apporterait des renseignements utiles sur la perspective des clients.

Community health centres (CHCs) in Canada have emerged as a model of service delivery and health care management that is based on the principles of primary health care. CHCs are non-profit health care organizations or associations that offer a broader range of services than conventional medical practices (Church & Lawrence, 1999). Objectives of CHCs include (a) fostering the empowerment and health of the individual and the community; (b) improving access to appropriate primary care services; (c) promoting health and preventing illness; (d) developing services that maximize availability of service providers and resources; and (e) promoting a multidisciplinary team approach in meeting client social and health care needs (Church & Lawrence, 1999). Programs and services offered may include health promotion and illness/injury prevention, mental health services, community development, and outreach community-based services. CHCs employ multidisciplinary teams of health care professionals and give priority to allocation of resources to meet the specific needs of the population they serve.

Evaluation of primary health care services in CHCs can contribute to program improvement, increased program efficacy and efficiency, and cost-effectiveness in a climate of scarce resources. Similarly, evaluation findings are often required to ensure future funding from regional health authorities or to secure special project grants from different levels of government. Evaluation also serves to demonstrate the overall effectiveness of the CHC model in relation to other types of service delivery within regional health authorities.

Client satisfaction is an important component of evaluation of all CHC services because satisfaction survey results provide information about the quality of multidisciplinary care from the perspective of clients (Davis & Hobbs, 1989). Pascoe (1983) argues that client satisfaction serves as an outcome measure of the quality of health care and provides a consumer perspective that contributes to a com-

plete, balanced evaluation of services. Client feedback alerts the multidisciplinary health care team to clients' needs, concerns, and perceptions of service and is useful for improving existing programs and developing new ones. Evaluation of client satisfaction also reassures clients that their concerns are important and provides a mechanism for participation that can foster empowerment.

Clients who are satisfied may also be more willing to adhere to a treatment regimen. As well, satisfied clients are loyal and may be counted on for return business and referrals (Steiber & Krowinski, 1990). Retention of clients who might otherwise avoid health care or seek alternate providers is important to the success and viability of the CHC. Health providers in any service that keeps clients satisfied will see an improved image as a direct and immediate consequence (Steiber & Krowinski, 1990).

However, the measurement of client satisfaction is not without its faults. Haas (1999) has described a number of these shortcomings, including inability to capture a true expression of clients' feelings towards care because of their belief that they are not knowledgeable enough to comment on their care. Furthermore, clients are not usually asked to identify priorities among their beliefs. Finally, client satisfaction is only a partial measure of client outcome, yet program decision makers often see results as directly applicable to outcome and often make resource decisions based on the results. Avis, Bond, and Arthur (1997) cite similar issues and describe the bias inherent in the clients' desire to answer positively because they do not want to offend their caregivers. They suggest that other, more qualitative measures may be a better way to address client satisfaction. Therefore, based on these observations, the evaluation team recommended that a survey be used in conjunction with focus groups and individual interviews with clients who used the resources of the centre. The evaluation team comprised a group of external independent consultants who were engaged to complete the evaluation of the Northeast Community Health Centre, and an internal evaluator. Satisfaction was included as one of four domains of a major formative evaluation at the centre. The evaluation was completed over the first 16 months of operation and was used to help shape the evolution of the primary health care service delivery model at the site.

One of the challenges in evaluating client satisfaction in a CHC is to identify appropriate measurement tools (Eriksen, 1995; Forbes

& Neufeld, 1997; Munro, Jacobsen, & Brooten, 1994; Pascoe, 1983). Well-defined criteria exist to guide researchers and evaluators in appropriate selection of survey tools (Burns & Grove, 1993). There are many client satisfaction tools available (Atlantic Information Services, 1998/1999; McGee, Goldfield, Riley, & Morton, 1997); however, there are no criteria specifically for selecting a client satisfaction tool for use within a CHC guided by the primary health care (PHC) model.

The purpose of this project was to use predetermined criteria to select a client satisfaction tool. The tool must be useful for evaluation in a multiservice CHC using a PHC model.

## BACKGROUND

### Conceptualization of Client Satisfaction

Client satisfaction has been defined in a variety of ways (Eriksen, 1995; La Monica, Oberst, Madea, & Wolf, 1986; Linder-Pelz, 1982; Pascoe, 1983; Risser, 1975; Strasser & Davis, 1991; Williams, Coyle, & Healy, 1998). Because the conceptual definitions of satisfaction are not consistent across measurement tools, comparisons among studies are generally not meaningful (Munro et al., 1994). Ware, Davies-Avery, and Stewart (1978) identified the gold standard for client satisfaction measures as follows: accessibility/convenience, availability of resources, continuity of care, efficacy/outcomes of care, finances, humanness/interpersonal manner, information gathering, information giving, pleasantness of surroundings (physical environment), and quality/competence. As these diverse dimensions indicate, client satisfaction is a multidimensional concept (Attkisson & Greenfield, 1994; Strasser & Davis, 1991; Ware et al., 1978), including dimensions that may either be specific to a health care setting and provider or cross boundaries between health care providers and settings (Forbes, 1996). However, viability for generalizability and future use is lost when unique centre-specific definitions are used instead of variables derived from commonly identified concepts or theories (Mahon, 1996). Hence, when one is reviewing the literature for an appropriate tool to use to measure client satisfaction, it is imperative that the tools be considered only if their conceptual definitions are similar.

Some researchers claim that satisfaction and dissatisfaction are opposites poles of the same continuum (Harpole, Orav, Hickey,

Posther, & Brennan, 1996; Pascoe, 1983; Ware, 1981), whereas others argue that satisfaction and dissatisfaction exist as separate concepts (Comley & Beard, 1998; Eriksen, 1995; Forbes, 1996; La Monica et al., 1986). Some have viewed the satisfaction construct as a client's comparison between his or her antecedent expectations for service and what that person actually experiences (Linder-Pelz, 1982). Linder-Pelz further argued that client satisfaction was inversely related to expectations; if expectations were low upon entering the health care system, then satisfaction would be greater; if expectations were high, then client satisfaction would be lower. Even though some clients may feel that the service has failed in its "duty," they may not evaluate it negatively or hold it responsible because they accept that there may be mitigating circumstances (Williams et al., 1998). High satisfaction ratings may reflect the attitude that "they are doing the best that they can" and not necessarily that clients have had good service or experiences. Agreement has not been reached regarding the definitions, dimensions, boundaries, and determinants of satisfaction and dissatisfaction because of the complexity of the constructs (Forbes, 1996; Haas, 1999; Pascoe, 1983).

### Contribution of Client Satisfaction in Evaluation

Attkisson and Greenfield (1994) maintain that knowledge of clients' reactions to service can make multiple contributions: (a) satisfaction findings may be used to improve services, training, financing, and organization; (b) perceptions of satisfaction may aid negotiation between the process of care and its consequences and help to illustrate what works; and (c) understanding the client's "point of view" may be useful in choosing providers or studying service utilization patterns. For example, studies involving primary health care clinics staffed with advanced-practice nurses (nurse practitioners or clinical nurse specialists) have reported the greatest client satisfaction. The reasons cited for greater satisfaction with improved service include better ability to negotiate with care providers and enhanced ability to choose priorities (Graveley & Littlefield, 1992; Hill, 1997) and the lowest cost per visit (Graveley & Littlefield, 1992). These findings can contribute to improved quality and economy in delivery of services.

### Issues in Measurement of Client Satisfaction

Issues in measuring client satisfaction include determining what dimensions or attributes should be measured, how the data should

be collected, reliability of the measurement tool, and whether to develop a unique tool or use a pre-existing one (Acorn & Barnett, 1999). Expression of satisfaction may not necessarily mean that a critical evaluation has taken place; such expression may arise from lack of an opinion or acceptance of medical paternalism (Williams, 1994). Williams argues that although some clients might critically evaluate their health care, most clients are very positive, allowing care to be of extremely poor quality before expressing dissatisfaction. Because populations differing in sociodemographic characteristics may not value or measure providers and services in the same way (Ware & Davies, 1983), a standardized tool for measuring client satisfaction has not been readily identified (Forbes, 1996). Furthermore, being able to sample satisfied as well as dissatisfied clients is not always guaranteed when doing surveys. Anonymous responses also pose problems in interpretation when some surveys report negative satisfaction and some report positive satisfaction. This issue of representation and interpretation again makes interpretation of results difficult.

*Reliability and validity.* There is growing reliance on use of client satisfaction scales that have demonstrated reliability and validity (Attkisson & Greenfield, 1994; Eriksen, 1995; Greenfield & Attkisson, 1989; Ware & Davies, 1983). McIver and Meredith (1998) argue that there is no "off the shelf" questionnaire that will satisfy the requirement of eliciting client views in all service delivery areas. However, ad hoc generation of client satisfaction tools specific to one organization leads to problems (Acorn & Barnett, 1999) and should no longer be employed (McKinley, Manku-Scott, Hastings, French, & Baker, 1997). First, there is a potential to use a tool that is not valid and reliable. Second, one is unable to compare findings across programs, organizations, and sites, and therefore findings from similar evaluations cannot be shared.

Many issues remain unresolved in the area of client satisfaction. The main unresolved issue is the lack of conceptual clarity and consensus among those working in the area. Other issues include (a) the multidimensional nature of satisfaction, resulting in many attributes/dimensions to measure, and (b) variations in whether satisfaction and dissatisfaction are considered on the same continuum or viewed as different concepts. These early questions continue to challenge researchers working in the area of client satisfaction (Avis et. al., 1997; Haas, 1999).

## PROJECT DESCRIPTION

The setting for the project was the Northeast Community Health Centre, located in Edmonton, Alberta. Client satisfaction was an important component of multiple evaluations of a variety of CHC programs occurring at the site. Like Strasser and Davis (1991), we view client satisfaction as a value judgment of and response to personal health care encounters and the CHC environment, and this definition guided our selection of an appropriate tool. The empirical referents or dimensions of satisfaction as defined by Ware et al. (1978), used by others (Greenfield & Attkisson, 1989; Linder-Pelz, 1982; Strasser & Davis, 1991) and recurring in published client satisfaction tools, include reference to client, health care provider, and setting characteristics. Within the context of the current project, the dimensions chosen as suitable for a CHC evaluation were as follows: accessibility, convenience, availability of resources (multidisciplinary), continuity of care (provider), outcomes of care, humanness/interpersonal manner, information gathering and giving (client education), and physical environment.

Using a research planning model similar to that of Davis and Hobbs (1989), we used the following steps to guide the choice of a client satisfaction measure for use in the evaluation of a CHC: (a) development of criteria to guide selection of client satisfaction tools for review; (b) analysis of publications on client satisfaction that contain measurement tools and meet the selection criteria; (c) use of the criteria to establish priorities among satisfaction tools selected; and (d) selection of the final tool(s) to be recommended to the evaluation team for use in measuring client satisfaction at the CHC.

### Development of Criteria for Selection of the Tool

A search of the literature for the years 1989–1999 was completed using CINAHL, Medline, Healthstar, Eric, Embase, Canadian Research Index, and ProQuest databases. Based on this literature review and practical requirements for instrument use in evaluations in a CHC setting, we chose the following criteria for selection of potential client satisfaction tools for review:

1. The researcher(s)/author(s) stated that the purpose of the tool was to measure client satisfaction and not some other construct. Only client satisfaction dimensions used by Ware et al. (1978) and appropriate for use in a CHC were chosen.

For example, dimensions relating to inpatient experiences such as “food service” were not useful for a CHC without inpatient beds.

2. Psychometric characteristics were reported. As a minimum, reporting of reliability testing (internal consistency) and content validity testing was required. An alpha reliability of greater than .70 was required in order to ascertain that the items were tapping the same underlying concept or service dimension (Steiber & Krowinski, 1990).
3. The tool was acceptable to a population using a CHC (e.g., easy to complete). In order to be congruent with the PHC service delivery model, it was essential that the tool be appropriate and that the clients have had input regarding suitable use of the tool. For example, clients will complete surveys incorrectly or refuse to participate if tools are complex. When questions are ambiguous or vague, clients are likely to be confused (Steiber & Krowinski, 1990).
4. Time required to complete the questionnaire was feasible. Steiber and Krowinski (1990) recommended 15–20 minutes or between 45–75 questions for self-administered questionnaires.

Articles were selected for further analysis that addressed at least two of the identified criteria. Using this approach, we selected 13 client satisfaction tools for further review. In addition to obtaining tools reported in the literature, we contacted other CHCs in Canada to procure their client satisfaction tools. Although some of the CHCs had locally developed client satisfaction tools, these had not been tested for reliability and validity. Several experts in the area of client satisfaction measurement were also contacted to obtain client satisfaction tools not published in the articles reviewed (Bear & Bowers, 1998; Eriksen, 1995; Larsson, Larsson, & Munck, 1998). All authors replied providing access to their tool.

#### Analysis of Publications that Contain Client Satisfaction Measurement Tools and Met the Selection Criteria

A summary of the 13 satisfaction tools selected for review is presented in table format for ease of interpretation (see Table 1). Although each tool clearly stated that it was measuring client satisfaction, a definition of client satisfaction was cited in only 6 of the 13 tools (Eriksen, 1995; La Monica et al., 1986; Megivern, Halm, & Jones, 1992; Risser, 1975; Ryan, Collins, Dowd, & Pierce, 1995;

**Table 1**  
**Preliminary Screening of Client Satisfaction Measurement Tools**

Author	Definition of Client Satisfaction	Psychometric Characteristics	Congruence with CHC Population: Dimensions, Setting, and Disciplines	Number of Items and Type of Scale
Davis & Bush (1995)	Not defined specifically	Content validity as measured by content experts ranged from 0.75 to 1.00 for scale items Construct validity using factor analysis with significance set at 0.40 Items loading on more than 1 factor — highest loading used 4 factors, those congruent with CHC population were validated Cronbach's $\alpha$ coefficient 0.92	4 dimensions • Psychological safety • Discharge teaching • Technical competence of provider • Information giving Emergency room Measures satisfaction with nursing care	20 items 5-point Likert scale Anchors: Completely disagree Completely agree
Eriksen (1995)	Importance of stating the definition of satisfaction	Cronbach's $\alpha$ coefficient Two factors were 0.93 and 0.94	2 dimensions • Art of care • Tangibles/ environments Inpatient setting Measures satisfaction with nursing care	15 items 7-point Likert scale Anchors: Expectations not met at all Way beyond expectations
Greenfield & Attkisson (1989); Attkisson & Greenfield (1994)	Not defined specifically	Content/ expert validity Cronbach's $\alpha$ coefficient scores 0.80 to 0.88 Across populations • 0.87 practitioner manner • 0.80 perceived outcome • 0.69 office procedures • 0.66 access	4 dimensions defined by Ware (1981) • Practitioner manner and skill • Perceived outcome • Office procedures • Access Inpatient and outpatient settings Across discipline scale	30 items 5 point Likert scale Anchors: Terrible Delighted
Harpole, Orav, Hickey, Posther, & Brennan (1996)	Not defined specifically	Not reported	3 dimensions • Courtesy of office staff • Timeliness of care • Communication with provider Ambulatory care Measures "patient dissatisfaction with ..." care providers	23 items 5-point Likert scale Anchors: Poor Excellent

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Author	Definition of Client Satisfaction	Psychometric Characteristics	Congruence with CHC Population: Dimensions, Setting, and Disciplines	Number of Items and Type of Scale
La Monica, Oberst, Madea, & Wolf (1986)	Defined as congruence between patients' expectations and their perceptions of actual care received	Content validity from professionals and clients Construct validity reported based on inverse relationship of satisfaction scores to negative mood states Cronbach's $\alpha$ coefficient 0.89 to 0.92 across factors and 0.92 for total instrument Authors caution that validity of any indirect measure of satisfaction with care may be difficult to determine.	3 dimensions <ul style="list-style-type: none"> <li>• Dissatisfaction</li> <li>• Interpersonal support</li> <li>• Good impression</li> </ul> Hospital Measures satisfaction with nursing care	42 items 7-point Likert scale Anchors: Strongly disagree Strongly agree
Marsh (1999)	Not defined specifically	Cronbach's $\alpha$ for entire scale was 0.92. Construct validity was done through factor analysis	4 dimensions <ul style="list-style-type: none"> <li>• General satisfaction</li> <li>• Humaneness</li> <li>• Quality</li> <li>• Access</li> </ul> Managed care inpatient setting Measures satisfaction with care from nurses and/or physicians	18 items 5-point Likert scale Anchors: Strongly disagree Strongly agree
Mayer, Cates, Mastorovich, & Royalty (1998)	Not defined specifically	Not reported	14 dimensions <ul style="list-style-type: none"> <li>• Quality care</li> <li>• Skill, ER physician</li> <li>• Skill, ER nurse</li> <li>• Overall satisfaction</li> <li>• Overall respect to patient</li> <li>• Wait time to see provider</li> <li>• Physician's ability to explain condition</li> <li>• Staff effort to keep family informed</li> <li>• Staff ability to keep patient informed</li> <li>• Likelihood of returning</li> <li>• Rapidity of evaluation by triage nurse</li> <li>• Triage nurse sensitivity to patient pain</li> <li>• Overall discharge process</li> <li>• Explanation by triage nurse</li> </ul> Emergency Phone interview	50 items 7-point Likert scale Anchors: Low High

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Author	Definition of Client Satisfaction	Psychometric Characteristics	Congruence with CHC Population: Dimensions, Setting, and Disciplines	Number of Items and Type of Scale
McKinley, Manku-Scott, Hastings, French, & Baker (1997)	Specific regarding satisfaction with off-hours care by alternate physician	Content validity as established by experts Construct validity done through intercomponent correlations Cronbach's $\alpha$ coefficient 0.61 to 0.88 by scale	8 dimensions <ul style="list-style-type: none"> <li>• Communication and management</li> <li>• Doctor's attitude</li> <li>• Continuity of care</li> <li>• Delay until visit</li> <li>• Access to out-of-hours care</li> <li>• Initial contact person</li> <li>• Telephone advice</li> <li>• Overall satisfaction</li> </ul> Out-of-hours care Measures satisfaction with physician care	32 items 5-point Likert scale Anchors: Strongly disagree Strongly agree
Megivern, Halm, & Jones (1992)	Patient perception of care provision	Content validity determined through content experts	10 dimensions <ul style="list-style-type: none"> <li>• Art of care</li> <li>• Technical quality</li> <li>• Physical environment</li> <li>• Availability</li> <li>• Continuity</li> <li>• Efficacy/outcomes</li> <li>• Recognition of individual qualities and needs</li> <li>• Reassuring presence</li> <li>• Promotion patient autonomy</li> </ul> In-patient critical care patients and their families	37 items 5-point Likert scale Anchors: Poor Excellent
Munro, Jacobsen, & Brooten (1994)	Not defined specifically	Cronbach's $\alpha$ entire scale 0.97 Validity was reported based on: <ul style="list-style-type: none"> <li>• Those receiving more intensive nursing care scored higher</li> <li>• Significant correlations between total score and items measuring satisfaction with nursing care</li> <li>• No significant correlation between total score and items measuring satisfaction with physician care</li> </ul>	2 dimensions <ul style="list-style-type: none"> <li>• Dissatisfaction</li> <li>• Interpersonal support/good impression</li> </ul> In-patient women's health clients Measured satisfaction with nursing care	28 items 5-point Likert scale Anchors: Strongly disagree Strongly agree

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Author	Definition of Client Satisfaction	Psychometric Characteristics	Congruence with CHC Population: Dimensions, Setting, and Disciplines	Number of Items and Type of Scale
Risser (1975)	Defined as the congruency between what a patient expects from care and what care was actually received	Cronbach's $\alpha$ 0.89 to 0.91 Content validity based on expert opinion and client input	3 dimensions <ul style="list-style-type: none"> <li>• Technical-professional relationship</li> <li>• Educational relationship</li> <li>• Trusting relationship</li> </ul> Community clinics Nursing and nursing care in primary care settings	25 items 5-point Likert scale Anchors: Strongly disagree Strongly agree
Ryan, Collins, Dowd, & Pierce (1995)	Defined as fulfillment of expectations, needs for care from the patient's perspective	Content validity determined through expert opinion Test-reliability agreement between items was 92%	7 dimensions <ul style="list-style-type: none"> <li>• Information and education</li> <li>• Patient values</li> <li>• Emotional support</li> <li>• Continuity and transition</li> <li>• Involving family and friends</li> <li>• Physical comfort</li> <li>• Coordination of care</li> </ul> Phone interview	94-item survey
Ware, Snyder, Wright, & Davies (1983)	Defined as a patient's rating of personal evaluation of health services and providers	Content validity determined through expert opinion Cronbach's $\alpha$ 0.43 to 0.94 with majority of subscales in the 0.70 to 0.79 range Test-retest was 0.62 to 0.82	<ul style="list-style-type: none"> <li>• Access to care</li> <li>• Financial aspects</li> <li>• Availability of resources</li> <li>• Continuity of care</li> <li>• Technical quality</li> <li>• Interpersonal manners</li> <li>• Overall satisfaction</li> </ul>	55 items 5-point Likert scale Anchors: Strongly disagree Strongly agree

Ware, Synder, Wright, & Davies, 1983). All of the tools used the client satisfaction dimensions as described by Ware et al. (1978). Nine of the tools measured four or more of the satisfaction dimensions, and four tools incorporated fewer dimensions (Harpole et al., 1996; La Monica et al., 1986; Munro et al., 1994; Risser, 1975). The 13 tools were further assessed for their appropriateness in a CHC setting, including their relevance for a PHC model and acceptability to the population.

Overall, review of the selected tools indicated that clients were not usually involved in developing client satisfaction measurement strategies. Four tools were an exception. These tools (McKinley et al.,

1997; Megivern et al., 1992; Risser, 1975; Ware et al., 1983) used terminology that clients use, and clients were the major source for the items. In a CHC that uses a PHC service delivery model in which community participation is a guiding principle, it is important that client satisfaction evaluation reflect clients' perspective on satisfaction (Mahon, 1996)

Many of the tools investigated did not have multidisciplinary provider input (a core component of PHC), but often measured satisfaction specifically with nursing care or referred to nurses as providers (Eriksen, 1995; La Monica et al., 1986; Risser, 1975). Marsh (1999) claimed to measure client satisfaction outcomes across provider disciplines. However, on closer inspection the only disciplines truly being measured in the tool were nurses and physicians (Marsh, 1999). These tools were subsequently reviewed with the question, "Could any provider be substituted for the word 'nurse' or 'doctor'?"

Although most of the tools reviewed measured client satisfaction in an inpatient setting, they were included as they addressed dimensions relevant to a CHC setting. Six tools measured a range of ambulatory care settings: outpatient department, emergency department, out-of-hours care, mental health clinics, community-based residential care, and employee assistance programs (Attkisson & Greenfield, 1994; Davis & Bush, 1995; Harpole et al., 1996; Mayer, Cates, Mastorovich, & Royalty, 1998; McKinley et al., 1997; Risser, 1975).

Reliability data were provided on 11 of the 13 client satisfaction tools. Test-retest reliability was reported on 2 tools (Attkisson & Greenfield, 1994; Ryan et al., 1995), and alpha reliability (internal consistency) was consistently reported on 9 tools (Davis & Bush, 1995; Eriksen, 1995; Greenfield & Attkisson, 1989; La Monica et al., 1986; Marsh, 1999; McKinley et al., 1997; Munro et al., 1994; Risser, 1995; Ware et al., 1983). One article reported that reliability testing was done but gave no results (Mayer et al., 1998). One tool did not report any evidence of psychometric testing (Harpole et al., 1996). Several tools with subscales reported alpha reliabilities for each subscale, indicating that they could possibly be used individually or in different combinations (Attkisson & Greenfield, 1994; Davis & Bush, 1995; Eriksen, 1995; Greenfield & Attkisson, 1989; La Monica et al., 1986). For example, Ware et al. (1983) had 18 subscales in the satisfaction tool with a 43-item short form.

Validity testing of the tools was not as evident. Content validity was reported to have been done on several tools (Attkisson & Greenfield,

1994; Davis & Bush, 1995; La Monica et al., 1986; Megivern et al., 1992; Risser, 1975; Ryan et al., 1995; Ware et al., 1983), and construct validity was reported on three others (Davis & Bush, 1995; Marsh, 1999; McKinley et al., 1997). Finally, four of the thirteen articles mentioned validity testing but reported no values (Mayer et al., 1998; McKinley et al., 1997; Ryan et al., 1995; Ware et al., 1983). The difficulty of establishing construct validity for client satisfaction scales is evident in this review, where only three tools discussed construct validity.

### Use of the Criteria to Establish Priorities among Satisfaction Tools

Following review of the selected client satisfaction tools, two tools were considered for a more in-depth analysis for use in the CHC. The Emergency Department Patient Satisfaction tool has been used to measure satisfaction in emergency services (Mayer et al., 1998), and the Service Satisfaction Scale (Attkisson & Greenfield, 1994; Greenfield & Attkisson, 1989) has been used and tested for reliability and validity in a variety of outpatient settings in primary health care clinics that included emergency services. The Service Satisfaction Scale was deemed to be a more comprehensive tool that would be appropriate for measuring client satisfaction in a CHC using PHC as the model of service delivery.

### Review of the Service Satisfaction Scale

The goal in the development of the Service Satisfaction Scale was to provide a multidimensional way to assess clients' responses to health care services rendered (Attkisson & Greenfield, 1994). The tool includes four subscales or theoretical domains: personal manner and skill, perceived outcomes, office procedures, and accessibility. Waiting time items were also written to cover other areas such as cost and experience with emergency services. Item wording was clear, and the item comprehension was judged "perfect" or "good" in previous studies. This scale was found to be highly relevant and appropriate to heterogeneous groups of clients and had been administered to evaluate client satisfaction with a diversity of service types (Attkisson & Greenfield, 1994). Data on psychometric performance of the scale included norms from several different populations, such as primary health care outpatient clinics, mental health outpatient services, employee assistance program clients, community-based residential care, and Driving Under the Influence (DUI) offenders

(Attkisson & Greenfield, 1994; Greenfield & Attkisson, 1989). The Client Satisfaction Questionnaire (Larsen, Attkisson, Hargreaves, & Nguyen, 1979), a well-used satisfaction survey, was extensively compared to the Service Satisfaction Scale (Attkisson & Greenfield, 1994). The Service Satisfaction Scale is a multifactorial scale and therefore more useful in a PHC setting, whereas the Client Satisfaction Questionnaire measures a unitary general satisfaction factor.

A common problem in satisfaction surveys is lack of variability in degrees of satisfaction. Most client responses “pile up” at the most satisfied levels (Attkisson & Greenfield, 1994; Pascoe, 1983; Williams et al., 1998). Attkisson and Greenfield (1994) reconfigured response items in order to “normalize” the scores and found that the use of more extreme endpoint anchors (“delighted” and “terrible”) reduced the negative skew and ceiling effect.

The recommended approach to administration of the tool is to invite clients in waiting rooms to participate. A designated research assistant (RA), trained in procedures for soliciting voluntary participation of sampled clients, recruits respondents. The RA then leaves the room when the form is actually being completed. The form is left in a ballot box when completed. Census samples of all clients seen at the CHC during a minimum of two typical service weeks is recommended to ensure that few clients are omitted and that respondents are somewhat representative of the target population (Attkisson & Greenfield, 1994). Algorithms are available on request from Greenfield for scoring the subscales of the Service Satisfaction Survey. We are planning to develop a version that can be optically scanned. As well, we are developing procedures to achieve “generation of reports based on the subscales, tailored to and normed for specific types of settings” (Attkisson & Greenfield, 1994, p. 418). The survey is also an appropriate tool for measuring client satisfaction in each of the specialized service areas within the CHC, as it has been used and tested with various populations in primary health care settings (Attkisson & Greenfield, 1994).

### Uptake by the CHC Evaluation Team

The criteria developed for tool selection and the results of the client satisfaction tool selection and review process were discussed with the evaluation coordinator and members of the CHC evaluation team. Based on the findings of the project, several options for implemen-

tation were proposed. The most desirable and pragmatic option was to use the Service Satisfaction Survey tool (Attkisson & Greenfield, 1994) without alterations. The tool is psychometrically sound and was previously used in primary health care settings similar to those at the CHC. Three other options were discussed. One was to revise the Service Satisfaction Survey tool with input from clients who use the CHC, make some alterations, and then test for reliability and validity in a pilot study before using it on the general population. Another option was to use the survey tool and do a comparative analysis with a second tool on clients who use the CHC. The last option was to use more than one method to gather client satisfaction data, such as focus groups comprised of clients using the CHC, and structured interviews involving questions designed by clients to measure client satisfaction in the CHC.

The evaluation team and the staff of the CHC chose to modify the existing Service Satisfaction Survey tool (Attkisson & Greenfield, 1994) with input from both the clients who use the centre for their health care service and CHC health care providers. Information about user friendliness, relevance of questions, and acceptance was then obtained from both groups through focus groups. The tool was modified based on this input, and a revised tool is being retested for reliability before being used with the CHC clientele. Measures of internal consistency through Cronbach's  $\alpha$  scores and test-retest reliability will be obtained. Content validity will be confirmed using expert opinion. Factor analysis will determine consistency of subscales. The evaluation team also decided to use the revised satisfaction survey results in conjunction with focus groups and structured interviews as the preferred method of collecting client satisfaction results at the Northeast Community Health Centre.

## DISCUSSION

Use of criteria to guide selection of a client satisfaction tool aided the evaluation team in choosing a tool that was conceptually and psychometrically sound. The process helped to eliminate the arduous work of developing a new tool and testing and retesting to ensure reliability and validity. The criteria assisted in differentiating between psychometrically strong and weak tools and ascertaining suitability for use in a CHC setting using a PHC model, and potential acceptability to the population using the CHC. However, the criteria could be more stringent by stating the minimum number of dimensions that the tool must contain.

Finding a reliable and valid tool from the numerous published tools available is challenging. As there is no “off the shelf” questionnaire that will satisfy the requirements of all service areas (McIver & Meredith, 1998), it is not surprising that health care professionals continue to develop their own tools in spite of all the pitfalls. However, the development of tailored instruments for each individual population has some major limitations. There is the inherent difficulty in establishing construct validity. Furthermore, there are inherent sampling biases in most instruments and the difficulty of not being able to compare the findings obtained with previous published results.

If an appropriate tool for measuring client satisfaction can be identified in the literature, the health care provider, the evaluation team, and the community using the CHC must be convinced of its acceptability and utility. In order to measure client satisfaction in a meaningful way for both the CHC staff and the community it serves, it must be appropriately administered and the results utilized in a responsive way.

The process for tool selection and modification presented here provides some guidance for those developing similar tools for use with their client groups. Developing criteria for comparison of tools based on appropriateness for a CHC setting is the first step. Applying those criteria to potential instruments available in the literature is the next step. Testing those that fit the criteria with potential clients in focus groups and structured interviews allows for tailoring of the instrument. The final step is pilot testing the adapted instrument and making final modifications based on the results.

Are the criteria generated for tool selection and review limited to this setting, or can they be used in other settings? We suggest that the criteria developed for review and selection of a tool for measuring client satisfaction can be used in any setting. Can a similar approach be used for other topic areas? The criteria were based on general, minimal requirements, and could provide a useful starting point for review of tools measuring another concept.

The criteria we employed to select a potential tool to measure client satisfaction in this context were useful. However, some adaptation was required to incorporate the clients' perspectives and address practical issues specific to the setting. We suggest that, congruent with the PHC model, a multi-method approach that incorporates fo-

cus groups and exit interviews should be employed in evaluation of client satisfaction to add useful information about client perspectives.

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## REFERENCES

- Acorn, S., & Barnett, J. (1999). Patient satisfaction: Issues in measurement. *The Canadian Nurse*, 95(6), 33–36.
- Atlantic Information Services. (1998/1999). *1998–99 guide to patient satisfaction survey instruments: Profiles of patient satisfaction measurement instruments and their use by health plans, employers, hospitals, insurers and physicians* (2nd ed.). Washington, DC: Author.
- Attkisson, C.A., & Greenfield, T.K. (1994). Client satisfaction questionnaire-8 and service satisfaction scale-30. In M. Maruish (Ed.), *The use of psychological testing for treatment planning and outcome assessment* (pp. 402–420). Hillsdale, NJ: Lawrence Erlbaum.
- Avis, M., Bond, M., & Arthur, A. (1997). Questioning patient satisfaction: An empirical investigation in two outpatient clinics. *Social Science and Medicine*, 44, 85–92.
- Bear, M., & Bowers, C. (1998). Using a nursing framework to measure client satisfaction at a nurse-managed clinic. *Public Health Nursing*, 15(10), 50–59.
- Burns, N., & Grove, S. (1993). *The practice of nursing research: Conduct, critique & utilization* (2nd ed.). Toronto: W.B. Saunders.
- Church, J., & Lawrence, S. (1999). Community health centres: Innovation in health management and delivery. In J. Hibberd & D.L. Smith (Eds.), *Nursing management in Canada* (pp. 219–235). Toronto: W.B. Saunders.

- Comley, A., & Beard, M. (1998). Toward a derived theory of patient satisfaction. *Journal of Theory Construction & Testing*, 2(2), 44–50.
- Davis, B., & Bush, H. (1995). Developing effective measurement tools: A case study of the consumer emergency satisfaction scale. *Journal of Nursing Care Quality*, 9(2), 26–35.
- Davis, D., & Hobbs, G. (1989, June). Measuring outpatient satisfaction with rehabilitation services. *Quality Review Bulletin*, 192–197.
- Eriksen, L. (1995). Patient satisfaction with nursing care: Concept clarification. *Journal of Nursing Measurement*, 3(1), 59–76.
- Forbes, D. (1996). Clarification of the constructs of satisfaction and dissatisfaction with home care. *Public Health Nursing*, 13(6), 377–385.
- Forbes, D., & Neufeld, A. (1997). Strategies to address the methodological challenges of client-satisfaction research in home care. *Canadian Journal of Nursing Research*, 29(2), 69–77.
- Graveley, E., & Littlefield, J. (1992). A cost-effectiveness analysis of three staffing models for the delivery of low-risk prenatal care. *American Journal of Public Health*, 82(2), 180–184.
- Greenfield, T., & Attkisson, C. (1989). Steps toward a multifactorial satisfaction scale for primary care and mental health services. *Evaluation and Program Planning*, 12, 271–278.
- Haas, M. (1999). A critique of patient satisfaction. *Health Information Management*, 12, 9–13.
- Harpole, L., Orav, J., Hickey, M., Posther, K., & 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.
- Hill, J. (1997). Patient satisfaction in a nurse-led rheumatology clinic. *Journal of Advanced Nursing*, 25, 347–354.
- La Monica, E., Oberst, M., Madea, A., & Wolf, R. (1986). Development of a patient satisfaction scale. *Research in Nursing & Health*, 9, 43–50.
- Larsen, D.L., Attkisson, C.C., Hargreaves, W.A., & Nguyen, T.D. (1979). Assessment of client/patient satisfaction: Development of a general scale. *Evaluation & Program Planning*, 2, 197–207.

- Larsson, G., Larsson, B., & Munck, I. (1998). Refinement of the questionnaire "quality of care from the patient's perspective" using structural equation modeling. *Scandinavian Journal of Caring Sciences, 12*, 111–118.
- Linder-Pelz, S. (1982). Toward a theory of patient satisfaction. *Social Science & Medicine, 16*, 577–582.
- Mahon, P. (1996). An analysis of the concept "patient satisfaction" as it relates to contemporary nursing care. *Journal of Advanced Nursing, 24*, 1241–1248.
- Marsh, G. (1999). Measuring patient satisfaction outcomes across provider disciplines. *Journal of Nursing Measurement, 7*(1), 47–62.
- Mayer, T., Cates, R., Mastorovich, M., & Royalty, D. (1998). Emergency department patient satisfaction: Customer service training improves patient satisfaction and ratings of physician and nurse skill. *Journal of Healthcare Management, 43*(5), 427–440.
- McGee, J., Goldfield, N., Riley, K., & Morton, J. (1997). *Collecting information from health care consumers: A resource manual of tested questionnaires and practical advice*. Gaithersburg, MD: Aspen.
- McIver, S., & Meredith, P. (1998). There for the asking: Can the government's planned annual survey really measure patient satisfaction? *Health Service Journal, 19*, 26–27.
- McKinley, R., Manku-Scott, T., Hastings, A., French, D., & Baker, R. (1997). Reliability and validity of a new measure of patient satisfaction with out-of-hours primary medical care in the United Kingdom: Development of a patient questionnaire. *British Medical Journal, 314*, 193–198.
- Megivern, K., Halm, M., & Jones, G. (1992). Measuring patient satisfaction as an outcome of nursing care. *Journal of Nursing Care Quality, 6*(4), 9–24.
- Munro, B., Jacobsen, B., & Brooten, D. (1994). Re-examination of the psychometric characteristics of the La Monica–Oberst patient satisfaction scale. *Research in Nursing & Health, 17*, 119–125.
- Pascoe, G. (1983). Patient satisfaction in primary health care: A literature review and analysis. *Evaluation & Program Planning, 6*, 185–210.

- Risser, N. (1975). Development of an instrument to measure patient satisfaction with nurses and nursing care in primary care settings. *Nursing Research, 24*(19), 45–52.
- Ryan, M., Collins, F., Dowd, J., & Pierce, P. (1995). Measuring patient satisfaction: A case study. *Journal of Nursing Care Quality, 9*(2), 44–53.
- Steiber, S., & Krowinski, W. (1990). *Measuring and managing patient satisfaction*. Chicago: American Hospital Publishing.
- Strasser, S., & Davis, R. (1991). *Measuring patient satisfaction for improved patient services*. Management Series. Ann Arbor, MI: American College of Health Care Executives.
- Ware, J., Jr. (1981). How to survey patient satisfaction. *Drug Intelligence & Clinical Pharmacy, 15*, 892–899.
- Ware, J., Jr., & Davies, A. (1983). Behavioral consequences of consumer dissatisfaction with medical care. *Evaluation & Program Planning, 6*, 291–297.
- Ware, J., Jr., Davies-Avery, A., & Stewart, A. (1978). The measurement and meaning of patient satisfaction: A review of the literature. *Health & Medical Services Review, 1*, 1–15.
- Ware, J., Jr., Snyder, M., Wright, R., & Davies, A. (1983). Defining and measuring patient satisfaction with medical care. *Evaluation & Program Planning, 6*, 247–263.
- Williams, B. (1994). Patient satisfaction: A valid concept? *Social Science & Medicine, 38*(4), 509–516.
- Williams, B., Coyle, J., & Healy, D. (1998). The meaning of patient satisfaction: An explanation of high reported levels. *Social Science & Medicine, 47*(9), 1351–1359.

