DEVELOPMENT OF AN EVALUATION PROTOCOL FOR AN ALTERNATIVE FUNDING PLAN FOR ACADEMIC PEDIATRICIANS

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ABSTRACT

The goal of an alternative funding plan (AFP) is to create a funding system which acknowledges that the responsibilities of academic physicians extend beyond the provision of clinical services to significant roles in teaching, research and administrative service. An alternative funding plan was proposed for St. John's academic pediatricians, in the Child Health Program, Health Care Corporation of St. John's, Department of Pediatrics, Memorial University of Newfoundland.

The objective of this study was to develop a comprehensive evaluation protocol for the proposed AFP which can be used to assess the impact of the AFP on: (1) providers, in terms of research, teaching, administrative and clinical care duties, (2) consumer (parent/guardian) satisfaction, (3) undergraduate medical student course satisfaction, (4) post-graduate pediatric resident satisfaction, and (5) community-based non-academic providers' pediatric workloads.

The protocol developed in this study employed (1) questionnaires (provider and consumer satisfaction and student assessment of teaching quality), (2) provincial medical database information for non-academic physicians,

(3) information gleaned from the Child Health Program, Janeway databases (patient volume, services, and waiting times), government information (overall budget changes, provider incomes) and (4) faculty information (research activities, income, administration /organizational activities, continuing education, physician recruitment and turnover and department and faculty innovations). Selected data collection instruments and procedures for the evaluation protocol were pretested to determine their appropriateness and completeness.

Dedication

For my grandmother
Rose Anna (Moore) Kennedy
(1910-1996)
A woman of great love, faith,
strength, wisdom,
And Peace.

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Chapter I

INTRODUCTION

Academic physicians are clinical providers of care, but also fill roles as researchers, educators, and administrators. These physicians find it a challenge to balance such distinct activities effectively(Cadman, 1994). Recently, several authors have explored the stresses caused by ineffective balancing of such professional activities among academic physicians(Linn, Yager, Cope and Leake, 1985).

Difficulties experienced by academic physicians in balancing duties have a multitude of potential causes. The most commonly cited causes have been those based on remuneration methods (Glaser, 1970 and Babson, 1972). There are four broad methods of payment that have been explored. The traditional three include: (1)fee-for-service, a service volume based method, (2)salary, a time-based method, and (3)capitation, a population size based method (Fournier, Contandriopoulos and Pineault, 1984). The fourth is a more recent design exclusively used in academic health care centers- the alternative funding plan[1] (AFP) method, which

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[1]It could be argued that this actually describes an alternative payment plan (APP), not an AFP, but after

involves mixtures of the three traditional methods (Haslam and Walker, 1993, Coyte, 1995, and "Queen's Health Policy Unit's AFP Evaluation Workshop Background Paper", 1996).

Any remuneration method involves incentives (Wright, 1991) which are essential considerations in physician behavior. Indeed, it is the belief of some researchers that inefficient balancing behavior exhibited by some physicians can be explained in part by the set of incentives associated with the particular remuneration method chosen (Hickson, Altemeier and Perrin, 1987, Casalino, 1992, and Birch, 1994). Since each remuneration method has a unique set of incentives at work, changing the remuneration method potentially affects the physicians' balance of activities. (Birch, 1994).

Recently, several academic health science centers across Canada have introduced alternative funding plans; University of Toronto, 1990, Queen's University, 1994 and Dalhousie University 1995. One of the goals of any AFP is to create a remuneration system which acknowledges that the responsibilities of academic physicians extend beyond the provision of clinical services to significant roles in teaching, research and administrative service. It is hoped that the new incentives created will facilitate an effective

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consideration of the difference, the term AFP was retained in this discussion.

balancing of activities for academic physicians(Haslam and Walker, 1993).

Academic pediatricians in the Department of Pediatrics, Faculty of Medicine, MUN, have explored the possibility of designing and implementing an alternative funding plan. Their current system of remuneration is primarily based on earnings for clinical services through a fee-for-service mechanism. A proposed AFP has been developed by these pediatricians. It will entail a shift from a primarily fee-for-service mechanism to remuneration by salary.

The developers of the AFP for St. John's academic pediatricians identified the need for a comprehensive evaluation of the proposed AFP.

1.1 Relevant Research

There were two broad areas of research relevant to this study, (1) Reimbursement Methods and Their Impacts, and (2) Alternative Payment Plans for Academic Pediatricians.

1.1.1 Reimbursement Methods and Their Impacts

Study of reimbursement methods in health care has consisted largely of opinions concerning behavior changes of the physician (Glaser, 1970 and Babson, 1972). Glaser and Babson who summarized various methods concluded that

reimbursement methods research was based exclusively on shadow controls, judgements of experts, program administrators, and participants. This type of methodology usually lacks substantial evidential basis (Rossi, 1993).

The study of remuneration methods does not have to address the question of how much a physician is paid but how to design a payment mechanism that facilitates the aligning of roles and functions and the common shared health care objectives with reasonable levels of compensation (Barer and Stoddart, 1991).

Concern over the adverse incentives associated with various payment methods have been expressed in many papers. Contandriopoulos, Champagne and Pineault (1986) gave a Canadian point of view when discussing the advantages and disadvantages of fee-for-service, capitation and salary arrangements for physician remuneration. Some advantages of salary remuneration identified in this paper included: enhancement of teamwork, participation in medical-administration activities and participation in prevention oriented activities. The negative aspects of salary remuneration considered in the same paper centered around productivity. Babson (1972), Reinhardt (1984) and Contandriopoulos, Champagne and Pineault (1986) asserted that salary payment undermines patient and physician

autonomy and lowers physician motivation, productivity and type and numbers of services provided.

Others have concentrated on one form of payment. For example Casalino (1992) advocates that the use of a fee-for-service system ensures adequate incentives for physicians remain in place. Consulting vs. procedural distortions caused by fee-for-service payment were identified by Opit, (1984) and noted by Barer and Stoddart, (1992) in their Canadian Health policy review. Charles J. Wright highlighted the shortcomings of the current system for reimbursement in his 1991 article, "The fee-for-service system should be replaced". Wright summarized the beliefs reflected in the papers mentioned earlier in this paper by saying:

> The current fee-for-item-of-service system causes gross inequities in physicians' remuneration... It also results in disproportionate recognition of procedures, undervaluing of counseling services and disincentives to productivity in all activities but clinical ones - areas such as medical education, planning and research suffer. (Wright, 1991)

Alternatives to fee-for service were presented as capitation (National Health Service, United Kingdom),

contracting and salary (Fournier, Contandriopoulos and Pineault ,1984 and Thornhill, 1991)[2].

Pineault, Contandriopoulos and Fournier (1984) conducted a study of Quebec physicians in 1981 to determine their acceptance of an alternative to fee-for-service payment. Two-thirds of the physicians surveyed would have accepted a time-based remuneration system to replace fee-for-service payment. However, concerns remained over professional autonomy in content of work and practice organization. Of particular importance to this discussion were the results from the questions on practice changes. The authors found that general practitioners on a time-based remuneration system would decrease, or at most maintain, time devoted to patient care and increase time spent on continuing education, teaching, research, community health and prevention.

Lahaie and Chopyk (1992) and Guilfoyle (1988) studied the use of salary remuneration for rural physicians in Manitoba and within a health center environment. The program evaluation undertaken in 1990 observed increases in services such as counseling, health promotion, home visits,

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[2]Capitation is a payment method designed to pay the physician according to the amount of responsibility held (# of patients in practice). Salary is a time-based method and fee-for-service is a service based method.(Fournier, Contandriopoulos and Pineault, 1984).

prevention, satellite clinics and specialty clinics, improvements in peer relationships (no longer seen as competing for patients, more equality), increased continuing education activities among salaried physicians, and increases in time spent with patients. There were concerns over loss of autonomy expressed by more experienced physicians (those who had practiced under the fee-for-service system), the oppressive tax structure of personal income and unevenly distributed workloads.

According to Hickson, Altemeier and Perrin (1987), behavior, attitude, practice priority and motivation modifications accruing to payment method changes must be identified and measured in an evaluation of a new payment mechanism. They ascertained that pediatric practice will likely be influenced by new reimbursement techniques. Using a randomized experimental design, they allocated physicians to be paid by fee-for-service or salary and followed a set of variables for nine months. The findings included that fee-for-service physicians scheduled more visits per patient than did salaried physicians and saw their patients more often (1.42 visits versus .99 visits). Fee-for-service physicians also provided better continuity of care by attending 86.8% of the visits made by their patients (salaried physicians attended 78.3% of visits) and encouraging less emergency visits per enrolled patient. This

study was the only published systematic study of the effects of salary or fee-for-service payment on pediatricians. However, it was a study of pediatric residents, not academic pediatricians (Hickson, Altemeier and Perrin, 1987).

Other studies such as Bjorndal, Artntzen and Johansen (1994), studied the effects of salary versus fee-for-service payment on the behaviors of general practitioners concerning working hours, patient turnover and patient characteristics. They found that fee-for-service physicians "worked almost exclusively with patients in their own practice, while salaried GPs spent more time out of office" (55% of working hours). The fee-for-service group had more consultations (avg. 2.68 patients per hour versus 2.37 patients per hour for salaried physicians). These findings were not sufficiently significant to support the authors' hypothesis that salary reimbursement leads to fewer and longer consultations. Salaried physicians had more telephone consultations per hour than the fee-for-service group. Also, the fee-for-service physicians worked an average of 42 hours per week; whereas, the salaried group averaged 38 hours per week. In this study consultation activity and patient populations were not found to have evolved differently between fee-for-service and salaried general practice professionals.

The proposed AFP for St.John's academic pediatricians will entail a reorganization of the payment plan. The payment mechanism will be established on a salary rather than fee-for-service billing. Therefore, as part of the search for an appropriate evaluation tool, research regarding behavior, work effort and output changes must be explored.

1.1.2 Alternative Funding Plans For Academic Pediatricians

In April 1990 the University of Toronto's Department of Pediatrics at The Hospital for Sick Children signed a AFP agreement with the Ontario Ministry of Health. The plan was structured to fulfil the principal goal of establishing a stable and secure funding base for academic medicine. The department was facing shrinking resources, including stagnant fee schedules, and increasing time spent devoted to clinical care, with a resultant de-emphasis on teaching and research (Haslam and Walker, 1993). The reorganization of the payment plan for the department as a whole required changes. For individual clinicians the new plan entailed:

> a shift from fee-for-service contributions to the department's central fund, with a guaranteed annual salary, to a negotiated annual salary possibly augmented with merit pay to reflect achievement in the areas of research, service and teaching.(Coyte, 1995)

According to Coyte (1995), the introduction of the University of Toronto, Department of Pediatrics AFP increased the financial stability of the department and also reduced the incentive for its members to see large numbers of patients in order to "earn their-full-salaries"(Coyte, 1995). The AFP allows for the members to spend more time in research and teaching, and correspondingly less time in clinical service.

After a short period of negotiations, the Ontario Ministry of Health and the Department endorsed an AFP which held the Department to operate within a global budget based on clinical services billings to the Ontario Health Insurance Plan (OHIP) and other sources, namely university funds and research grants. The full-time faculty members were assured a salary to provide clinical care, research, teaching and administrative services and were accountable to the Chair of Pediatrics. Although the plan has been active for six years, there has been no comprehensive evaluation completed.

The areas of the University of Toronto's Department of Pediatrics at Sick Children's Hospital's plan reviewed to date include the following variables: number of hospital admissions, number of emergency visits, physician turnover

and recruitment, innovations, sub-specialty clinic visits, publications and impact and research funding. The number of hospital admissions has remained constant since the introduction of the AFP (approximately 8000 per annum) (Haslam, 1996). However, there has been a drop in patient days due to decreases in length of stay and shifts to ambulatory setting care. The acuity level of pediatric patients has risen more than in other departments in the Faculty. There was a decrease in emergency visits but it was coupled with a 20% increase in sub-specialty clinic visits. The department has experienced a 14% increase in shadow billing since the introduction of the AFP. There has been a 7% increase in the number of University of Toronto graduating medical students seeking pediatric residencies at Hospital for Sick Children and pediatric residents from the university have improved MCCQE scores. The number of annual peer-reviewed publications per faculty member rose to 4.8 from 3.2[3], from before the AFP was introduced. And research funding rose, with number of investigators remaining almost unchanged over the 5 year period (Haslam, 1996).

The AFP at Queen's University, Faculty of Medicine, took effect in July, 1994. This AFP is similar to the University of Toronto, Department of Pediatrics at Hospital

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[3]Pre-AFP calculations based on data in Haslam, (1995).

for Sick Children's plan, with the exceptions of (1) the breadth of inclusion (the entire Faculty of Medicine) and (2) they did not initially include part-time faculty. The Queen's University (Kingston) AFP included SEAMO, South Eastern Ontario Academic Medical Organization, which is comprised of five members: Queen's University, Kingston General Hospital, Hotel Dieu Hospital, Providence Continuing Care Center and Clinical Teachers Association of Queen's University (Sinclair, 1996). The granting of the funding envelope has allowed the inclusion of all academic medical professionals. Queen's University Health Policy Research Unit recently developed a provider satisfaction questionnaire designed to gauge the faculty response to the AFP. The results of this survey will be available in late May 1997[4].

Other provinces are in the process of developing AFPs; University of Ottawa, University of Saskatchewan, Dalhousie University and Université de Montréal are in the preliminary stages of AFPs.

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[4]Personal communication with Malcolm Anderson and Jarold Cosby of Queen's University Health Policy Research Unit.

1.2 The Proposed AFP

The goals of the proposed Department of Pediatric, Memorial University of Newfoundland's AFP for academic pediatricians were outlined in a brief prepared for the Department of Health in 1996. It calls for the establishment of a remuneration system which: (1) provides a stable funding base for the academic Department of Pediatrics, with educational, research, clinical and administrative responsibilities encompassed therein, (2) offers competitive salaries, reflecting years of training, seniority and rank, intensity of work, teaching commitments, academic productivity, and amount of on-call and out of town clinics held per annum, (3) offers a fair and mutual opportunity for annual salary adjustments and dispute resolution, (4)recognizes part-time faculty as essential to the Department of Pediatrics, (5) ensures the maintenance of competence for academic medical faculty (travel for academic paper presentations and course expenses) and maintenance of appropriate levels of administrative support (see Appendix A for Role, Mission and Goals of the AFP for the Department of Pediatrics, Memorial University of Newfoundland). The proposed AFP for academic pediatricians in St.John's essentially follows the outlines of the University of Toronto and Queen's University AFPs, with modifications made

to reflect the unique regional requirements of pediatric academic medicine in Newfoundland.

1.3 Statement of the Problem

The purpose of this study was to develop a comprehensive evaluation protocol for the proposed AFP for academic pediatricians in the Department of Pediatrics, Memorial University of Newfoundland (MUN).

1.4 Study Objectives:

1/ To develop the protocol and instrumentation for the evaluation of an AFP for academic pediatricians in the Child Health Program, Health Care Corporation of St.John's (HCCSJ) and the Department of Pediatrics, MUN.

2/ To pretest selected data collection instruments and procedures for the evaluation protocol.

This study developed the instrumentation protocol for the future data collection and analysis for the comprehensive evaluation of the AFP. The complete evaluation

of the proposed AFP will take place over an extended period of three years and will be undertaken at a later date by a research team using the protocol developed in this study. Therefore, focus of the analysis in this study was on the assessment of the appropriateness, completeness, validity and reliability of the instrumentation.

1.5 Assumptions

The assumptions basic to this study were:

1. Academic pediatricians are challenged with a non-optimal balance of activities and remuneration[5].
2. The proposed AFP will introduce a new set of financial incentives which will facilitate the academic pediatricians' effective balance of activities.

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[5] This problem has been identified by the Department of Pediatrics, Memorial University of Newfoundland, and they have chosen to address the problem with a new alternative funding plan.

Chapter II

Methods

2.1 Selection of Protocol Design

The most rigorous evaluation of the impact of an AFP on pediatric health care in the province would be a randomized trial, wherein physicians would be randomly allocated to the AFP or the current fee for service remuneration system and variables such as cost, quality of work, productivity and satisfaction could be monitored over time. This design however is not currently feasible within the region as only 31 pediatricians will be potentially affected.

A quasi experimental design, in the form of independent pre and post tests[6], was therefore chosen for the protocol. This design will require one experimental group (the academic pediatricians in the province) and multiple observations of this group before and after the intervention (in this case, the intervention will be the introduction of the AFP).

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[6]Depending on the dependency observed between tests, the analysis may have to consider the study as a repeated measures test.

2.2 Setting

The evaluation protocol was developed in collaboration with several institutions including: the Child Health Program, HCCSJ, and the Department of Pediatrics, MUN, Faculty of Medicine, St. John's. This work involved four different sites; the Janeway Hospital, Department of Pediatrics, Faculty of Medicine (Health Science Centre), Medical Care Plan Office and the Department of Health for the Province of Newfoundland and Labrador.

2.3 Sample

The six target groups for this study included those which would potentially be impacted upon by the introduction of the proposed AFP. The sample included members from the following groups: (1) all providers (full-time and part-time academic pediatricians in the Child Health Program, HCCSJ, and the Department of Pediatrics, Faculty of Medicine, MUN), (2) a convenience sample of 15 consumers (parents or guardians of patients in the Child Health Program, HCCSJ), (3) all Undergraduate Medical Students (students in the Growth and Development course in Winter semester 97), (4) all Post-graduate Pediatric Residents (16 in Winter semester 97), and (5) a convenience sample of non-academic community based providers (five individuals from a group of practicing

non-academic general and family practitioners in the St. John's Metropolitan region). The sixth group consisted of a convenience sample of personnel at the Department of Health, Medical Care Plan Offices, and Memorial University, who provided information about the overall environment setting to the investigator.

2.4 Instrumentation

Identification of appropriate strategies to evaluate the impact of the AFP proceeded in several steps: (1) domain and indicator identification, (2) location of data sources to appropriately measure selected variables, (3) identification of access requirements for data sources, (4) pretesting of instruments, (5) identification of appropriate schedule administration for instruments, and (6) finalization of a formal evaluation protocol for the proposed AFP. Each step is discussed below.

2.4.1 Domain and Indicator Identification: The variables chosen were based on the objectives of the plan and the principles for alternate funding of the Department of Pediatrics at Memorial University (Appendix A). They included all areas and groups of people which could be potentially affected by the AFP. Five groups were identified

that could be potentially impacted upon. The primary domains of impact and appropriate indicators for each group were outlined through extensive consultation with members of each potentially affected group (see Table 2.1).

Table 2.1: Groups, Domains and Indicators

Group	Domain	Indicator
I. Providers	A. Clinical Care	a. work satisfaction and workload
		b. number and type of services provided
		c. length of stay
		d. waiting times (referral to consultation)
		e. emergency room visits
		f. number of admissions
	B. Administration	a. overall budget
		b. provider income
		c. physician turnover and recruitment
		d. degree of continuing education
		e. number and depth of innovations (eg: traveling clinics)
		f. activity in professional organizations and public or community service

Group	Domain	Indicator
Providers Con't.	C. Research	a. number of academic publications (peer and non peer review)
		b. number of citations from published materials
		c. Proposals written (all reviewed, funded or unfunded)
		d. Externally funded research projects
		e. number of clinical trials (funded and unfunded)
		f. Gross Research Funding
		g. academic awards
	D. teaching	see cell (3Aa)
2. Consumers	A. Quality of Care	a. Satisfaction with Care
3. Under-graduate	A. Satisfaction with Teaching	a. student course evaluation
		b. student research and papers
4. Pediatric Post Graduate Medical Students	A. Satisfaction with Teaching and Supervision	a. student program evaluation
		b. supervisory positions of faculty
5. Community Based Non-academic providers	A. Clinical services	a. MCP billing practice changes (pediatric population only)

2.4.2 Location of Data Sources: Identification of data sources to measure changes in the selected indicators resulted from consultation with members of the potentially affected groups and a review of the relevant instrumentation literature. Appropriate instruments were designed if no suitable data collection source could be located. Data sources were of two major types: (1) existing databases, and (2) survey instruments.

Most indicators (excluding those related to satisfaction) could be measured through existing databases. However, no existing data bases provided a measure of satisfaction for each of the four groups potentially impacted upon by the proposed AFP. Therefore, validated and reliable instruments were located through a literature review and assessed for their appropriateness and completeness for use in the target settings. Four survey questionnaires were adapted or developed for the purpose of this study, as noted below.

2.4.2.1 Provider Satisfaction Survey

Provider satisfaction is an important component because it allows for an assessment of physician behaviour changes attributable to the AFP (Cosby and Middleton, 1996).

Two existing questionnaires were chosen to measure the impact of the AFP on providers. The first questionnaire was

a work satisfaction measure entitled "The Hospital for Sick Children Department of Pediatrics Physician Survey 1996", which was developed by the HMRU (Sandra Leggatt) at the University of Toronto (April, 1996), and adopted by the investigator as section one of the Child Health Program, Department of Pediatrics, HCCSJ, questionnaire.

The second questionnaire chosen, entitled "The Alternative Funding Plan and the Professional Activities of Medical Faculty©1996" was designed at the Queen's Health Policy Unit (Cosby and Middleton, 1996) at Queen's University, Kingston, and had been administered to all academic physicians in the Spring of 1996 (Cosby and Middleton, 1996). This questionnaire focused mainly on measuring self-efficacy (perceptions of the opportunities created) and outcome-efficacy (perceptions of the value of change) of the providers affected by the AFP (Cosby and Middleton, 1996). The University of Toronto questionnaire made up the second section of the Child Health Program, Department of Pediatrics, HCCSJ, questionnaire and was also designed to gauge overall intent and interest of faculty in changing their behaviors. It is ideally suited for an ex-ante evaluation because it measures both intent and actual behavior shifts, in terms of time allocation to activities and the relative perceived importance of the AFP to the faculty pediatricians.

The two instruments, from the University of Toronto and Queen's Health Policy described above, were combined to form the Child Health Program, Department of Pediatrics, HCCSJ, questionnaire entitled "The Proposed Alternative Funding Plan: The Physician's Perspective" (see Appendix B). The work satisfaction questionnaire from Toronto (Leggatt, 1995) formed section one and the AFP attitudes questionnaire from Kingston (Cosby and Middleton, 1996) formed section two. The questionnaire from Kingston was slightly modified by changing the verb tense (to future from past) and by the term "proposed" being added before all references to the AFP. The original designer did not feel these slight modifications would seriously affect the reliability or face validity of the questionnaire (personal communication with Jarold Cosby, February 1997).

Inter-item reliability for the questionnaire from the Queen's Health Policy Unit was measured by Cronbach's alpha coefficient and found to be .81; a significant level of reliability (Cosby and Middleton, 1996). Factor analysis and principal components were used by Cosby and Middleton to ascertain construct and face validity. They found that

> the majority of the variables are measuring a similar construct that is based on faculty perceptions of the AFP... a three factor solution which accounts for over 40% of the variance.

Reliability and validity scores are not yet available for the University of Toronto work satisfaction survey.

In adherence with the Queens University, Kingston, designers' specifications, the physical appearance of the Child Health Program, Department of Pediatrics, HCCSJ, questionnaire administered at the Child Health Program, HCCSJ, followed that of the original Kingston questionnaire, with one exception. The booklet for the Child Health Program, Department of Pediatrics, HCCSJ, questionnaire had a buff cover in place of the original grey cover (see Appendix B for questionnaire).

2.4.2.2 Consumer Satisfaction Survey

It is important to attempt to measure consumer satisfaction because, according to Larsen et al.(1979), without the clients' viewpoint, an evaluation of services is bound to be biased toward the evaluators' perspective.

There is a tendency for patients, or in this case, their proxy (parent/guardian), to report high levels of satisfaction regardless of the service provided (Brown, Sheehan, Sawyer, Raftos and Smyth, 1995). The patient satisfaction data from young guardians (under 18 years) or patients older than 60 years is particularly vulnerable to acquiescent response bias, whereby the respondents tend to

answer all questions in a positive manner indicating high satisfaction (Linn, 1975 and Simonian, Tarnowski, Park and Bekeny, 1993). The higher levels of satisfaction reported from some pediatric satisfaction studies resemble the primarily positive responses found with satisfaction data from elderly patients (Ross, Steward and Sinacore, 1995 and Rees Lewis, 1994). And it has been suggested by Ware (1981) that this phenomenon of higher levels of satisfaction reported, called upper limit clustering, is caused primarily by lack of item variability. Upper limit clustering could be primarily solved by the assignment of both positively and negatively worded questions. Positively and negatively worded questions were used throughout the Child Health Program, St. John's, questionnaire to address this possible problem. However, as described by Nguyen, Attkisson and Stegner (1983) and Linn (1975), in patient satisfaction evaluations of health care, levels of satisfaction are very high regardless of the method used or the population sampled, and this is particularly true in pediatric settings (Meterko et al., 1994).

Another procedure to correct for upper limit clustering is to regress satisfaction data on disease seriousness measures[7] (Strasser and Davis, 1991 and Ross et al., 1995).

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[7]In Strasser and Davis (1991) this is called "Patient Acuity" nd in Ross et al. (1995) this is referred to as "Sickness Impact

Education and socio-economic levels (Linn, 1975 and Ware et. al., 1976 and Hulka et al., 1975) of respondents may influence data and response bias. Patients with less formal education and lower socio-economic status tend to evaluate their physicians more positively than patients with more formal education (Linn, 1975 and DiMatteo and Hays, 1980). Demographic information on the education or socio-economic levels and ages of parents was not collected in this study. Although information such as this may provide for greater insights into satisfaction determinants, measuring these was beyond the scope of the current study. However, appropriateness of vocabulary for parent/guardian literacy levels was addressed by approximating the literacy level of the parental or guardian group using census data.

The instrument chosen to measure satisfaction in the evaluation used university letterhead because of the findings of Etter, Perneger and Rougemont (1996), concerning high scores for questionnaires printed on medical practice letterhead. However, it is not known whether University letter head is better than Child Health Program, HCCSJ, letterhead for response rates. This should be pretested. A study by James et al. (in press)[8] found a better response

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rofile".

[8]Personal Communication with Bonnie James, Co-ordinator of he Enhanced Cancer Surveillance Project, Ontario Cancer

rate among physicians with the use of cancer agency vs. University letterhead and with a Ph.D. as requester instead of an MD.

A summary of the factors influencing response bias is presented in Table 2.2 below.

Table 2.2: Factors Influencing Response Bias

Year	Researchers	Factor
1975	Linn	education level, age, satisfaction with life in their community
1975	Hulka et al.	education level
1976	Ware et al.	education level
1980	DiMatteo and Hays	socioeconomic status
1983	Ware, Snyder, Russell Wright and Davis	socioeconomic status, self vs. supervised survey completion, income and age, and social desirability of answer
1986	Lewis et al.	adherence intent significantly associated with total satisfaction
1985	Linder-Pelz and Struening	doctor conduct reflecting satisfaction
1991	Strasser and Davis	patient acuity

Treatment Research Foundation, Toronto (May, 1997).

Year	Researchers	Factor
1975	Linn	education level, age, satisfaction with life in their community
1994	Meterko et al.	pediatrician acquiescent responses
1996	Etter, Perneger and Rougemont	questionnaire sponsorship

The concern over bias due to the more or less satisfied parents/guardians being more likely to return questionnaires remains. However, Meterko et al. (1994) did carry out a study of the response characteristics of those parents/guardians responding. They tested the hypothesis that the survey was being filled out by those individuals who were greatly impressed or discontented with care. However, they did not observe big negative correlations between sample size and scale scores, thus disproving their bias theory.

According to Ware (1981), good measures of patient satisfaction are characterized by acceptability, practicality, score variability, reliability, validity and precision for hypothesis testing. It was found by Ware et al. (1976), and Linder-Pelz and Struening, (1985) that the key determinant of overall and clinic encounter patient satisfaction is doctor conduct. Several validated and

reliable measures of patient satisfaction were reviewed by the investigator but found to be lacking in appropriate pediatric vocabulary or were not for use in a pediatric care setting (eg: Form IV of the Patient Satisfaction Questionnaire (PSQ) Ware, Snyder, Russell Wright and Davies, 1983).

Surveys Chosen for this study: Two surveys were chosen by the investigator according to the criteria, outlined by Ware (1981) and the limitations of satisfaction measurement, outlined in the paragraph above. The two chosen surveys were combined into a single instrument for this study entitled "Parent/ Guardian Perspectives on Child Care at the Janeway". The instrument measured consumer satisfaction with care received by their children in the Child Health Program, HCCSJ. Section one was made of selected sub sections from a questionnaire entitled The Parent Medical Interview Satisfaction Scale, P-MISS (Lewis et al., 1986), and section two was composed of selected sub sections from the questionnaire entitled the PRF-23 (Davies and Ware, 1991).

The Parent Medical Interview Satisfaction Scale, P-MISS was chosen by the investigator to measure satisfaction with communication and interpersonal scales of satisfaction with an episode of patient care. The PRF-23 sub sections form

assessed consumer satisfaction with access to care and technical quality (see Appendix C for questionnaire).

The effective measurement of satisfaction entails both quantitative (use of Likert scales) and qualitative (Nelson and Larson, 1993) data. The last three questions on the questionnaire developed by the investigator for use in the Child Health Program, Department of Pediatrics, HCCSJ, were qualitative questions based on work done by Nelson and Larson (1993).

Seriousness of the patient's illness, has been found to affect satisfaction levels and satisfaction levels can be adjusted with seriousness data to give a clearer picture of real satisfaction with medical care (Strasser and Davis, 1991 and Ross, Steward and Sinacore, 1995). Strict objective illness severity data could not be gathered in the pretest of the consumer satisfaction questionnaire; however, a rough subjective proxy question for parent/ guardian perception of illness seriousness was added to the questionnaire ("In general, would you say your child's health is:") to allow for the discussion of illness seriousness effects on overall satisfaction scores in this paper. However, provisions were being made to measure overall pediatric population illness seriousness levels in the evaluation (through the use of Resource Intensity Weights in Case Mix Groups). In the study by Meterko et al. (1994) satisfaction levels of

parents/guardians assessing care given by pediatricians when compared to adults assessing satisfaction levels with internists' and family practitioners' care are much more favorable. This will not pose a problem in the evaluation since only pediatric faculty will be evaluated using the questionnaire.

Validity and Reliability: The validity and reliability of the selected sub scales from the P-MISS and the PFR-23 questionnaires that made up the Child Health Program, St. John's, questionnaire for this study, have been established (Lewis et al., 1988, Ware and Davis, 1991 and Meterko et al.,1994). Cronbach's alpha coefficients (Cronbach, 1951) were used for measuring internal consistency of the subscales in both instruments.

The P-MISS survey's reliability was established by Lewis et al. (1988) and the Cronbach's alpha coefficients (Cronbach, 1951) were reported, by sub section, as follows: Physician communication with the parent (alpha=.81), Physician communication with child (alpha=.93), Distress relief (alpha=.85), and Adherence intent (alpha=.86)).

For group-level comparisons, Nunally (1978) suggested that the alpha coefficient be >.70 and Meterko et al. suggests for inter-item comparison an alpha coefficient >.90. The PRF-23 designers (Meterko et al., 1994) defined

Cronbach's Alpha as "the average of all split half reliability estimates, adjusted for scale length, and based on the average inter-item correlation". In section one of the Child Health Program questionnaire, a multi-item Likert scale was used ranging in seven choices from Strongly Disagree (1) to Strongly Agree (7). This was derived from the P-MISS and had an overall Cronbach's alpha coefficient=.95 (Lewis et al., 1986). Section two, was made up of two subscales of the PRF-23, and used a multi-item Likert scale ranging from excellent (5) to poor (1). Subscale one, access to care, had a reliability alpha=.86. Subscale two, Technical quality, had a reliability alpha=.96 (Meterko et al. ,1994). The distinctiveness of the subscales was proven for all subscales, by checking that the subscale-subscale correlations were less than their respective Alpha coefficients for PRF-23 sections and that the reliability of difference score was >.50 for P-MISS sections[9] (Lewis et al., 1986 and Meterko et al., 1994).

Validity is the measure of accuracy with which a behavioral scale measures what it says it measures (Kerlinger, 1986). It is determined in various ways but the PFR-23 designers chose criterion-based tests of validity to demonstrate that scale scores are systematically related to

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[9]The Distress Relief and Child Communication subscales were the only exceptions (Lewis et al., 1986).

one or more external outcome measures (Meterko et al., 1994). Four criteria were chosen by Meterko et al. (1994)and these are listed in Meterko et al.(1994) page 18. Meterko et al. (1994) observed 100% scaling success for the subscales Access to Care and Technical Quality. Meterko et al. (1994) suggest using multi-item scales in order to allow for estimating missing item scores for those who answered at least 50% of the questions in the subscale. This could be of use in the evaluation sampling if completion rates are not as high as in the pretests. Higher scores per item reflect a higher level of satisfaction with that item (reversed for the negatively worded questions).

Physical Appearance of the Questionnaire: Directions regarding the physical appearance of the questionnaire were not included in the instrument descriptions. Upon reviewing the literature on physical structuring of questionnaires, Dillman's Total Design Method, (TDM), (Dillman, 1978, p.121) was chosen. Following the prescribed dimensions, the booklet form was employed and a plain buff color cover was used. Dillman also suggested using a quality print (12pt.size). Dillman (1978), found that the use of the TDM increased response rates (Dillman, 1978, p.21).

2.4.2.3 Undergraduate Medical Student Survey

The purpose of introducing the student satisfaction with teaching indicator was to monitor possible changes in students' perceptions of faculty teaching during the three year transition phase of the Alternative Funding Program. Many undergraduate course evaluation instruments were reviewed by the investigator. However, the SIR- Student Instructional Report©1971, 1981 by Educational Testing Service was chosen due to its standard usage in the evaluation of undergraduate courses in North America and in most academic departments at Memorial University (see Appendix D). This Educational Testing Service instrument was employed in the pretest.

2.4.2.4 Post-graduate Pediatric Resident Survey

A comprehensive review of existing instruments took place but no single existing instrument was found to be appropriate. The Canadian Association of Interns and Residents (CAIR) questionnaire and the PAIRN pre-royal college survey questionnaire adapted for the University of Saskatchewan 1996, provided general guidelines. A new instrument was designed, reflecting the six areas of resident training involving the most contact with medical academic staff. The validity and reliability for this

instrument have not been ascertained. The booklet form was employed for this questionnaire (see Appendix E for questionnaire).

2.4.3 Identification of Access Requirements: The access requirements for the data sources were explored and ethical issues considered. The investigator took steps to procure all required permission to apply the data sources and instruments in the pretesting of selected indicators. Permission was also sought for general use of selected instruments for future use in the protocol. (See Appendix F)

2.4.4 Pretests: The objectives of this section were to assess the selected instruments for (1) appropriateness and completeness for measuring the target variable in the target setting, (2) to ensure that sufficient sample sizes for the respective instruments in the evaluation are available, and (3) to test parts of the design standardization procedure (sampling/ analysis protocol) for several components of the protocol.

2.4.4.1 Provider Survey Pretest

The provider questionnaire entitled "The Proposed Alternative Funding Plan: The Physician's Perspective" was administered to all full time and part time St. John's

pediatric faculty in a meeting at the Child Health Program, Department of Pediatrics, HCCSJ, on March 4, 1997. A full scale pretest, involving all academic pediatricians was adopted due to the small size of the population. The purpose of the pretest was to assess the appropriateness of the questions for use in the Child Health Program, HCCSJ, setting and to determine approximate completion and response rates for the questionnaire.

Sponsorship (letterhead) of the questionnaire was by the Division of Community Medicine, Faculty of Medicine. Attendance was taken at the meeting and questionnaires were sent by internal mail to missing pediatric faculty. In all, questionnaires were administered to 30 full time and part time academic pediatricians. An introductory presentation made during the monthly faculty staff meeting in March 1997, by the investigator, defined an AFP for those who were not yet familiar with the term. No references to the projected outcomes of the AFP were discussed, though several individuals posed questions to that effect. These potentially confounding questions were forwarded to the faculty AFP representative who agreed to answer the questions at a later date. A copy of the presentation is in Appendix G.

Originally, the physicians were asked to complete the questionnaires after the meeting. However, two asked for

more time and others agreed. Therefore, they were instructed to write their names on the outside cover, which was detachable from the questionnaire and send both the cover and the completed questionnaire in separate internal mail envelopes, to the investigator. One week after the distribution, the investigator telephoned the offices of the physicians who had not yet returned their questionnaires and left reminders with their administrative assistants. During the second week the faculty chair person sent out a reminder memo to all academic medical staff. During the fourth week the investigator telephoned all physicians who had not returned their questionnaires with another friendly reminder and at the faculty staff meeting in April all those present were verbally reminded one last time. In all, three verbal reminders and one written reminder were sent out after the questionnaires were administered.

2.4.4.2 a) Consumer Satisfaction Pretest I

The objectives of this pretest were: (1) to detect possible vocabulary and interpretation problems and, (2) to detect any errors in printing or grammar present in the questionnaire. The subjects for this pretest included 5 individuals made up of 2 parents, a physician, a nurse and an interested individual (student).

b) Consumer Satisfaction Pretest II

The objectives of carrying out this second pretest were (1) to establish response ranges in order to better set the sample size for subsequent time points of sampling and, (2) to get an estimate of completion rate. Information gleaned from the second pretest permitted the appropriate decision to be made whether the study population sample should be all patients visiting the Child Health Program, HCCSJ, in a three or four month period or whether the sample population should be partitioned into departmental sub settings and separate sample sizes determined for each. Data were analyzed to determine if the sub settings differed in their expressed satisfaction levels.

The questionnaire entitled "Parent/Guardian Perspectives on Child Care at the Janeway " was administered to 15 parents/guardians in a convenience sample of those parents/guardians with children using the emergency department, outpatient clinics and inpatient care on two sampling days (5 parents in each setting).

They were approached by either the triage, clinic or charge nurse, respectively, and asked to complete the questionnaire entitled "Parent/Guardian Perspectives on Child Care at the Janeway " to assess satisfaction with their most recent visit and contact with medical staff.

There were no refusals. The investigator spoke with the nurse managers of the areas she wished to sample from and then spoke to the nurses who would do the identification of parents/guardians. The nurses were asked to approach parents or guardians with a greeting and then ask the parents/guardians if they would mind filling out a questionnaire for a study. If parents/guardians answered in the affirmative, they were given the questionnaire and instructed to read the consent letter on the cover.

The questionnaire sponsorship was revealed on the inside cover of the questionnaire as Memorial University, Division of Community Medicine.

It was not possible in this pretest II to undertake a mail out pilot because the methodology for extracting a representative sample of parents/guardians from the Child Health Program, HCCSJ, databases was only recently developed and requires some programming modifications. However, current data exist on response rates for mail out satisfaction questionnaires to a parent/guardian sample which were used in the development of the protocol (Meterko et al., 1994).

2.4.4.3 Undergraduate Student Survey Pretest

The pretest of the SIR instrument was undertaken to assess its appropriateness for use in the Growth and Development course taught exclusively by a sequence of pediatric faculty members. It was administered to a convenience sample of 52 undergraduate students, after the last class of the course, by the investigator, according to university guidelines for the administration of SIR course evaluation forms on March 26, 1997. The forms were collected by the investigator at the door and placed in a sealed envelope for delivery to the data analysis office in the Psychology Department. The investigator asked for verbal feed back from students as to the appropriateness of the instrument.

In the pretest of this instrument in this study, the SIR questionnaire was found to be inappropriate and a second instrument was designed to replace it. The second instrument is based on the existing Memorial University, Faculty of Medicine course evaluation form. It is not yet validated and reliability scores have not been calculated.

2.4.4.4 Post-graduate Pediatric Resident Survey Pretest

The questionnaire entitled "Pediatric Resident Perspectives on Teaching by Pediatric Faculty" was administered to 16 pediatric residents at the Child Health Program, HCCSJ. It was distributed during an academic half day in March of 1997. Due to the small number of pediatric residents the investigator decided to administer the questionnaire to all available residents. Missing residents were sent the questionnaire by internal mail (one was out of town). The completed questionnaires were sent via internal mail to the investigator.

2.4.6 Finalization of a Formal Evaluation Protocol: The information gathered throughout the study was assembled into a formal evaluation protocol for the proposed AFP for academic pediatricians in the Department of Pediatrics, Faculty of Medicine, Memorial University.

2.5 Ethical Issues

Several ethical issues were considered and addressed in this study. They were (1) issues arising from data collection from existing databases, and (2) issues relating to the collection of data via questionnaires.

2.5.1 Ethical Issues Arising from the Use of Existing Databases

Data from existing databases in the Child Health Program, HCCSJ, the CIHI, the admissions, and ambulatory and other clinic databases were and will be gleaned in preparation for the evaluation and in the pretests. Steps were taken to ensure the confidentiality of participants in the pre-tests was preserved. These steps included: 1) all analysis was to be undertaken on group statistics, not on individual information, 2) no personal identifiers were to be used in the data gleaning operation and no individual information could be identified from the analysis or subsequent data summary, 3) database information was to be being kept in a locked cabinet only the principal investigator and primary supervisor having access, 4) all patient information gleaned from the databases was to be reassigned code numbers based on the six digit hospital unique identifier numbers as identifiers, and 5) the match list for any code numbers, addresses and names was only to be seen by the principal investigator.

2.5.2 Ethical Issues Arising from the Use of Questionnaires

The administering of questionnaires to consumers (parents/guardians), providers, and students also required ethical consideration regarding the preservation of

participant confidentiality. The steps included: 1) all analysis undertaken on group statistics, not individual information, 2) no personal identifiers were used in the data gleaning operation and no individual information could be identified from the analysis or subsequent data summary, 3) interview and questionnaire information were kept in a locked cabinet with only the principal investigator and primary supervisor having access, 4) all participants in the faculty questionnaire were assigned code numbers as identifiers solely for the purpose of ensuring that responses are returned and pre-post data could be compared, and 5) the match list for the code numbers and names was only seen by the principal investigator. The proposal for this project was submitted to the Human Investigations Committee at Memorial University and received approval to proceed(see Appendix H).

2.6 Data Analysis for the Pretests

All satisfaction instruments (questionnaires) were pretested on convenience sample of respondents and results were presented in terms of descriptive statistics including frequencies (or percentages), medians or modes. The statistical software package used was SPSS 7.5.

All the questionnaires had some Likert-scale based questions and therefore the data gleaned was of an ordinal nature. The ranks of the data were compiled and compared using non-parametric statistical measures (Daniel, 1995), the Kruskal-Wallis test at a $\alpha = .05$.

The purpose of the data analysis was to gather information on the following:

1. response and completion rates
2. response ranges or results (for both qualitative and quantitative questions)

For the consumer satisfaction questionnaire, vocabulary, interpretation problems, and sponsorship of the questionnaire were also examined.

Chapter III

RESULTS

The main purpose of this study was to develop an evaluation protocol for the proposed AFP for academic pediatricians in the Child Health Program, HCCSJ/ Department of Pediatrics, Faculty of Medicine, MUN. Table 3.1 summarizes the major elements of this protocol. Each will be briefly discussed below.

3.1 Domain and Indicator Identification

The four main groups expected to be impacted upon by the proposed AFP (1) providers, (2) consumers, (3) medical students, undergraduate and post-graduate, and (4) non-academic community-based providers were identified in the early stages of the study. Their respective domains of impact, previously presented in Table 2.1, remained unchanged throughout the study.

3.2 Data Sources

3.2.1 Existing Databases: As shown in Table 3.1, many indicators can be measured by the extraction of data from existing databases. For example, most indicators for the

Table 3.1: Protocol Guideline

Group	Domain	Indicator	Data Source	Access Requirements	Frequency of Measure
1. Providers	A. Clinical Care	a. work satisfaction and workload	questionnaire	consent form	4 time points
		b. number and type of services provided	data base CIHI (CMG data)	permission of HCCSJ	4 time points
		c. length of stay	data bases CIHI and admissions	permission of HCCSJ	4 time points
		d. waiting times (referral to consultation)	admissions data base	permission of HCCSJ	4 time points
		e. emergency room visits	Annual Report of Manager (Janeway)	permission of HCCSJ	4 time points
		f. number of admissions	Admissions database	permission of HCCSJ	4 time points

Group	Domain	Indicator	Data Source	Access Requirements	Frequency of Measure
Providers con't.	B. Administration	a. overall budget	Dept. Of Health and HCCSJ	Ministerial Approval	annual summary data
		b. provider income	Faculty of Medicine, Department of Health, MCP and Medical Practice Associates	Ministerial Approval	Annual summary data
		c. physician turnover and recruitment	HCCSJ, Faculty of Medicine Staff Database (Fall 1997)	Faculty of Medicine permission (summary data only)	Annual data (if updated)
		d. degree of continuing education	Faculty of Medicine Staff Database	Faculty of Medicine permission (summary dat only)	Annual data

Group	Domain	Indicator	Data Source	Access Requirements	Frequency of Measure
Providers con't.	Admin. con't.	e. number and depth of innovations (eg: traveling clinics)	HCCSJ and individual physician clinics	physician consent	Monthly data
		f. activity in professional orgs. and public or community service	Faculty of Medicine Staff Database	permission from Faculty of Medicine	Summary data annually (if updated)
	C. Research	a. number of academic publications (peer and non peer review)	Faculty of Medicine Staff Database	permission from Faculty of Medicine	Summary data annually (if updated)
		b. number of citations from published materials	Faculty of Medicine Staff Database	permission from Faculty of Medicine	Summary data annually (if updated)

Group	Domain	Indicator	Data Source	Access Requirements	Frequency of Measure
Providers con't.	Research con't.	c. Proposals written reviewed, funded or unfunded)	Office of Research and Graduate Studies (Faculty of Medicine)	permission from Faculty of Medicine	Summary data annually (if updated)
		d. Externally funded research projects	Office of Research and Graduate Studies	permission from Faculty of Medicine	Summary data annually (if updated)
		e. number of clinical trials (funded and unfunded)	Office of Research and Graduate Studies	permission from Faculty of Medicine	Summary data annually (if updated)
		f. Gross Research Funding	Office of Research (MUN) Database and Division of Research and Graduate Studies, Faculty of Medicine	permission of Faculty of Medicine and Office of Research, MUN	Summary data annually (if updated)

Group	Domain	Indicator	Data Source	Access Requirements	Frequency of Measure
		g. academic awards	Division of Research and Graduate Studies	permission from Faculty of Medicine	Summary data annually (if updated)
	D. teaching	see cell (3a)			
2. Consumers	A. Quality of Care	a. Satisfaction with Care	questionnaire	parent/ guardian consent	4 time points
3. Under-graduate medical students	A. Satisfaction with Teaching and supervision	a. student course/ program evaluation	questionnaire	consent forms	Annual survey
		b. student research and papers	Division of Research and Graduate Studies	summary data permission from Faculty of Medicine	Annual data
4. Pediatric Post-graduate Medical Students	A. Satisfaction with teaching and supervision	a. Student program evaluation	question-naire	consent forms	Annual survey

Group	Domain	Indicator	Data Source	Access Requirements	Frequency of Measure
Post-grad. con't.	Satisfaction con't.	b. supervisory positions of faculty	Division of Research and Graduate Studies	summary data permission from Faculty of Medicine	Annual data
5. Community Based Non-academic providers	A. Clinical services	a. MCP billing practice changes (pediatric population only)	Medical Care Plan Database	Department of Health (ministerial approval)	4 time points

provider and community-based non-academic provider groups can be assessed by existing databases.

In the Clinical Care domain of the provider group, information on numbers and types of services provided, length of stay, waiting times, emergency room visits, and the number of admissions are available by abstracting reports from the admissions and health records databases.

The numbers and types of services can be obtained by a "Report Request" to Information Systems, HCCSJ. (See Appendix I). All information requested must be organized by physician to ensure that summary information can be divided into full-time, part-time and non-academic groups of physicians.

In the administration and research domains, continuing education activities, activities in professional and public service organizations, number of academic publications (peer and non-peer reviewed), number of citations from published materials, number of proposals written (those which were positively reviewed and funded or unfunded), number of externally and internally funded research projects, number of clinical trials and academic awards, will be available in the Fall of 1997.

A new data base was designed by the Faculty of Medicine to organize information from current faculty activity reports. Presently, the activity reports are in the form of

curriculum vitorem and the information will be entered into the data base by Dean's office personnel in the Summer and Fall of 1997. When this data base is completed, it will be possible to request summary information on any field, by physician. (See Appendix J for complete description of available fields).

Overall budget and summary provider income data from the Department of Pediatrics is available from the Faculty of Medicine. Provider clinical income data for full-time pediatricians is available on an annual summary basis from Medical Practice Associates. For summary estimates of part time faculty clinical earnings a report can be requested by Ministerial Authority (ie: requiring a letter from the Minister of Health) from Medical Care Plan (MCP).

Physician turnover and recruitment information, in summary form only, is available from the chairperson of the Department of Pediatrics.

The number and depth of innovations, such as: travelling clinics and involvement in public education campaigns information, must be collected from individual physicians. This information, which is not now included in all activity reports, should be made part of the activities included in the Faculty of Medicine Staff Database.

In April, 1997, as part of the pre-accreditation exercises of the Department of Pediatrics, the Chairperson

of Pediatrics compiled a list of research undertaken by pediatric faculty in the past five years. This list was examined in this study and found to be incomplete when compared to similar lists available from the Division of Research and Graduate Studies. Therefore, an analysis of the completeness of the information available from the new Dean's Office Faculty Database should be undertaken before the research information from the Faculty Database is used in the evaluation (possibly at the end of October, 1997). Improving the completeness of the research database, both for funding and studies undertaken, may require a new method of gleaning professional activities information from faculty. Although, Memorial University's regulations require that all full-time faculty submit annual reports of professional activities, only ~13% of all full time pediatric faculty have done so in the last five years (personal communication with Paul Chancey, Centre for Institutional Analysis and Planning (CIAP), Memorial University).

Data regarding gross research funding is available from two sources; Memorial University's Office of Research (which was scheduled to begin transferring all its files to a computer database in the Spring of 1997) and the Faculty of Medicine's Division of Research and Graduate Studies. Preliminary inspection of research funding levels for

pediatric faculty in March, 1997, indicated that the information from the two sources differs, but is complementary in nature. Complete information should be available from the Office of Research once the new computerized database is established. However, both of these research offices depend on complete and accurate activities information being sent from the Department of Pediatrics.

The detection of downloading of work to non-academic and community based physicians can be monitored in the evaluation through Medical Care Plan (MCP) benchmark coding frequencies from medical practitioners. Benchmark billing codes were identified (see Appendix K) and will be used to generate reports from Medical Care Plan (MCP) files, pending Ministerial approval. These reports will follow the same frequency measures schedule as the data collected over three months for four time points. They will identify the frequencies at which the benchmark codes are claimed by St. John's physicians for patients sorted according to age groups of 15 years and younger. The reports should include summary code frequency data only.

3.2.2 Access to Existing Databases: Access requirements for existing data bases are also outlined in Table 3.1. Most of the data bases examined are administered by the HCCSJ, and

therefore permission to access data in these systems must be sought from the information managers involved (Information Systems Department of the HCCSJ).

To access the Medical Care Plan data base ministerial approval is required. The collection of detailed data from Medical Practice Associates can be made with the executive's approval.

Information gathering from the new Faculty of Medicine Staff data base (set up in the summer of 1997), requires approval of the Dean of Medicine.

3.2.3 Pretest Results for Satisfaction Questionnaires:

Results of the pretests for each satisfaction instrument are presented below. First, response and completion rates are presented. Then the actual results (response ranges) from the pretests are briefly considered.

3.2.3.1 Provider Survey

The questionnaire (Appendix B) collected data on variables: overall work satisfaction, workload (time/activity allocation), perceived self-efficacy (attitudes towards change), awareness and expectations of the proposed AFP, and overall concerns with the proposed policy change.

Response rate: The survey was administered to 31 full time and part time pediatricians (all academic pediatricians in the St. John's area). Twenty three questionnaires were returned, of these, one was returned blank and one was returned blank with a letter expressing the physician's concern with not knowing enough about the AFP to answer the questionnaire adequately. Therefore, 23 of the 31 questionnaires administered were accounted for, resulting in a response rate of 74%. Of the 21 completed and returned questionnaires, 13 were from full time faculty and 4 were from part time faculty, representing 76.5% and 31% of their[10] respective total groups. One respondent was unsure of their faculty position, one respondent said they were neither part-time or full-time and two others failed to complete that question[11].

Completion rate: Completion rates per section differed markedly. The completion rate for section one was 99%. The lowest completion rates were for the subsections on research

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[10]This indicates his/her.

[11] These percentages differed when compared to the results from the income question (#16). Of the 21 completed and returned questionnaires, 67% (14) of pediatric faculty indicated they will derive all their income from the proposed AFP (at this point anyone indicating this can be assumed to be full time faculty), 14% (3) indicated that some of their income will come from the AFP (possibly part time faculty), 9.5% (2) denoted that none of their income would come from the proposed AFP and 9.5% (2) "didn't know".

and education activities. This can be explained by the fact that these were optional sections; those not currently involved in research or education activities did not complete these subsections.

Response Ranges: Of the 21 completed questionnaires, three respondents (14%) indicated they were not involved in research activities and four respondents (19%) indicated that administrative duties accounted for less than 2% of their time. All respondents were involved in at least one education activity. The responses ranged from 1 activity to 11 activities with a mean of 8 activities and from 5% to 80% of total time.

The results were analyzed by section and, in some cases, by individual question. The work satisfaction section data was presented in both summative and individual question frequency statistics.

The median percentages of time spent at each activity were: clinical 61%, education 22%, research 9%, and administration 9% [12]. The range (minimum and maximum) and sample size for each median is presented in Table 3.2. The mean "average hours worked weekly" was 64 hours, but again the answers ranged from 40 to 110 hours weekly. Eighty one

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[12]The percentages over the four activities were consistently ~115%, not 100%. All the answers were adjusted using a weighted proportion to a 100% scale.

percent of respondents described their workload as "heavy" or "very heavy" (question #58).

Table 3.2: Ranges of Answers for Time Items

Question	Sample Size (n)	Median	Range (min-max)
		% Time at	Activity:
Education	21	21.7	4-70
Research	21	8.7	0-70
Clinical	20	60.9	17-78
Administration	21	8.7	0-65

In section 2, "General Views of Your Job and the Proposed AFP", the overall views and expectations from the proposed AFP were examined. There was disagreement among the physicians as to how much their job would change, but 43% chose "remain the same". Similarly, for the question (#18) on "how will your education and research activities be affected", 43% and 38% said "unchanged" respectively. There was a big difference within the same question with regard to clinical and administration activities, where 71% chose "unchanged" for both. The apparent consensus (62%) was that time devoted to all activities would remain the same as a result of the proposed AFP.

The results were somewhat different in section 3, "Activities, Programs and Policies", when the questions addressed what the physicians' desired to change about their

activities in the next two years. The two most common first and second choice responses for increasing activity were in the areas of : first, education and second, research. In education, undergraduate teaching was first choice and clinical skills teaching was second choice. In research, funded clinical trials were first choice and publications second choice.

The answers to the questions monitoring self-efficacy (perceptions of the opportunities created by the proposed AFP) and outcome-efficacy (perceptions of the value of the change) are presented in the following table:

Table 3.4: Self-Efficacy and Outcome-efficacy Measure Results

Activity	Combined %'s of respondents indicating that the Effort was Worthwhile or Very Worthwhile	Sample Size (n)	Combined %'s of respondents who indicated that they were Confident or Very Confident	Sample Size (n)
Research	94%[a]	17	88%	16
Education	94%	17	100%	17
Clinical[b]	75%	20	50%	20

[a] The other 6% expressed negative or uncertain answers.

[b] The question in the Clinical section was slightly different to the wording of the other two questions for Research and Education, it asked: " Do you believe the effort required to reduce some of your clinical activities and shift your workload in the direction you indicated [in question #46] would be worthwhile?"

In the next two years, 52% of pediatric faculty would like to spend less time in clinical activities, 48% would

like to do more research and 52% indicated they wanted to spend more time in education activities. However, answers to questions 50 through 53, indicated that although 52% of respondents said they wanted to spend less time at clinical activities, only 29% felt that as a result of the proposed AFP, the amount of time spent on all clinical activities in the next two years would decrease, most (52%) felt it would remain the same. Similarly, 43% felt that the proposed AFP would increase their opportunity to reduce some of their clinical activities and shift their workloads in the direction indicated and 43% said there would be no change in opportunity with the proposed AFP. When these results were examined for each of the two groups, full time and part time respondents, the respective means were not significantly different at a significance level of .05 for any of the above questions.

There was great disparity in the answers to questions 16, 62 and 63. The answers to these three questions should correspond for each individual. However, it became apparent that 11 of the 21 respondents presented conflicting answers to these questions. For example, someone indicating that they will receive all of their income from the proposed AFP would almost certainly be a full time faculty member and possess a primary academic position title of a full time faculty member (for instance: Professor, Assoc. Professor or

Assistant Professor). In numerous cases, an individual would indicate "all" income and then say their academic position was a clinical lecturer as well as choosing the "not faculty" item in question #63. Twenty four (23.8%) of respondents indicated they were unsure or were considered "other" in question #62 addressing academic position. And 14.3% indicated that they were either not faculty or unsure in question #63. Therefore, if we organized the respondents into full time or part time groups, (it could be done according to their answers to either question #16, 62 or 63), the list would be different dependent on the reference question. The returned covers did not clarify the issue either, since only 16 covers were returned, leaving 5 respondents as unknowns (either full time or part time). This information implies that there is great confusion among faculty about the proposed AFP, their academic position and their faculty category. The confusion over their academic position could be due to sloppiness in filling out the questionnaire or from question comprehension problems. In any case, it may suggest there are problems with response validity and this finding could be explored further before the evaluation takes place.

Perceived Faculty, Departmental and Divisional responses to desired changes were "neutral" (not positive or negative) for each activity. The answers for change in

education activities showed that faculty expect a more "positive" response from all administration levels.

The most frequently mentioned qualitative comments regarding the proposed AFP were organized into 3 groups: AFP concerns, survey suggestions and other. They are summarized in Table L.1 of Appendix L.

3.2.3.2 Consumer Satisfaction

Results of Pretest I

In pretest I, of the five individuals consulted, two respondents expressed concern over the level of literacy needed to understand the questions. Another respondent (a pediatric nurse) expressed concern about parental/guardian willingness to respond to "such a long questionnaire". According to Statistics Canada a self-administered questionnaire should be of a length that provides enough information to satisfy the study objectives and should not take the respondent more than 15 minutes to complete[13][14]. A fellow graduate student had concerns with the question concerning "access to specialty care" saying that it was

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[13]Personal communication with Owen Power, Statistics Canada, Ottawa, 1997 and Statistics Canada. Mail Surveys: Improving Response Rates, 1978.

[14]Although a little unreasonable, according to Dillman (1978) problems with length do not come up until after 12 pages or 145 questions have been exceeded.

redundant. It is agreed that the question "access to specialty care" was redundant. However, it was retained in the questionnaire so as to not modify the subscale so excessively that the internal consistency and validity scores would be affected. The pediatrician in the pre-test felt the questionnaire gave ample opportunity for feedback and an appropriate range of questions. However, he questioned as to how the physician communication with child section was to be interpreted for children not yet able to talk. This concern was addressed by the following methodology change: the age of the child was asked in order to adjust answers to "physician communication with child" questions. Responses for any questionnaire stating that the child was two years or younger were not considered for the answers to questions p7-p16, inclusive. The revised questionnaire was prepared and readied for its use in the subsequent pretest II.

Results of Pretest II

Response rate: Pretest II questionnaire (Appendix C) was administered to 15 parents in three settings (five parents each): inpatient, outpatient and emergency. The procedure for the self- administering of the questionnaires by the parent/guardian led to a high response rate among

parents/guardians. Fifteen of the sixteen parents approached returned completed questionnaires (94% response rate).

Incompletion Rate: In the pilot of the PFR-23 Meterko et al. discovered that two questions had unusually high missing rates: access to specialty care and access to hospital care. They assumed this was because these two items may be outside the direct experience of the parent/guardian. In the Child Health Program, HCCSJ's pretest II the missing data problems were negligible, with at most two missing results in four questions (3/15 = .20) for an overall incompletion rate of 21 missing/555 total= 3.8%. Redundancy may explain question a5, where all physicians seen were "specialists" and therefore provide "specialty care". Others may be explained by their being outside the direct experience of the parent/guardian. These included: a1 (ease of telephone) and missing physician communication with child data for people whose child was less than two and could not talk (questions p7-p16). The question on office waiting times also had a low completion rate. This is a potential problem for the main study, as this particular aspect of access to care is known to affect overall satisfaction rates.

Vocabulary Appropriateness: The average level of literacy attained by the average age of parents in this group for

Atlantic Canada is 3 out of 5 on the document scale[1516]. And 57.2% of Newfoundlanders[17] in this parental group have a level of schooling of between grade 9 and 13 (Statistics Canada Census, 1991). The questionnaire adhered to a reading level of sixth grade.

Response Ranges and Results:

Qualitative Question Responses: The responses to the qualitative questions were grouped into frequency of similar sentiment expressed. The most frequently expressed "bad surprise" was waiting time to see doctor, the most frequent "good surprise" was excellent/good/ helpful staff. However, three positive answers were qualified by ~ "despite the cuts in health care". "Cuts in Health Care" appeared to be a concern of parents/guardians.

Overall Satisfaction Levels: The overall satisfaction levels reported were very high, as can be expected in pediatric care proxy populations (Meterko et al., 1994). The overall

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[15]A "3" on the document scale reflects a proficiency score of 276-326 on the IRT (Item Response Theory Scale (0-500) by Educational Testing Service, (ETS)).

[16]The average age of parents/guardians when having a first child in the province is 23 years with 85% of mothers with children under the age of sixteen being between 20 and 35 (Statistics Canada, Atlantic (1995) and Canada wide (1991)).

[17]Approximated from the age group 15-24 years (Census, 1991).

satisfaction level of parents/guardians with care received at the Child Health Program, HCCSJ, was determined by summing responses over subscales and over settings. The medians for totals across subscales by settings are presented in Table 3.4.

Table 3.4: Medians for Totals Across Sub-scales for the Parent/Guardian Questionnaire

Sub-scales	I. Physician Communication with parent	II. Physician Communication with child	III. Distress Relief	IV. Adherence Intent	V. Access to Care	VI. Technical Quality
Questions	p1-p6	p7-p15	p16-p21	p22-p25	a1-a7	t1-t5
scores out of	42	63	42	28	35	25
Setting	Median		Total	Subscale	Scores	
Inpatients n=5	34 (28,41)*	57[a] (45,61)	33 (29,39)	19 (15,22)	23 (22,26)	18 (16,25)
Outpatients n=4	42 (36,42)	63 (63,63)	42 (42,42)	22 (21,28)	31 (29,34)	25 (25,25)
Emergency n=5	42 (42,42)	55 (15,63)	40 (35,42)	27 (22,28)	28[b] (21,34)	25 (19,25)

* The first number in parentheses is the minimum the second number after the comma is the maximum.

[a] In outpatients one child was under two years so there were four viable samples for this sub scale.

[b] One person left out this entire subscale.

Although, the sample size was too small to yield any statistically relevant information on satisfaction, several interesting trends were noted in the data. The section 1 (7 choice scale) items with the highest satisfaction scores were: "the doctor listened carefully to what I said" and "the doctor seemed to think about my child's problem carefully". The item with the lowest satisfaction score (interpreted as positively worded) was "It may be too difficult for us to do exactly what the doctor told us to do". In section 2 (5 choice scale) the highest satisfaction level expressed was for the item "Skill, experience, and training of the doctor" and the lowest satisfaction level expressed was for "Length of time spent waiting at the office to see the doctor".

Overall satisfaction levels were analyzed to compare the responses in sub settings (inpatient, outpatient and emergency patients) to determine if they differed significantly. The Kruskal-Wallis test was employed (the non-parametric equivalent of the one way ANOVA to test for the means of each group being equal using SPSS 7.5(ed.)), at an $\propto$=.05 level of significance the observed p-value was .022[18]. The conclusion drawn from this test is that the ranks of the overall satisfaction levels do differ

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[18]For the same test omitting person #1 and #11 data (due to multiple missing answers) the p-value increases to .035 which is closer to .05.

significantly between sub settings: with outpatients having highest mean rank of satisfaction (12.00), followed by emergency patients (7.80) and inpatients (4.20).

Sub settings: During the pretest II in the emergency sub setting, it was noted that the emergency department at the Child Health Program, HCCSJ, was medically staffed with casualty officers and family practitioners, not academic pediatricians. Although a child may see an academic pediatrician in the course of their emergency visit, the first encounter with a medical staff person is unlikely to be with an academic pediatrician. Therefore, in the proposed AFP evaluation, parent/guardian satisfaction will not be measured from the emergency sub setting. Approximately 1650 children per annum are admitted to inpatient care from the emergency department[19]. Those admitted will be included in the inpatient setting satisfaction study, since, once they are admitted they come under the general care of a physician who is likely to be an academic pediatrician.

Illness seriousness: The overall satisfaction levels were tested against the proxy illness seriousness measure (question d1) using a Kruskal-Wallis test for equal means

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[19]Child Health Program, HCCSJ, Child Health Centre Annual Report 1994-95

for each level of child's health reported at a significance level of $\alpha = .05$. The questions were split into the 7 choice scale questions and the 5 choice scale questions; neither p-values were found to be significant at the significance level of $\alpha = .01$ (.900 and .013 respectively), so the test suggests that it is reasonable to conclude that the mean satisfaction levels for each illness seriousness rank were equal. (The 5 choice questions are almost less than .01 indicating that illness seriousness, as measured by a subjective parent/ guardian perception of their child's health status, may explain some of the variation in satisfaction level; on those questions which were made up of the Technical Quality and Access to Care subscales). Overall (sum of section one and two item answers), the p-value=.079 which is greater than .05 so the p-value was not found to be significant. A more accurate measure of illness seriousness will be employed in the evaluation.

Age: The overall satisfaction levels were tested against the reported age categories in order to account for any change in the satisfaction levels due to the age of the child (no data was collected on age of parent or guardian completing the questionnaire) (Linn, 1975 and Simonian, Tarnowski, Park and Bekeny, 1993). The p-value was $=.461>.05$. Therefore there is not sufficient evidence to suggest the overall

satisfaction levels differ according to age category of child.

Overall Satisfaction Measures: Low overall satisfaction levels in the inpatient group may be explained by the increased stress and perceived lack of control of parents/guardians. This hypothesis was tested by comparing the mean ranks of answers to "parent empowerment" questions among sub settings. The satisfaction levels were summed across all people for the following questions: (p2) "The doctor gave me a chance to say what was on my mind", (p17) "After talking to the doctor I feel I am handling my child's illness well.", (p19) "The doctor made me feel I've done a good job of caring for my child" and (p20) "After talking to the doctor, I feel better about my child's illness". The mean ranks were compared over the three sub settings and a p-value of .05 was observed, indicating[20] rejection of the null hypothesis of equal mean ranks over each sub setting. The inpatient respondents had the lowest satisfaction levels with these "empowerment" questions, possibly indicating that the inpatient respondents (parents/guardians) felt the least satisfied with the degree of control with which the medical staff could empower them, with regard to their children's

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[20]At an alpha level of significance .05.

health state. The inpatient group also indicated the lowest satisfaction levels with question (t5) "How much was your child helped?".

3.2.3.3 Undergraduate Medical Students

The SIR form questionnaire collected course evaluation data on the course taught by pediatric faculty in the Winter semester 1997. It was administered to all students present at the final class of the course (52 students).

Response Rate: The response rate for the pretest of the SIR form was 77% (40 forms returned out of a possible 52) and the average incompletion rates for individual items ranged from 10% to 95%.

Results: Following the data summary techniques adopted by Memorial University, in the manipulation and interpretation of the data, questions four through eleven, excluding question six and including question 19, were grouped as a single comprehensive indicator of faculty teaching. Using MUN standard criteria, only 2 respondents answered all of the questions that composed the composite indicator; therefore, the mean composite score of 2.5/4 reflected only 5% of respondents. The composite question as defined by MUN did not include answers to overall questions from section III of the SIR. The incompletion rates for the faculty

teaching questions (questions 35 and 39) in this section were 12.5% and 10% respectively, lower rates of missing or not applicable values than in section I. The mean satisfaction levels reported for questions 35 and 39 ("I would rate the general quality of the lectures" and "How would you rate the quality of instruction in this course?") were 3.51/5 and 3.58/5. The scales for these two questions differed slightly in wording, "satisfactory" with a value of 3 in question 35 was replaced with "about average" with a value of 3 in question 39.

Verbal feedback was requested from respondents and comments were noted by the investigator who was present in the class. Comments ranged from "I can't answer this in a general manner, some profs were good, some were not so good." to "I'm glad you've finally found a better course evaluation form". There were six negative comments on the appropriateness of the use of the SIR form in this setting. The statements were qualified by noting that the SIR form was designed to evaluate a single instructor in a single course, not for use in the evaluation of a course like Growth and Development where up to 15 different instructors lecture on different topics. Two positive comments were made regarding the comprehensiveness of the questions in the form.

The high rates of missing and non-applicable values (0) indicate that the students had problems with some questions. They also had a negative effect on the investigator's ability to derive any statistically significant conclusions from the data. This provided further evidence that the instrument was inappropriate for use in this setting. Completion rates coupled with student and faculty comments on the use of the SIR form in the setting led to its rejection as an appropriate instrument for use in the AFP evaluation protocol.

3.2.3.4 Post-graduate Pediatric Resident Survey

The questionnaire entitled "Pediatric Resident Perspectives on Teaching by Pediatric Faculty" (Appendix E), collected data on resident satisfaction with teaching and supervision they received from academic pediatric faculty. It was administered to 16 post-graduate pediatric residents during an academic half-day.

Response Rate: The response rate was 100%. This can be expected for each time point because of the small number of residents. Completion rate was only less than perfect for the call schedule sub section (6.7% or 1 respondent).

Results: Overall satisfaction was reflected by response modes for questions in each section. All questions utilized

a five-point Likert-scale with five being the maximum and one the minimum (for negatively worded questions the responses were inverted so that a score of 5 indicated disagreement).

The subscales of major concern were: Administrative Duties and Research Activities. Most respondents did not feel that faculty were good role models in their research activities (modes were 1 and 2, 46.7%) or in their administrative duties (modes were 2, 53.3%).

Overall results indicated a high satisfaction with faculty teaching, except in areas of research and administration. Two other areas were identified as lacking in quality; these were: bed side rounds and volume of ambulatory patients seen.

One question will be added to the final version of the questionnaire as suggested by a resident who completed the questionnaire. It will be added under the sub section entitled "overall" and is worded: "I receive timely and appropriate feedback on my progress from faculty teachers". Such a minor change would enable the questionnaire to be implemented quickly.

The qualitative question responses were not grouped due to the small number of comments. They are summarized in Table M.1 of Appendix M.

3.2.3.5 Non-academic Community-based Providers

Five non-academic community providers were consulted on how they, as a group, may be impacted upon by the introduction of the proposed AFP. These five were a convenience sample of physicians enrolled in graduate courses in the Division of Community Health in Fall and Winter semesters 1996-97.

The qualitative question they were asked is outlined in Appendix N.

Results: They collectively expressed concerns about potential changes in Pediatric specialty care availability for the patients they refer to the Child Health Program, HCCSJ, (i.e. longer waiting times for consultations and the downloading of services from pediatric specialists to community providers).

As a result of these consultations, the investigator approached a practicing pediatrician to identify bench marking codes to detect any downloading effects impacting community providers which may result from the introduction of the proposed AFP (these were previously discussed in section 3.2.1 and Appendix K). There was no attempt to measure quality of care of these services.

Chapter IV

DISCUSSION AND RECOMMENDATIONS

4.1 Protocol Design

The protocol was developed for a formative evaluation, as defined by Fitz-Gibbon and Morris (1987), and therefore it will allow for a period of observation to assess impact and determine its effectiveness[21].

The number of observations required to perform a valid post test analysis has been debated. Ideally, 50 observations are needed in order to estimate correlated error in a time series analysis(Cook and Campbell, 1979). However, 50 observations will not be possible for the Child Health Program, HCCSJ, study due to obvious time and budgetary constraints. Most analyses using an independent pretest-postest design are acceptable when more than two pretest and post-test observations are collected. If the experimental group is sufficiently small then the group can be sampled more frequently (Cook and Campbell, 1979, p.229) This may apply to the small sized physician group in the

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[21]Although the opportunity existed to gather ex-ante, pre-implementation data, a direct comparison of before and after data would be insufficient to draw acceptable conclusions because it is not possible to account for long term confounding effects (Rossi and Freeman, 1993).

Child Health Program, HCCSJ, and the Department of Pediatrics, MUN study. However, since the physician group should be given the same questionnaire over the span of the evaluation (to guarantee consistency) the time interval between sampling must be long enough to prevent boredom of subjects and yet reasonably short to prevent selection-maturation confounding. Selection-maturation confounding occurs when a group of study participants progressively become more bored than another group of respondents (Cook and Campbell, 1979). For this reason, the evaluation should be undertaken over at least a period of three years. At least two pre and two post measures of each variable should be taken.

4.1.2 Identification of Schedule of Instrument Administration:

All indicators possessed unique data source limitations which affected their potential frequency of measurement. Not all indicators could be measure at the same points. A valid and feasible schedule of administration was prepared based around the data source availabilities. There are four main schedules of indicators: (1) Survey data will follow a four time point schedule, (2) Data available on an annual summary basis, (3) 90 days period data (4 time points with same

dates as survey data) and (4) Student survey data (annual for undergraduate and post-graduate students). See Table 4.1 and Table 3.1.

Table 4.1: Frequency of Measure Schedule for Four Time Point Surveys

Time Point #	Time Point Date
1	8 months before introduction of AFP
2	3 months before introduction of AFP
3	12 months after introduction of AFP
4	24 months after introduction of AFP

As stated previously, the complete evaluation of the proposed AFP should take place over an extended period of at least three years and will be undertaken at a later date by a research team using the protocol developed in this study.

4.1.2 Potential Confounders

According to Cook and Campbell (1979) the confounding effects that should be considered in this design can be organized into four groups: (1) history, (2) seasonal variation, (3) changes in instrumentation and (4) uncontrolled selection, as follows:

4.1.2.1 History: The major threat to internal validity is the effect of history, that is, the possibility that a historical trend in the outcome variable of interest exists. The best way to control for this potential threat is to add a non-intervention control group. However, when this option is not feasible, it is reasonable to track all plausible effect-causing events that can influence respondents and to ascertain if any of them are operative between the last pretest and the first post test. If not, history is less plausible as an explanation for results. Many effects are not instantaneous and present themselves over time; this delay can often be unpredictable. Careful consideration is therefore needed when assigning time points for the measures to be taken.

4.1.2.2 Seasonal Variation: Seasonal variation is an example of cyclical variation in the observations. The observations will be taken at various times in the year to ensure they accurately reflect relevant activities on an annual basis. It may also be possible to introduce dummy variables to assess seasonal variation.

4.1.2.3 Instrumentation: The possibility exists for record keeping behaviors to change within the time span of the evaluation. Record keeping changes can artificially inflate or deflate observed trends over a period of time (Cook and

Campbell, 1979). Standard instruments were identified in this study to be used for variable measurement throughout the final evaluation. This could be particularly important in the measurement of faculty academic activities.

4.1.2.4 Uncontrolled Selection: Uncontrolled selection occurs when the composition of a study group changes suddenly at the time of the intervention (Cook and Campbell, 1979). A significant change in study group is not expected during this study. However, if it appears to occur, at least with the smaller sample populations (physicians), then the background characteristics of the attrition group, (for example physicians leaving their faculty positions), will be examined to determine if the physicians' collective profile has changed significantly. If the profile changes enough to cause a sharp discontinuity with the pre-test data, selection is a problem. For the evaluation, all physicians in the academic pediatric department will be included (currently 31 physicians). Turnover rates are expected to remain constant. The physicians' profile of the study group should be monitored throughout the evaluation.

4.2 Data Sources

4.2.1 Existing Databases Changes

It is nessassary to access addresses and mothers' names that correspond with the new patient unique identifiers

generated by the reporting system in the first observation of the evaluation. A sample of questionnaires should be sent out for each observation point on a quarterly basis. Small variations will occur in this number due to actual patient numbers for each particular quarter.

4.2.2 Satisfaction Survey Changes

Recommendations for changes in survey protocols for the evaluation of the proposed AFP in each of the satisfaction surveys are presented in the following paragraphs. A summary of the finalized instruments is presented in Table 4.2, below.

Table 4.2: Summary Information for Finalized Satisfaction Questionnaires.

Survey	Target Sample	# of Questions	Answer Format[a]	Time to Complete
Provider	Academic Pediatri-cians	64	Multiple Choice	30-35 minutes
Consumer	Parents/ Guardians	42	Likert-scale (5&7 item)	15-20 minutes
Undergrad-uate Medical Student	2nd year students	22	Likert-scale (5 item)	10 minutes
Post Graduate Resident	all pediatric residents	41	Likert-scale (5 item)	15-20 minutes

[a] All questionnaires included at least two qualitative questions as well.

In the evaluation, sample sizes for all survey instruments should be calculated based on the ability to detect a 5% change in the percentage of respondents indicating `satisfied' responses (5,6,7 on the 7 item scale and 4 and 5 on the 5 item scale) from those indicating `unsatisfied' responses (3,2,1 on the 7 item scale and 2 and 1 on the 5 item scale) (75% and 80%) between any two time point observations at a α=.05, two-sided level of significance.

4.2.2.1 Providers

There were no vocabulary changes identified and no major changes suggested after the pretest. Therefore, the pretest results from the questionnaire may be used as part of the baseline data needed for the evaluation. The sponsorship may either be by the university or the Child Health Program, HCCSJ; a comparison may be undertaken in another pilot or pretest.

The answers to the qualitative questions in the questionnaires indicate the need for more information on the proposed AFP to be made available to the pediatricians potentially affected. A mechanism to ensure the fair distribution of clinical service should be instituted when the proposed AFP is introduced. The comments indicate the

need for some sort of complementary program, such as detailed job descriptions, formal job appraisals or performance incentives package.

4.2.2.2 Consumers

While the instrument assembled and pretested in this study was generally found to be both appropriate and complete for use in the evaluation, several small but specific improvements to the consumer survey and survey protocol are suggested below.

Mail Questionnaire: Despite the myriad of problems with mail out questionnaires described by Nguyen, Attkisson and Stegner (1983)[22], the evaluation baseline and subsequent observation time point observations for the consumer survey should be carried out by mail questionnaire. In the evaluation, the consumer satisfaction questionnaire should be administered by mail according to instructions in Press and Ganey, (1989). The PRF-23 questionnaire was developed and pilot tested as a mail out survey and in the pilot conducted by Meterko et al. (1994) the response rate among

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[22]The problems included: a 35% return rate of questionnaires and a bias created towards satisfied clients since they are more likely than dissatisfied clients to complete and return questionnaires.

parents evaluating their child's care was 51.7%. This is the response rate expected in the first baseline sample for the evaluation. It was noted in the Meterko paper that response rates can be expected to be higher with a more vigorous follow-up (ie: sending a reminder postcard between two mailings of the questionnaire). This suggestion was followed in the development of the survey protocol outlined in Appendix O. There was a substantial difference between the method used in the pretest and that proposed for the actual evaluation protocol. Therefore, the information gleaned through the pretest should not form part of the baseline.

Expected Response Rates in the Evaluation: Response rate for the mail out questionnaire is expected to be less than that observed in the second pretest (94%), since it is possible that the response rate observed in the pretest study may have been favorably inflated by selection bias problems. Nurses may have self-selected individuals that they felt were more likely to complete the questionnaire and provide favorable results. Such selection bias should be controlled for in the evaluation by a random generation of patients' identifiers from the databases (admissions, other clinics and ambulatory care scheduling). Also, individuals should

not have any influence over which parents/guardians are chosen to take part in the satisfaction study.

Response Biases: The meaningfulness of the satisfaction with the Child Health Program (HCCSJ) measured by the instrument pretested in this study is dependant on the comparability of time points. The strength of a patient satisfaction instrument lies in its repeatability under similar circumstances (Nguyen, Attkisson and Stegner, 1983). Therefore, although the average profile of the parents/guardians will not be known in the evaluation, the need to ensure the relative comparability of time pont observations, dictates that it be assumed that the socioeconomic, education and other factors influencing profiles will remain constant at least over the next three years. Methods, procedures and instrument should be kept constant throughout the length of the evaluation to minimize the impact of this confounder variable.

Consumer Sample Selection for the Protocol: Ensuring that a representative pediatric sample will be taken in the baseline study should be a primary concern. For most ambulatory clinics, the extraction of addresses and mothers' names from the appointment scheduling database is possible. This will require a Health Care Corporation Information

Systems technician to write a small reporting program to extract a set number of patients' six digit hospital unique identifiers randomly from all "new patients" that have gone through ambulatory clinics in the preceding quarter (3 month period). It will also be beneficial to have a list[23] of six digit identifiers generated for a specified group of physicians (all full-time and part-time pediatricians) for each quarter minus a day (the system purges on the 90th day). These identifiers can then be randomized and those chosen can be reentered into the Meditech system to retrieve a parental or guardian name and address. Organization by physician allows for distinctions to be made between groups of physicians that are impacted differently by the proposed AFP.

The only way to ensure the optimal measurement of satisfaction changes is with newly seen and treated patients. Restricting the study to include only new patients allows the investigator to minimize the chances that a parent/guardian will base their satisfaction appraisal on previous rather than the most current care received from academic medical staff at the Child Health Program, HCCSJ/ Department of Pediatrics. This is most important because of the time frame of the evaluation which will require the

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[23]See Appendix I for the Information Systems Request Form.

investigators to be able to detect changes in parent/guardian satisfaction levels over short periods of time. Nevertheless, this restriction may create a selection bias towards younger and less acute patients, as well as to patients of younger or newer staff who have more practice places to take on more new patients (personal communication with Noreen Walsh, Child Health Program, HCCSJ, Department of Outpatient Clinic Scheduler) and against patients with chronic disease. However, the age and illness seriousness profiles of selected patients can be monitored using a similar process to that for resource intensity weights in the CIHI data. Again, the method of subject selection described should be kept in place for the duration of the study in order to preserve observation point comparability.

Identifying new patients who have been treated on an inpatient basis requires merging admitting files and health records files. The Child Health Program (HCCSJ) admitting database does not distinguish between re-admitted and new-patients; all other databases and patient scheduling mechanisms in the Child Health Program (HCCSJ) do distinguish the two groups in the Child Health Program, HCCSJ.

Information regarding how to generate new patient numbers has only become available since the pretests in this study were carried out. Therefore, the patient numbers used

to calculate sample size for the pretest II included all patients treated at the Child Health Program (HCCSJ) in the three sample settings: emergency, outpatient and inpatient. Calculating Consumer Sample Size for the Protocol: Hickson, Altemeier and Perrin, chose to sample 25% of patients seen during their period of study. However, the Child Health Program (HCCSJ) has a much larger population size- approximately 26820 outpatients seen per year at clinics and 3974 inpatients (admissions)[24]. The numbers vary quarterly (by the season), there are approximately 6700 outpatients and 1000 inpatients. The sample sizes of the parent/guardian groups for the evaluation should be based on these numbers.

To calculate the optimal sample sizes for the evaluation, information from the pretests regarding ranges, means and frequencies of question answers, can be used in the evaluation. Based on the neonatology parent satisfaction study by Mitchell-DiCenso et al. (1996), an overall highest level of 5.25 /7.0 was recorded and an overall lowest level was observed at 4.75/7.0. Although the questionnaire used by Mitchell-DiCenso et al. is different from the P-MISS and PRF-23, it is based on the P-MISS instrument. As a consequence, results gleaned from the pretests at the Child Health Program (HCCSJ) should be compared to those observed

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[24]These may change, as only patients defined as "new patients" will be included in the evaluation.

by Mitchell-DiCenso et al.(1996)to assess range appropriateness.

It is recommended here that the results from the evaluation be sensitive to a 5% change (two-tailed) in satisfaction (α=.05) as defined above. With this information the evaluation's sample size was calculated using Epi Info 6.0.

The approximate number of patients seen in the Child Health Program, HCCSJ, are organized by setting and are presented below in Table 4.3. The calculated sample sizes, based on 1996 and 1997 data for the evaluation are found in Table 4.4, following Table 4.3.

Table 4.3: Approximate Patient Numbers in Ambulatory[25] and Inpatients Settings (Annual)

Setting	New Patients	Total Patients/year
Ambulatory Clinics[a]	3360	4536
Inpatients (1995-96)	1947	3836
Total	5307	8372

[25]In some ambulatory clinics, the department or clinic secretary schedules all appointments. Appendix P lists these other departments and individuals as well as out of town clinics. The Psychiatry Department, although staffed mostly with full-time academic medical staff, is not included in the study since they are not academic pediatricians and will not be included in the proposed AFP.

[a] The admissions data base does not keep any computerized record of patients who failed to come to their appointments. A manual record is kept for several months. Further investigation is needed to determine proportion of "no shows", those missing appointments, amongst new patients in this population, as patients who failed to come to their appointment cannot evaluate their satisfaction with care received at the Child Health Program, HCCSJ. This may require that once the random list of new patients is generated, a proportion of these new patients be checked against the manual clinic lists to ensure no patients missed their appointments. If this proves too resource intensive, which is very likely, than the proportion of these cases will have to be estimated and considered as non respondents for survey purposes, thus the sample size will have to be increased to reflect these. This number is only for ambulatory clinics which are staffed by academic pediatricians.

Table 4.4: Calculated Sample Sizes (to detect a 5% change in satisfaction levels) Based on 1996 data for inpatients and Jan-Mar 1997 data for outpatients

Calculated Sample Sizes		
Setting	Total new patients quarterly	Sample size required
Inpatients	487	163
Outpatients	840	190
Other	225	117
Totals[a]	1552	212

[a] This assumes the sample is a random sample from the pooled settings.

4.2.2.3 Undergraduate Medical Students

The SIR form will not be used as an evaluation instrument. It was found to be inappropriate since it was

originally designed to act as a course evaluation form for a course taught by a single instructor over a semester. In contrast, the Growth and Development course, the only course taught by pediatric faculty (other than Dr. A.R. Cooper's Microbiology course), is taught by approximately 15 instructors over 6 weeks. And in the next academic year a whole new Pediatric course, taught by at least 15 instructors, will be introduced as part of the new curriculum.

In view of the results outlined in the previous chapter, a new questionnaire was developed to gauge student satisfaction with pediatric faculty teaching skills (see Appendix Q). The new questionnaire was designed to be short and to be administered either after each faculty instructor completes assigned lectures in the course, or as a package at the end of the course. It is recommended here that the package include a course outline showing what each instructor had taught and then include a series of forms, one for each instructor, that will be completed by the student after the last class. Therefore, teaching ability will be measured on an individual faculty member basis. The new questionnaire entitled "Undergraduate Student Perceptions of Faculty Teaching" has been reviewed by the course coordinator and a non-pediatric faculty member; and

both found it to be an appropriate instrument. Due to the large number of questionnaires the response rate may suffer.

4.2.2.4 Post-graduate Pediatric Residents

With the exception of one change, the addition of the question "I receive timely and adequate feedback about my skills from faculty", the survey developed for use in the post-graduate pediatric resident group should be adopted in the evaluation.

4.3 Data Analysis for the Evaluation

There is a potential for difference in the amount of dependency among the same sample groups for each time point observations. Therefore, appropriate independent samples analysis could be performed. The observations associated with consumers and undergraduate medical students will be independent, but the observations associated with providers, post-graduate pediatric residents and non-academic providers have the potential of being partially dependent.

All the indicators will be statistically categorized according to type of variable (see Appendix R), and an appropriate test employed in an independent analysis (Table 4.5).

Table 4.5: Types of Variables and their Appropriate Analysis

Type of	Variable	Data Analysis
Quantitative	Continuous	Analysis of Variance
	Discrete	Chi-squared Analysis
Qualitative	Nominal	Descriptives (frequencies)
	Ordinal	Non-parametric Analysis (Kruskal-Wallis)

The newly developed instruments should have their predictive power evaluated through criterion validation and have their inter-item reliability established. This could be done If time permits, a mail survey pilot of the consumer survey should be undertaken in order to ascertain a more accurate estimate of the response rate.

4.4 Suggestions for Complementary Programs and Further Research

A recent description of the various reimbursement methods for health care services, in a multi-national context, included salary and global budgets in its discussion (Hoffmeyer and McCarthy, 1994). It concluded that, in most circumstances, fee-for-service is an inappropriate method of payment. However, in a salary arrangement, work effort and output must be monitored.

The establishment of physician performance incentives packages or performance appraisals to complement the change from fee for service to salary must be examined in more detail. The preliminary provider questionnaire data indicated that workload equity is a concern of participating faculty.

When introducing a salary arrangement, a performance appraisal and performance incentives package is usually included (Hoffmeyer and McCarthy, 1994, Babson, 1972 and Wright, 1991). However, if this is implemented seperatly from the proposed AFP, it could serve as a major confounding variable. Performance appraisal and incentives should be an integral part of the entire package. Faculty innovations must also be monitored in order to determine whether they are serving as an internal or extraneous effect or variable. Although, the introduction of an incentives package may affect the results of the evaluation, it may encourage continuing excellence in the department in the diverse fields of clinical care, research, teaching and administration. A performance appraisal and incentives package could be introduced after the evaluation has been completed. Models for the introduction of such a package are being reviewed at both Queen's University and University of Toronto[5]. Another possibility is the introduction of a peer coaching program. Peer coaching is a technique that has been

proven to improve the quality of teaching in teaching institutions (Gingiss, 1993). It involves pairing faculty with colleagues who give feedback to one another on their teaching technique. This could also be introduced after the evaluation has been completed.

A complete pretest and pilot of the method for the detection and downloading of clinical activities should be undertaken.

4.5 Limitations of the Study

1. Although all attempts should be made to minimize the introduction of potentially confounding events in the groups identified in the protocol, some events are scheduled to occur during the length of the evaluation. These events include: (1) the closure of the Janeway Child Health Centre physical plant and the move of all pediatric services to a new physical plant on the Prince Philip Parkway in St. John's, and (2) a program evaluation undertaken by the HCCSJ to monitor changes in pediatric services since the amalgamation of all Health Care Institutions in the St. John's region under the HCCSJ.

2. Monitoring for the detection of downloading and substitution should take place with nursing staff[26] and

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[26]An important consideration when nurse clinicians are hired.

allied health staff. It was not possible in this study because an adequate instrument was not available.

3. The instruments developed by the investigator in this study were not tested extensively for reliability and validity. These characteristics could be determined with the data collected in the final evaluation. Also, depending on this protocol's future use, the protocol could stand further refinements with regard to numbers of variables.

4. When the administrative details of the proposed AFP are outlined the opportunity may exist for more explicit economic modeling of various factors in the evaluation (eg: incentives behaviour and downloading implications).

5. This protocol was designed to be implemented with a specific proposed AFP. However, it is extremely important to note that the evaluation of any AFP should be an ongoing monitoring process.

Chapter V

CONCLUSION

This study had two objectives: (1) To develop the protocol and instrumentation for the evaluation of an alternative funding plan for academic pediatricians in St.John's which can be used to assess the impact of the proposed AFP on: (i) providers, participating faculty in terms of their research, teaching, administrative and clinical care activities, (ii) consumers, parent/guardian satisfaction, (iii) undergraduate medical students' and (iv) post-graduate pediatric residents' satisfaction, and (v) community-based non-academic providers' activities, and(2) to pre-test selected data collection instruments and procedures for the evaluation protocol of the proposed AFP for academic pediatricians in the Department of Pediatrics, Memorial University, and the HCCSJ.

Instruments were selected for the evaluation of the variables concerned and pretesting of these to determine appropriateness, completeness, validity and reliability of the instrumentation was undertaken.

The importance of the evaluation protocol for this proposed AFP lies in determining if (1) the salaried situation is producing results which adhere to the *Canada Health Act*, which requires that any new system provide the

same level of access and quality of care to patients currently available under the fee-for-service system (Victoria Report, 1995), and (2) within this great change the potential for a health infrastructure which promotes greater quality initiatives and health promotion is realized. The ultimate goal of the proposed AFP evaluation protocol is to ensure that it is possible to assess to what degree the aims of the proposed AFP, (creating an effective balance and increase in quality of teaching, clinical care, research and administration duties among academic pediatricians at the Child Health Program, HCCSJ/ Department of Pediatrics and at other Academic Health Science Centres), are realized.

References

Babson, J.H., (1972). *Health Care Delivery: A Multinational Survey*. London: Pilman Medical.

Bloor, K. and Maynard, A., (1992). *Rewarding Excellence? Consultants' Distinction Awards and the Need for Reform*. Discussion Paper 100, Centre for Health Economics Health Economics Consortium. York: University of York.

Bloor, K., Maynard, A. and Street, A., (1992). *How Much is a Doctor Worth?*. Discussion Paper 98, Centre for Health Economics Health Economics Consortium. York: University of York.

Barer, Morris., Kazanjian, Arminée., Pagliccia, Nino., Ruedy, John, and Webber, William A. (1989). A profile of Academic Physicians in British Columbia. *Academic Medicine*, Sept. 1989; 524-532.

Barer, M. and Stoddart, G., (1991). *Toward Integrated Medical Resource Policies for Canada: Background Document*. Centre for Health Economics and Policy Analysis, Hamilton: McMaster University.

Birch, S., (1994). *Paying the Piper and Calling the Tune: Principals and Prospects for Reforming Physician Payment Methods in Canada-Executive Summary*. Hamilton: McMaster University.

Bjorndal, Arild., Arntzen, Eystein and Johansen, Arild (1994). Salaried and Fee-for Service General Practioners: Is There a Difference in Patient Turnover?. *Scandinavian Journal Primary Health Care*, 12; 209-213.

Brown, K., Sheehan, E., Sawyer, M., Raftos, J. and Smyth, V. (1995). Parent Satisfaction with Services in an Emergency Department Located at a Paediatric Teaching Hospital. *Journal of Paediatric Child Health* , 31; 435-439.

Cadman, Edwin C. (1994). The Academic Physician-Investigator: A Crisis Not To Be Ignored. *Ann Intern Med.*, 120; 401-410.

Casalino, Lawrence Peter. (1992) Balancing Incentives How Should Physicians Be Reimbursed?. *JAMA,* 267(3); 403-405.

Contandriopoulos, A. P., Champagne, F. and Pineault, R. (1986) Incentives Through Payment Modalities in the Medical Care Sector: Framework and Empirical Evidence. *Proceedings of the Third Canadian Conference on Health Economics 1986.* J.M. Horne, ed. Winnipeg: University of Manitoba.

Cosby, Jarold L. and Middleton, Mary Jo., (1996). *The Perceptions of Clinical Medical Faculty towards the Alternative Funding Plan.* Queen's University Health Policy Unit. Kingston: Queen's University.

Coyte, Peter C., (1995). Review of Physician Payment and Service Delivery Mechanisms, *Ontario Medical Review,* April, 1995: 23-37.

Cronbach, L.J., (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16; 297-334.*

Cronbach, L.J., (1982). *Designing Evaluations of Educational and Social Programs.* San Francisco: Jossy Bass.

Daniel, Wayne W., (1995). *Biostatistics: A Foundation for Analysis in the Health Sciences Sixth Edition.* New York: John Wiley and Sons, Inc.

Dillman, D. (1978). *Mail and Telephone Surveys: The Total Design Method.* New York: John Wiley and Sons, Inc.

DiMatteo, Robin M., and Hays, Ron. (1980). The Significance of Patients' Perceptions of Physician Conduct. *Journal of Community Health,* 6(1); 18-33.

Etter, Jean-Francois, Perneger, T.V., and Rougemont, André. (1996). Does Sponsorship Matter in Patient Satisfaction Surveys?. *Medical Care,* 34(4); 327-335.

Fitz-Gibbon, Carol Taylor and Morris, Lynn Lyons. (1987) *How to Design a Program Evaluation.* Newbury Park: Sage Publications.

Fulfilling the Mission, The Conference Summary of the National Conference on the Future and Funding of Academic Health Science Centres, Toronto. December 1995.

Glaser, William A. (1970), *Paying the Doctor*. Baltimore: Johns Hopkins Press.

Guilfoyle, F.J. (1988). Salary or Fee-for-Service?. *Manitoba Medicine*, Fall 1988; 108-109.

Haddix, Anne C. et al. (eds.) *Prevention Effectiveness: a guide to decision analysis and economic evaluation*. New York: Oxford University Press, 1996.

Hanson, R., Clifton-Smith, B. and Fasher, B. (1994), Patient Dissatisfaction in a Paediatric Accident and Emergency Department. *Journal of Quality Clinical Practice*, 14; 137-143.

Haslam, Robert and Walker, Neil (1993). Alternative funding plans: Is there a place in academic medicine?, *CMAJ*; 148(7):1141-1177.

Haslam, Robert H.A. (1996). Alternative Funding Plan, Department of Pediatrics, University of Toronto:Is the AFP Still Alive?, *Annals RCPSC*;29(4):219-222.

Hickson, Gerald B. Altemeier, William A. and Perrin, James M (1987). Physician Reimbursement by Salary or Fee-for-Service: Effect on Physician Practice Behavior in a Randomized Prospective Study. *Pediatrics*, 80(3), 344-350.

Hoffmeyer, Ullrich. and McCarthy, Thomas, eds. (1994).*Financing Health Care*. Dordrecht: Kluwer Academic Press: pp.239-241.

Hulka, B.S., Kupper, L.L., Daly, M.B., Cassel, J.C., and Schoen, F., (1975). Correlates of Satisfaction and Dissatisfaction with Medical Care: A Community Perspective. *Medical Care*, 13; 648-658.

Hulka, B.S., Zyzanski, S.J., Cassel, J.C., and Thompson, S.J., (1971). Satisfaction with medical care in a low-income population. *Journal of Chronic Disease*, 24; 661-673.

Hulka, B.S., and Zyzanski, S.J., (1982). Validation of a Patient Satisfaction Scale. *Medical Care*, 20(6); 649.

James, B., (1997) an article on physician response rates to appear in *BMJ*.

Kerlinger, F.N., (1986). *Foundations of Behavioral Research*. New York: Holt, Reinhart and Winston.

Lahaie, U. and Chopyk, Wilmar. (1992). Salaried Physician Programs: The Manitoba Experience. *Leadership in Health Services*, Nov/Dec 1992; 31-35.

Larsen, Daniel L., Attkisson, Clifford C., Hargreaves, William A. and Nguyen, Tuan D. (1979), Assessment of Client/Patient Satisfaction. *Evaluation and Program Planning*, 2; 197-207.

Lewis, Catherine., Scott, Douglas E., Pantell, Robert. H., and Wolf, Matthew H. (1986). Parent Satisfaction With Children's Medical Care, *Medical Care*, 24(3); 209-215.

Likert, R.A., (1932). A Technique for the Measurement of Attitudes. *Archives of Psychology*, (140); 1-55.

Lipsitz, D.J., Nagler, H.J., Giannelli, A., (1993). A Physician Incentive Compensation Program in a Staff Model HMO. *HMO Practice* 7(2):82-87.

Linn, L.S., Yager, J., Cope, D., and Leake, B., (1985). Health Status, Job Satisfaction, Job Stress, and Life Satisfaction Among Academic and Clinical Faculty. *JAMA* 254(19):2775-2782.

Linder-Pelz, Susie and Struening, Elmer L (1985). The Multidimentionality of Patient Staisfaction with a Clinic Visit, *Journal of Community Health;* 10(1), 42-54.

Linn, L.S. (1975), Factors Associated With Patient Evaluation of Health Care. *Medical Care*, 53; 531-547.

Linn, L.S., Yager, Joel., Cope, Dennis., and Leake, Barbara. (1985), Health Status, Job Satisfaction, Job Stress, and Life Satisfaction Among Academic and Clinical Faculty. *JAMA*, 254(19); 2775-2782.

Meterko, M., Kosinski, M., Ross Davies, A., and Ware, J.E., (1994). *Physicain -Specific Patient Satisfaction Profiles: Report of a Pilot Study at Tufts Associated Health Plans*. Boston: The Health Institute, New England Medical Center.

Miller, Delbert C. (1991), *Handbook of Research Design and Social Measurement 5th ed.* Newbury Park: Sage Publications.

Mitchell-DiCenso, Alba. et al. (1996) A New Measure of Parent Satisfaction with Medical Care Provided in the Neonatal Intensive Care Unit. *Journal of Clinical Epidemiology*, 49(3);313-318.

Nelson, E.C., and Larson, C., (1993). Patients' Good and Bad Surprises: How Do They Relate to Overall Patient Satisfaction?. *Quality Review Bulletin*, 19(3): 89-94.

Nelson, E.C., Larson, C., Davies, A.R., Gustafson, D., Ferreira, P.L., and Ware, J.E., (1991). The Patient comment card: a system to gather customer feedback. *Quality Review Bulletin*, 17(9): 278-286.

Nelson, C.W. and Niederberger, J. (1990). Patient Satisfaction Surveys: An Opportunity for Total Quality Improvement. *Hospital & Health Services Administration*, 35(3); 409-427.

Nunnally, J.C., (1967 and 1978). *Psychometric Theory*. New York: McGraw-Hill.

Ossorio, Clifford Robert and Alper, Michael J. (1991) Fee-for-Service Medicine, Preferred Provider Organizations, and Health Maintenance Organizations, in Gitnick, Gary., Rothenberg, Fred. And Weiner, Judy L. (Eds.) (1991). *The Business of Medicine*. New York: Elsevier.

Pineault, R. , Contandriopoulos, A.P. and Fournier, M.A. (1985). Physicians' Acceptance of an Alternative to Fee-for-service Payment: A Possible Source of Change in Quebec Medicine, *International Journal of Health Services*. 15(3):419-430.

Rees Lewis, J. (1994). Patient Views on Quality Care in General Practice: Literature Review. *Social Science and Medicine*, 39(5); 655-670.

Ross, C.K., Steward, C.A. and Sinacore, J.M., (1995). A Comparative Study of Seven Measures of Patient Satisfaction. *Medical Care*, 33(4); 392-406.

Rossi, Peter and Freeman, Howard (1993). *Evaluation: A Systematic Approach 5*, Newbury Park, CA:Sage Publications,pp.333-343.

Sinclair, D., (1996). Alternative Funding: The Comprehensive SEAMO Model, in *Fulfilling the Mission*. Kingston: Queen's Health Policy Unit.

SPSS Inc. SPSS for Windows. Version 7.5. Chicago, IL: SPSS Inc., 1997.

Simonian, Susan J., Tarnowski, Kenneth J., Park, Angela and Bekeny, Paula. (1993). Child, Parent and Physician Perceived Satisfaction with Pediatric Outpatient Visits. *Developmental and Behavioral Pediatrics*, 14(1); 8-12.

Statistics Canada. *Mail Surveys: Improving Response Rates*. Federal Statistical Activities Secretariat. Ottawa, 1978.

Stoddart, Greg and Barer, Morris (1992). Toward Integrated Medical Resource Policies for Canada #1: Background, Process and Perceived Problems, *CMAJ*;146(3); 347-351.

Stoddart, Greg and Barer, Morris (1992). Toward Integrated Medical Resource Policies for Canada #5: The Roles and Funding of Academic Medical Centres, *CMAJ*;146(11):1919-19.

Stoddart, Greg and Barer, Morris (1992). Toward Integrated Medical Resource Policies for Canada #6: Remuneration of Physicians and Global Expenditure Policy, *CMAJ*;147(1); 33-38.

Strasser, S. and Davis, Rose Marie. (1991) *Measuring Patient Satisfaction For Improved Patient Services*. Ann Arbor: Health Administration Press, ACHE, p.148.

Thornhill, Michael C. (1991) Physician Income: Historic and Recent Changes in Payment Sources, Income Levels, and Professional Autonomy, in Gitnick, Gary., Rothenberg, Fred. And Weiner, Judy L. (Eds.) (1991). *The Business of Medicine.* New York: Elsevier.

The Victoria Report: A Discussion Document. The Federal/Provincial/Territorial Advisory Committee on Health Services, July 1995.

Ware, J.E., Snyder, M.K., Wright, W.R., (1976). *Development and validation of scales to measure patient satisfaction with health care services: volume I of a Final Report. Part A: review of the literature, overview of methods, and results regarding construction of scales.* Publication no. PB-288-329. Springfield and Carbondale, Il.: National Technical Information Service (Southern Illinois University).

Ware, J. E. and Berwick, Donald M. (1990). Conclusions and Recommendations. *Medical Care.* 28(9) Supplement; S1-S56.

Ware, John E. (1981). How to Survey Patient Satisfaction, *Drug Inteligence and Clinical Pharmacy.* 15:892-898.

Ware, John E. and Hays, Ron. (1988). Methods For Measuring Patient Satisfaction With Specific Medical Encounters. *Medical Care,* 26(4); 393-402.

Ware, John E. and Snyder, Mary (1975).*Dimensions of Patient Attitudes Regarding Doctors and Medical Care.* Santa Monica: The Rand Corporation.

Ware, John E., Snyder, Mary K., Russell Wright, W., and Davies, Allyson. (1983) Defining and Measuring Patient Satisfaction with Medical Care. *Evaluation and Program Planning,* 6;247-263.

Ware, John. E. and Snyder, Mary (1975). Dimensions of Patient Attitudes Regarding Doctors and Medical Care Services. *Medical Care,* 13(8); 669-682.

Wright, Charles J.(1991), The Fee-for-service System Should be Replaced. *CMAJ,* 144(7); 900-904.

Appendices

Appendix A

Principles For Alternative Funding of the Department of Pediatrics

Memorial University of Newfoundland

Principles For Alternate Funding of the Department of Pediatrics

Role and Mission of the Department of Pediatrics:

1. The Department of Pediatrics, Memorial University of Newfoundland, plays a unique role in research, teaching and clinical care, relating to the health of children in Newfoundland and Labrador.

2. The Department of Pediatrics is committed to excellence in quality medical care for all children in Newfoundland and Labrador.

3. The Department of Pediatrics is committed to the provision of specialized diagnostic and ongoing care for all children in Newfoundland and Labrador.

4. The Department of Pediatrics will continue to provide a collaborative, consultative model of care, delivering a wide variety of specialty expertise to Newfoundland and Labrador physicians, families and children.

5. To achieve goals and aims of an academic clinical department. The members of such a department engage in clinical care, research, teaching, scholarly pursuits, innovations in care and provide administrative duties for the university and Hospital.

6. The Department of Pediatrics, Memorial University of Newfoundland, provides primarily subspecialty care to the children of Newfoundland and Labrador.

General Principles:

7. To fulfil goals and objectives of the Department of Pediatrics, salaries must be competitive to recruit and retain high quality faculty.

8. The income of most academic pediatric subspecialists is considerably less than specialists in other academic areas and private practice. This inequity is not based on the years of training, intensity of work or academic productivity.

Stable Funding:

9. To responsibly govern an academic department of pediatrics, a stable funding base is required.

10. The educational responsibilities of the Department of Pediatrics requires a protected funding base.

Research:

11. Quality care requires committed support and funds for clinical and basic research.

Administration:

12. Administrative activities by university faculty in the hospital or clinical program management must be reimbursed fairly.

Part-Time Faculty:

13. The teaching, administrative and other academic activities of part-time faculty members is recognized as essential to the Department of Pediatrics.

Requirements:

14. To accomplish service and scholarly activities satisfactorily, each full-time faculty member requires secretarial assistance and office space.

15. A system should be in place to ensure adequate clinic space availability.

Maintenance of Competence:

16. Maintenance of competence requires participation in professional development and continuing education. For an academic pediatrician, this principle includes not only support for continuing medical education, but also for sabbatical leave.

17. Since research is a crucial part of the aims and objectives of the Department of Pediatrics, the communication of research results is extremely important and travel expenses must be supported to ensure the presentation of such information at academic meetings.

Mechanics:

18. An alternate funding scheme must allow opting out of the department as a whole with appropriate notice.

19. A fair and mutual system must be developed to address annual salary increases.

20. Funding for currently approved positions and vacancies must be a component of the plan. This will be compatible with the PRAG Report on Human Resource Needs in Pediatrics.

21. There must be a guarantee and commitment which ensures the provision of increased funding when additions of new clinical and research faculty is required.

22. In order to maintain current service and academic commitment to the hospital, funds must be available to replace any cutbacks in resident staff that might occur.

23. There should be a dispute resolution mechanism in place.

24. A formula for remuneration of faculty members will be determined by the Departmental Chairperson in consultation with the faculty. This remuneration may be based upon the following:

    Seniority and rank within the Department of Pediatrics, Faculty of Medicine.
    Administrative duties (academic, department and hospital).
    Teaching commitments.
    Research activities.
    Amount of clinical on-call (including out of hospital work, e.g. travelling clinics).
    Intensity of clinical services provided.

25. There should be a mechanism in place to cover support personnel in medical education, e.g. teaching assistants.

26. Geographic full-time (GFT) faculty members who relinquish full-time appointments, must be eligible to reestablish medical practice in the province of Newfoundland and Labrador.

27. GFT pediatric members should continue to have access to income tax deductions and advantages currently available to them, e.g. automobile, medical education costs, pensions, etc.

28. The funding of clinical and academic working environments, i.e. physical resources, of the GFT faculty should not be through the alternate funding system.

29. Where there is a reduced number of subspecialists for the PRAG requirement resulting in an increased workload for the remaining specialists, a formula should be arrived at to permit utilisation of the unused salary for the remaining subspecialists.

30. There should be an appeal mechanism in place for the resolution of stipendiary disputes.

31. Funding should be available for evaluation of the alternate funding plan.

Appendix B

Provider Questionnaire

The Proposed Alternative Funding Plan: The Physician's Perspective

QUESTIONNAIRE
CONSENT FORM

DIVISION OF COMMUNITY MEDICINE
FACULTY OF MEDICINE
MEMORIAL UNIVERSITY OF NEWFOUNDLAND
ST JOHN'S, NF

TITLE: Physician Perspectives on the Proposed Alternative Funding Plan (AFP)

INVESTIGATOR: Christine Kennedy BA

You have been asked to participate in a research study by completing this questionnaire. This questionnaire is a component of a Masters thesis which will design an evaluation protocol for the proposed AFP (ie: changing from fee-for-service to salary remuneration) and undertake a pilot of the protocol.

Information collected via the questionnaire will be used to form the pretest for an evaluation of the proposed AFP for Academic Pediatricians. It will also provide generalized information on physician work satisfaction.

Questions will be asked about your work experiences at the Janeway.

Participation in this study is entirely voluntary. Participants are not obligated to complete all or any part of the questionnaire. Each questionnaire will be assigned a code number. Your responses are strictly confidential and will be seen only by the Memorial University investigator and research supervisor. The match list for the code numbers will only be seen by the investigator. All completed questionnaires will be kept in a locked cabinet. Information gathered will be summarized for groups of people. No individual answers will be identifiable from those of anyone else.

This questionnaire **does not** replace the need for you to address any concerns you may have with your administrators.

This survey takes approximately 15 minutes to complete. Your time and input are greatly appreciated.

Instructions:

This survey is to be completed by all Academic Medical Faculty in the Department of Pediatrics at the Janeway

While completing the survey if you have any additional comments please feel free to add them in the space provided at the end of the questionnaire.

Please put your name on the questionnaire cover and insert it into an internal mail envelope provided. Please insert your completed anonymous survey into the other internal mail envelope provided and drop in the internal mail box.

If you have any further questions please contact:

Christine Kennedy
Division of Community Medicine
737-3889
ckennedy@ganymede.cs.mun.ca

Adapted from:
1. The Hospital for Sick Children Department of Pediatrics Physician Survey, April 1996. Sandra Leggat (section one).

SECTION ONE:

Please circle ○ the number after each question you feel best reflects what you think about each statement and the **proposed** AFP.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Moderately Agree	Strongly Agree
1	2	3	4	5	6	7

1. The AFP will change the operations of the Department of Pediatrics 1 2 3 4 5 6 7
2. The implementation of the AFP will be a positive move for the Department of Pediatrics 1 2 3 4 5 6 7
3. The AFP will make it easier for the Department of Pediatrics to achieve the goals in clinical care, teaching and research. 1 2 3 4 5 6 7
4. The AFP will have a positive impact on my ability to complete my work 1 2 3 4 5 6 7
5. If I were considering joining this organization today, the AFP would be a positive factor in my decision 1 2 3 4 5 6 7
6. I am more positive about my involvement with this organization since the proposal of the AFP 1 2 3 4 5 6 7
7. I talk up this organization to my friends as a great organization to work for. 1 2 3 4 5 6 7
8. I am proud to tell others that I am part of this organization. 1 2 3 4 5 6 7
9. This organization really inspires the very best in me, in the way of job performance. 1 2 3 4 5 6 7
10. When people in this organization make changes in the way things are done, they always talk first with the people who will be affected. 1 2 3 4 5 6 7
11. I find my values and the organization's values are very similar. 1 2 3 4 5 6 7
12. I am willing to put a great deal of effort beyond that normally expected in order to help this organization be successful. 1 2 3 4 5 6 7
13. I am extremely glad that I chose this organization to work for, over others I was considering at the time I joined. 1 2 3 4 5 6 7
14. I really care about the fate of this organization. 1 2 3 4 5 6 7
15. For me this is the best of all possible organizations for which to work. 1 2 3 4 5 6 7

SECTION TWO: General views of your job and the proposed AFP

(Please circle the appropriate item)

16. How much of your income will be based on the proposed Alternative Funding Plan?

    (a) ALL
    (b) SOME
    (c) NONE

17. As a result of the proposed AFP, how much will your job change?

    (a) VERY SIGNIFICANT CHANGE
    (b) SIGNIFICANT CHANGE
    (c) MODERATE CHANGE
    (d) MARGINAL CHANGE
    (e) REMAIN THE SAME

18. As a result of the proposed AFP, how will your following *professional* activities be affected?

(Please circle the appropriate statement)

	Not Applicable	Significantly Impeded	Impeded	Unchanged	Enhanced	Significantly Enhanced
Education	NA	SI	I	UC	E	SE
Research	NA	SI	I	UC	E	SE
Clinical	NA	SI	I	UC	E	SE
Admin.	NA	SI	I	UC	E	SE

19. As a result of the proposed AFP, in your overall estimate, the amount of time you devote to all your professional activities (education, research, clinical and administrative), will:

(a) DECREASE SIGNIFICANTLY
(b) DECREASE MARGINALLY
(c) REMAIN THE SAME
(d) INCREASE MARGINALLY
(e) INCREASE SIGNIFICANTLY

SECTION THREE: Activities, programs and policies

In the last section, you provided your views on the overall potential impact of the proposed AFP. Within each of the following subsections (education, research, clinical and administrative) there are questions about specific activities, how you would like to be using your time and how different programs and policies will affect your work.

A. EDUCATION

20. *In the past two years, approximately what percentage of your* time has been spent on educational activities?

_____%

21. In the next two years, do you want to spend more or less time on educational activities?

(a) SIGNIFICANTLY MORE TIME
(b) MORE TIME
(c) REMAIN THE SAME
(d) LESS TIME
(e) SIGNIFICANTLY LESS TIME

Education/ Teaching Activities

22. Listed below are educational activities you may be involved with as part of your professional duties. Please circle all the activities you have been involved with in the past two years.

(A) I am not involved in any education activities
(B) Undergraduate Teaching
(C) Graduate Supervision (eg. M.A., PhD.)
(D) Residency Training
(E) Small Group Teaching
(F) Problem Based Learning
(G) Bedside Teaching
(H) Clinical Skills Teaching
(I) Preparing Educational Materials (eg. Lecture notes, case studies, etc.)
(J) Preparing evaluation and feedback sheets for students/residents
(K) Administrative Educational Roles (eg. Curriculum Coordinator)
(L) Continuing Professional Education
(M) Other _____

23. **In the next two years**, which two activities listed in Question 22 do you see yourself becoming more involved with. You may choose an activity you are already involved with, or an activity you have not yet tried. (Please place the appropriate letters of the two items in the space provided)

_____FIRST CHOICE _____SECOND CHOICE

(If you do not want to become more involved in any education activity, please go to Question 29)

Based on the activity that you have identified as your first choice in Question 23, please answer the following questions:

24. Do you believe the effort required to become more involved in this activity would be worthwhile?

(A) NOT AT ALL WORTHWHILE
(B) NOT WORTHWHILE
(C) UNCERTAIN
(D) WORTHWHILE
(E) VERY WORTHWHILE

25. How confident are you in your own personal ability to perform this activity?

(A) NOT AT ALL CONFIDENT
(B) NOT CONFIDENT
(C) UNCERTAIN
(D) CONFIDENT
(E) VERY CONFIDENT

26. If you were more involved in this activity, what type of response do you believe you would receive from the following groups: (Please circle the appropriate item for all three areas)

Faculty of Medicine	Department	Division
(A)VERY NEGATIVE	(A)VERY NEGATIVE	(A)VERY NEGATIVE
(B)NEGATIVE	(B)NEGATIVE	(B)NEGATIVE
(C)NEUTRAL	(C)NEUTRAL	(C)NEUTRAL
(D)POSITIVE	(D)POSITIVE	(D)POSITIVE
(E)VERY POSITIVE	(E)VERY POSITIVE	(E)VERY POSITIVE

27. What degree of opportunity do you believe you have for being more involved in this activity?

(A) NO OPPORTUNITY
(B) SMALL OPPORTUNITY
(C) UNCERTAIN
(D) GOOD OPPORTUNITY
(E) GREAT OPPORTUNITY

28. Do you believe the proposed AFP will increase or decrease your opportunity to become more involved in this activity?

(A) DECREASE SIGNIFICANTLY
(B) DECREASE MARGINALLY
(C) REMAIN THE SAME
(D) INCREASE MARGINALLY
(E) INCREASE SIGNIFICANTLY

29. As a result of the proposed AFP, the amount of time you spend in the next two years on all your educational activities will:

(A) DECREASE SIGNIFICANTLY
(B) DECREASE MARGINALLY
(C) REMAIN THE SAME
(D) INCREASE MARGINALLY
(E) INCREASE SIGNIFICANTLY

Programs and Policies

30. Please circle the items below to indicate which programs and policies have affected a change in your education activities in the past two years (please circle all the items that apply to you)

    (A) New curriculum
    (B) Licensure Changes for Students
    (C) Internal Departmental Changes
    (D) Proposed Alternative Funding Plan
    (E) Proposed physical move for the Janeway
    (F) Other _____

31. Please rank order the 3 programs and policies from Question 30 which have had the most significant impact on your educational duties in the past two years? (place the letter of the items from Question 30 in the appropriate spaces below)

    _____ GREATEST IMPACT
    _____ SECOND GREATEST IMPACT
    _____ THIRD GREATEST IMPACT

B. RESEARCH

32. In the past two years, approximately what percentage of your time has been spent on research activities?

    _____ %

33. In the next two years, do you want to spend more or less time on research activities?

    (A) SIGNIFICANTLY MORE TIME
    (B) MORE TIME
    (C) REMAIN THE SAME
    (D) LESS TIME
    (E) SIGNIFICANTLY LESS TIME

Research Activities

34. Listed below are research activities you may be involved with as a part of your professional duties. Please circle all the activities you have involved with in the past two years.

    (A) I am not involved in any research activities
    (B) Unfunded Research
    (C) Clinical Trials (unfunded)
    (D) Clinical Trials (funded)
    (E) Externally Funded Research (eg. MRC)
    (F) Proposal Writing (Pending Review)
    (G) Proposal Application that is positively reviewed but unfunded
    (H) Supervising Student Research (eg. grad, undergrad, Post grad)
    (I) Publications (peer-review)
    (J) Publications (non peer-review)
    (K) Other _____

35. In the next two years, which two activities listed in Question 34 do you see yourself becoming more involved with. You may choose an activity you are already involved with, or an activity you have not yet tried. (Please place the appropriate letters of the two items in the space provided)

    _____ FIRST CHOICE _____ SECOND CHOICE
    (If you do not want to become more involved in any research activity, please go to Question 41)

Based on the activity that you have identified as your first choice in Question 35, please answer the following questions:

36. Do you believe the effort required to become more involved in this activity would be worthwhile?

    (A) NOT AT ALL WORTHWHILE
    (B) NOT WORTHWHILE
    (C) UNCERTAIN
    (D) WORTHWHILE
    (E) VERY WORTHWHILE

37. How confident are you in your own personal ability to perform this activity?

(A) NOT AT ALL CONFIDENT
(B) NOT CONFIDENT
(C) UNCERTAIN
(D) CONFIDENT
(E) VERY CONFIDENT

38. If you were more involved in this activity, what type of response do you believe you would receive from the following groups. (please circle the appropriate item for all three areas)

Faculty of Medicine	Department	Division
(A) VERY NEGATIVE	(A) VERY NEGATIVE	(A) VERY NEGATIVE
(B) NEGATIVE	(B) NEGATIVE	(B) NEGATIVE
(C) NEUTRAL	(C) NEUTRAL	(C) NEUTRAL
(D) POSITIVE	(D) POSITIVE	(D) POSITIVE
(E) VERY POSITIVE	(E) VERY POSITIVE	(E) VERY POSITIVE

39. What level of opportunity do you believe you have for being more involved in this activity?

(A) NO OPPORTUNITY
(B) SMALL OPPORTUNITY
(C) UNCERTAIN
(D) GOOD OPPORTUNITY
(E) GREAT OPPORTUNITY

40. Do you believe the proposed AFP will increase or decrease your opportunity to become more involved in this activity?

(A) DECREASE SIGNIFICANTLY
(B) DECREASE MARGINALLY
(C) REMAIN THE SAME
(D) INCREASE MARGINALLY
(E) INCREASE SIGNIFICANTLY

41. As a result of the proposed AFP, the amount of time you spend in the next two years on all your research activities will:

(A) DECREASE SIGNIFICANTLY
(B) DECREASE MARGINALLY
(C) REMAIN THE SAME
(D) INCREASE MARGINALLY
(E) INCREASE SIGNIFICANTLY

Programs and Policies

42. Please circle the items below to indicate which programs and policies have affected a change in your research activities in the past two years. (Please circle all of the items that apply to you)

(a) Internal Department Changes (eg. changes in personnel)
(b) External Funding of Research (eg increased competition)
(c) Changes in Administrative Factors
(d) Relationship Between Clinical and Basic Science Faculty
(e) Other _____

43. Please rank order the 3 programs and policies from Question 42 which have had the most significant impact on your research activities in the past two years? (Place the letter of the items from Question 42 in the appropriate spaces below)

____GREATEST IMPACT
____SECOND GREATEST IMPACT
____THIRD GREATEST IMPACT

C. CLINICAL

44. In the past two years, approximately what percentage of your time has been spent on clinical activities?

_____%

45. In the next two years, do you want to spend more or less time on clinical activities?

(a) SIGNIFICANTLY MORE TIME
(b) MORE TIME
(c) REMAIN THE SAME
(d) LESS TIME
(e) SIGNIFICANTLY LESS TIME

Clinical Activities

(if you are not currently involved in any clinical activities please go to Question 52)

46. In the next two years, If you were provided with an opportunity to reduce some of your clinical activities, you would become more involved with:(Please indicate your first and second choice)

First Choice	Second Choice
(a) OTHER CLINICAL ACTIVITIES	(a) OTHER CLINICAL ACTIVITIES
(b) RESEARCH ACTIVITIES	(b) RESEARCH ACTIVITIES
(c) EDUCATION ACTIVITIES	(c) EDUCATION ACTIVITIES
(d) ADMINISTRATION ACTIVITIES	(d) ADMINISTRATION ACTIVITIES
(e) OTHER	(e) OTHER

Based on the activity that you have identified as your first choice in Question 46, please answer the following questions according to your current professional situation:

47. Do you believe the effort required to reduce some of your clinical activities and shift your workload in the direction you indicated would be worthwhile?

(a) NOT AT ALL WORTHWHILE
(b) NOT WORTHWHILE
(c) UNCERTAIN
(d) WORTHWHILE
(e) VERY WORTHWHILE

48. How confident are you in your own personal ability to reduce your clinical activities and shift your workload in the direction you indicated?

(a) NOT AT ALL CONFIDENT
(b) NOT CONFIDENT
(c) UNCERTAIN
(d) CONFIDENT
(e) VERY CONFIDENT

49. If you reduced some of your clinical activities and were more involved in this activity, what type of response do you believe you would receive from the following groups: (Please circle the appropriate item for all three areas)

Faculty of Medicine	Department	Division
(a) VERY NEGATIVE	(a) VERY NEGATIVE	(a) VERY NEGATIVE
(b) NEGATIVE	(b) NEGATIVE	(b) NEGATIVE
(c) NEUTRAL	(c) NEUTRAL	(c) NEUTRAL
(d) POSITIVE	(d) POSITIVE	(d) POSITIVE
(e) VERY POSITIVE	(e) VERY POSITIVE	(e) VERY POSITIVE

50. What level of opportunity do you believe you have for reducing some of your clinical activities and shifting your workload in the direction you indicated?

(a) NO OPPORTUNITY
(b) SMALL OPPORTUNITY
(c) UNCERTAIN
(d) GOOD OPPORTUNITY
(e) GREAT OPPORTUNITY

51. Do you believe the proposed AFP will increase or decrease your opportunity to reduce some of your clinical activities and shift your workload in the direction you indicated?

(a) DECREASE SIGNIFICANTLY
(b) DECREASE MARGINALLY
(c) REMAIN THE SAME
(d) INCREASE MARGINALLY
(e) INCREASE SIGNIFICANTLY

52. As a result of the proposed AFP, the amount of time you spend in the next two years on all your clinical activities will:

(a) DECREASE SIGNIFICANTLY
(b) DECREASE MARGINALLY
(c) REMAIN THE SAME
(d) INCREASE MARGINALLY
(e) INCREASE SIGNIFICANTLY

D. ADMINISTRATIVE

53. In the past two years, approximately what percentage of your been spent on administrative activities?

____%

54. In the next two years, do you want to spend more or less time on administrative duties?

(a) SIGNIFICANTLY MORE TIME
(b) MORE TIME
(c) REMAIN THE SAME
(d) LESS TIME
(e) SIGNIFICANTLY LESS TIME

55. As a result of the proposed AFP, the amount of time you spend in the next two years on all your administrative activities will:

(a) DECREASE SIGNIFICANTLY
(b) DECREASE MARGINALLY
(c) REMAIN THE SAME
(d) INCREASE MARGINALLY
(e) INCREASE SIGNIFICANTLY

SECTION FOUR:

56. Approximately how many hours do you work weekly? _____

57. Please indicate the number of years since your graduation:

(a) 0-9
(b) 10-19
(c) 20-29
(d) 30-39
(e) 40 +

58. How do you describe your workload:

(A) very heavy
(B) heavy
(C) perfect
(D) light
(E) very light

59. Please indicate your gender:

(a) MALE
(b) FEMALE

60. Number of years you have had a professional position at Memorial University:____

61. Primary role is in the Department of_____

62. Primary academic position is:

(a) Professor
(b) Associate Professor
(c) Assistant Professor
(d) Clinical Professor
(e) Clinical Associate Professor
(f) Clinical Assistant Professor
(g) Clinical Lecturer
(h) Unsure
(i) Other_____

63. You are

(a) Full-Time Faculty
(b) Part-Time Faculty
(c) Not Faculty
(d) Unsure

64. Please feel free to provide any comments you wish regarding the proposed AFP. Also any comments you wish to make that you think may help in future efforts to understand the effects of the proposed AFP.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Thank you for your time and effort in completing this survey.
Again if you have any questions please contact:
Christine Kennedy at 737-3889 or ckennedy@ganymede.cs.mun.ca

Appendix C

Consumer Satisfaction Questionnaire

DIVISION OF COMMUNITY MEDICINE
FACULTY OF MEDICINE
MEMORIAL UNIVERSITY OF NEWFOUNDLAND
ST. JOHN'S, NF

Parent/ Guardian Perspectives on Child Care at the Janeway

Christine Kennedy BA

1. This survey takes approximately 15 minutes to complete. Your time and input are greatly appreciated.

2. Questions will be asked about you and your child's **most recent** health care contact with doctors at the Janeway.

3. This questionnaire is a component of a Masters thesis. Information collected from the questionnaire will be used to create a baseline for an evaluation of a proposed new way of paying doctors at the Janeway who are medical staff associated with the Faculty of Medicine. It will also provide generalized information on guardian/patient satisfaction with the care available at the Janeway.

4. Participation in this study is entirely voluntary. Participants are not obliged to complete all or any part of the questionnaire. Each questionnaire will be assigned a code number and will contain no personal identifiers (ie: it will not be possible to be identified by your questionnaire). The results will be presented in group summaries only. Your responses are confidential. All completed questionnaires will be kept in a locked drawer with only the investigator having access to a key.

This questionnaire **does not** replace the need for you to address any concerns you may have with your child's care givers.

Please put an X through or circle O the number after each question you feel best reflects your child's **most recent experience** at the Janeway.

Strongly Disagree	Moderately Disagree	Slightly Disagree	Neither agree nor disagree	Slightly Agree	Moderately Agree	Strongly Agree
1	2	3	4	5	6	7

The doctor listened carefully to what I said.	1 2 3 4 5 6 7
The doctor did not really give me a chance to say what was on my mind.	1 2 3 4 5 6 7
I really felt understood by my child's doctor.	1 2 3 4 5 6 7
The doctor failed to understand my main reason for coming.	1 2 3 4 5 6 7
The doctor gave me a poor explanation of my child's illness.	1 2 3 4 5 6 7
The doctor seemed to have other things on her/ his mind.	1 2 3 4 5 6 7
The doctor talked to my child about what (s)he can do to become more healthy.	1 2 3 4 5 6 7
The doctor seemed to think it was important for my child to understand the visit.	1 2 3 4 5 6 7
The doctor encouraged my child to talk.	1 2 3 4 5 6 7
The doctor listened closely to my child talk.	1 2 3 4 5 6 7
The doctor knows how to talk to children.	1 2 3 4 5 6 7
The doctor used words too difficult for my child to understand.	1 2 3 4 5 6 7

Strongly Disagree 1	Moderately Disagree 2	Slightly Disagree 3	Neither agree nor disagree 4	Slightly Agree 5	Moderately Agree 6	Strongly Agree 7

The doctor explained things very well to my child.	1 2 3 4 5 6 7
The doctor excluded my child from most of the discussion.	1 2 3 4 5 6 7
My child could not understand most of what the doctor said.	1 2 3 4 5 6 7
The doctor seemed to think about my child's problem carefully.	1 2 3 4 5 6 7
After talking with the doctor, I feel I am handling my child's illness well.	1 2 3 4 5 6 7
The doctor seemed to care about my child's feelings.	1 2 3 4 5 6 7
The doctor made me feel I've done a good job of caring for my child.	1 2 3 4 5 6 7
After talking with the doctor, I feel better about my child's illness.	1 2 3 4 5 6 7
The doctor seemed to know just what to do for my child's problem.	1 2 3 4 5 6 7
It may be too difficult for us to do exactly what the doctor told us to do.	1 2 3 4 5 6 7
I intend to follow the doctor's instructions.	1 2 3 4 5 6 7
I expect that it will be easy for me to follow the doctor's advice.	1 2 3 4 5 6 7
It will be too much trouble to follow the doctor's advice.	1 2 3 4 5 6 7

Please put an X through or circle O the number after each question you feel best reflects your child's ease of getting care at the Janeway (**most recent** visit).

For the following questions there are 5 scale options:

Poor 1	Fair 2	Good 3	Very Good 4	Excellent 5

Ease of getting through to the doctor's office by telephone	1 2 3 4 5
Convenience of location of the doctor's office	1 2 3 4 5
Hours when the doctor's office is open	1 2 3 4 5
Length of time you wait between being referred to the doctor and the day of your child's visit	1 2 3 4 5
Length of time spent waiting at the office to see the doctor	1 2 3 4 5
Access to specialty care	1 2 3 4 5
Access to hospital care	1 2 3 4 5
Thoroughness of examinations	1 2 3 4 5
Accuracy of diagnoses	1 2 3 4 5
Skill, experience, and training of the doctor	1 2 3 4 5
Thoroughness of treatment	1 2 3 4 5
How much your child was helped	1 2 3 4 5

In general, would you say your child's health is: (please circle one response)

Excellent Very Good Good Fair Poor

How old was your child on his or her last birthday?

(A) Newborn to 3 months
(B) 4 months to 2 years
(C) 3-4 years
(D) 5-10 years
(E) 11-15 years
(F) 16 or older

Any further comments are very welcome.

Did you have any GOOD SURPRISES when you and your child visited the Janeway?:_____
_____
_____
_____
_____
_____

Did you have any BAD SURPRISES when you and your child visited the Janeway?:_____
_____
_____
_____
_____
_____

Is there anything that could be changed to make your next visit better?_____
_____
_____

Thank you for your time and effort in completing this questionnaire.
The End.

Appendix D

SIR Form

STUDENT INSTRUCTIONAL REPORT

FOR CANADIAN COLLEGES AND UNIVERSITIES

This questionnaire gives you an opportunity to express anonymously your views of this course and the way it has been taught. Indicate the response closest to your view by filling in the appropriate circle. Use a soft lead pencil (No. 2) for all responses to the questionnaire. Do not use a pen (ink, ball-point, or felt-tip).

SIR Report Number

SECTION I. Items 1 - 20. Fill in one response number for each question.

NA (0) = Not Applicable or don't know. The statement does not apply to this course or instructor, or you simply are not able to give a knowledgeable response.
SA (4) = Strongly Agree. You strongly agree with the statement as it applies to this course or instructor.
A (3) = Agree. You agree more than you disagree with the statement as it applies to this course or instructor.
D (2) = Disagree. You disagree more than you agree with the statement as it applies to this course or instructor.
SD (1) = Strongly Disagree. You strongly disagree with the statement as it applies to this course or instructor.

	NA	SA	A	D	SD
1. The instructor's objectives for the course have been made clear	0	4	3	2	1
2. There was considerable agreement between the announced objectives of the course and what was actually taught	0	4	3	2	1
3. The instructor used class time well	0	4	3	2	1
4. The instructor was readily available for consultation with students	0	4	3	2	1
5. The instructor seemed to know when students didn't understand the material	0	4	3	2	1
6. Lectures were too repetitive of what was in the textbook(s)	0	4	3	2	1
7. The instructor encouraged students to think for themselves	0	4	3	2	1
8. The instructor seemed genuinely concerned with students' progress and was actively helpful	0	4	3	2	1
9. The instructor made helpful comments on papers or exams	0	4	3	2	1
10. The instructor raised challenging questions or problems for discussion	0	4	3	2	1
11. In this class I felt free to ask questions or express my opinions	0	4	3	2	1
12. The instructor was well prepared for each class	0	4	3	2	1
13. The instructor told students how they would be evaluated in the course	0	4	3	2	1
14. The instructor summarized or emphasized major points in lectures or discussions	0	4	3	2	1
15. My interest in the subject area has been stimulated by this course	0	4	3	2	1
16. The scope of the course has been too limited: not enough material has been covered	0	4	3	2	1
17. Examinations reflected the important aspects of the course	0	4	3	2	1
18. I have been putting a good deal of effort into this course	0	4	3	2	1
19. The instructor was open to other viewpoints	0	4	3	2	1
20. In my opinion, the instructor has accomplished (is accomplishing) his or her objectives for the course	0	4	3	2	1

SECTION II. Items 21 - 31. Fill in one response number for each question.

21. For my preparation and ability, the level of difficulty of this course was:
    1. Very elementary
    2. Somewhat elementary
    3. About right
    4. Somewhat difficult
    5. Very difficult

22. The work load for this course in relation to other courses of equal credit was:
    1. Much lighter
    2. Lighter
    3. About the same
    4. Heavier
    5. Much heavier

23. For me, the pace at which the instructor covered the material during the term was:
    1. Very slow
    2. Somewhat slow
    3. Just about right
    4. Somewhat fast
    5. Very fast

24. To what extent did the instructor use examples or illustrations to help clarify the material?
    4. Frequently
    3. Occasionally
    2. Seldom
    1. Never

Questionnaire continued on the other side ◆

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25. Was class size satisfactory for the method of conducting the class?

(1) Yes, most of the time
(2) No, class was to large
(3) No, class was to small
(4) It didn't make any difference one way or the other

26. Which one of the following best describes this course for you?

(1) Major requirement or elective within major field
(2) Minor requirement or required elective outside major field
(3) College requirement but not part of my major or minor field
(4) Elective not required in any way
(5) Other

27. Which one of the following was your most important reason for selecting this course?

(1) Friend(s) recommended it
(2) Faculty advisor's recommendation
(3) Teacher's excellent reputation
(4) Thought I could make a good grade
(5) Could use pass/no credit option
(6) It was required
(7) Subject was of interest
(8) Other

28. What grade do you expect to receive in this course?

(1) 75 - 100%
(2) 66 - 74%
(3) 60 - 65%
(4) 50 - 59%
(5) Fail
(6) Pass
(7) No credit
(8) Other

29. What is your approximate cumulative average?

(1) 75 - 100%
(2) 71 - 74%
(3) 66 - 70%
(4) 60 - 65%
(5) 55 - 59%
(6) 50 54%
(7) Less than 50%
(8) None yet-first year or transfer

30. What is your class level?

(1) 1st year
(2) 2nd year
(3) 3rd year
(4) 4th year
(5) Graduate
(6) Other

31. Sex:

(1) Female
(2) Male

SECTION III. Items 32 - 39. Fill in one response number for each question.

	Not applicable, don't know, or there were none	Excellent	Good	Satisfactory	Fair	Poor
32. Overall, I would rate the textbook(s)	0	5	4	3	2	1
33. Overall, I would rate the supplementary readings	0	5	4	3	2	1
34. Overall, I would rate the quality of the exams	0	5	4	3	2	1
35. I would rate the general quality of the lectures	0	5	4	3	2	1
36. I would rate the overall value of class discussions	0	5	4	3	2	1
37. Overall, I would rate the laboratories	0	5	4	3	2	1
38. I would rate the overall value of this course to me as	0	5	4	3	2	1

39. How would you rate the quality of instruction in this course? (Try to set aside your feelings about the course itself.) Fill in one response number.

Excellent	Good	About Average	Fair	Poor
5	4	3	2	1

SECTION IV. Items 40 - 49. If the instructor provided supplementary questions and response options, use this section for responding. Fill in only one response number for each question.

	NA										NA										NA									
40.	0	1	2	3	4	5	6	7	8	9	44.	0	1	2	3	4	5	6	7	8	9	48.	0	1	2	3	4	5	6	7	8	9
41.	0	1	2	3	4	5	6	7	8	9	45.	0	1	2	3	4	5	6	7	8	9	49.	0	1	2	3	4	5	6	7	8	9
42.	0	1	2	3	4	5	6	7	8	9	46.	0	1	2	3	4	5	6	7	8	9											
43.	0	1	2	3	4	5	6	7	8	9	47.	0	1	2	3	4	5	6	7	8	9											

If you would like to make additional comments about the course or instruction, use a separate sheet of paper. You might elaborate on the particular aspects you liked most as well as those you liked least. Also, how can the course or the way it was taught be improved? PLEASE GIVE THESE COMMENTS TO THE INSTRUCTOR.

If you have any comments, suggestions, or complaints about this questionnaire (for example, the content or responses available), please send them to: Student Instructional Report, Educational Testing Service, Princeton, New Jersey 08541.

This form can be processed only on an NCS Transoptic Scanner.

Appendix E

Post-graduate Pediatric Resident Questionnaire

QUESTIONNAIRE
CONSENT FORM

DIVISION OF COMMUNITY MEDICINE
FACULTY OF MEDICINE
MEMORIAL UNIVERSITY OF NEWFOUNDLAND
ST. JOHN'S, NF

TITLE: Pediatric Resident Perspectives on Teaching by Pediatric Faculty

INVESTIGATOR: Christine Kennedy BA

You are being asked to participate in a research study by completing this questionnaire. This questionnaire is a component of a Masters thesis. Information collected via the questionnaire will be part of a baseline for an evaluation of a new funding plan for Janeway Faculty. It will also provide generalized information on student satisfaction with the quality of teaching and supervision by academic pediatricians at the Janeway.

Questions will be asked about your learning experience and your experience with faculty members' teaching and supervision.

Participation in this study is entirely voluntary. You are not obligated to complete all or any part of the questionnaire. Each questionnaire will be assigned a code number and will contain no personal identifiers; it will not be possible for you to be identified by your questionnaire. Your responses are confidential.

This survey takes approximately 10 minutes to complete. Your time and input are greatly appreciated.

Please circle ○ the number after each question you feel best reflects your **recent experience** at the Janeway.

Strongly Disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree
1	2	3	4	5

Clinical training:

the faculty teachers are sometimes inaccessible to me when I have a pressing patient problem	1 2 3 4 5
In the following rotations I have exposure to an adequate **volume** of patients:	
inpatient	1 2 3 4 5
ambulatory	1 2 3 4 5
In the following rotations I have adequate exposure to a **variety** of clinical experiences:	
inpatient	1 2 3 4 5
ambulatory	1 2 3 4 5
I have adequate access to faculty teachers when I have a patient problem that should be discussed immediately	1 2 3 4 5
I feel my clinical responsibilities are appropriate for my level of training	1 2 3 4 5
I do not have adequate supervision by faculty teachers	1 2 3 4 5
I am allowed adequate opportunities to acquire technical skills	1 2 3 4 5

Strongly Disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly Agree 5

I am satisfied with the quality of:

bed-side rounds	1	2	3	4	5
academic half-days	1	2	3	4	5
specialty rounds	1	2	3	4	5
participatory seminars eg: evidence-based medicine	1	2	3	4	5
I am sometimes unable to discuss a patient with the clinical teacher because the teacher is too busy	1	2	3	4	5

Call Schedule:

I am on call too often	1	2	3	4	5
being on call is an educational experience	1	2	3	4	5

Didactic Teaching:

there should be more didactic lectures given by faculty per month	1	2	3	4	5
seminars and lectures are too repetitive of what is readily found in textbooks	1	2	3	4	5
overall, the value of academic half-day discussions is high	1	2	3	4	5
faculty are good role models for teaching	1	2	3	4	5
the service to education ratio is well balanced	1	2	3	4	5

Strongly Disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly Agree 5

I do not have the opportunity to be relieved of clinical responsibilities to attend educational activities	1	2	3	4	5
the number of didactic lectures given by faculty per month are sufficient	1	2	3	4	5

Research Activities:

I feel I am learning research skills which will enable me to undertake original research	1	2	3	4	5
faculty are good role models in their research activities	1	2	3	4	5
the opportunities for undertaking research interests are not sufficient	1	2	3	4	5

Administrative Duties:

I feel I am being adequately prepared for future involvement in administration duties	1	2	3	4	5
faculty are good role models in their administration duties	1	2	3	4	5

Overall:

the training objectives of the program are being met	1	2	3	4	5
I feel I am not being adequately trained	1	2	3	4	5
faculty teachers are open to other viewpoints	1	2	3	4	5

Strongly Disagree 1	Disagree 2	Neither agree nor disagree 3	Agree 4	Strongly Agree 5

the educational objectives of the program are being met	1 2 3 4 5
I feel adequately academically challenged in my current program	1 2 3 4 5
faculty are good role models in the practice of quality care	1 2 3 4 5
the faculty teachers seem genuinely concerned with my progress and are actively helpful	1 2 3 4 5
I do not feel adequately clinically challenged in my current program	1 2 3 4 5
the faculty teachers do not raise challenging questions or problems for discussion	1 2 3 4 5
I receive timely and adequate feedback about my skills from faculty	1 2 3 4 5

I am a: PGY 1 PGY 2 PGY 3 PGY 4

the strengths of the program are: _____

_____

_____

the weaknesses of the program are: _____

_____

_____

Please feel free to add other comments on the reverse.
Please leave the completed questionnaire in the box provided.

Thank you for your time and effort in completing this questionnaire.

Appendix F

Letters of Permission to Use Instruments

New England Medical Center

December 9, 1996

Christine Kennedy
Division of Community Medicine, Faculty of Medicine
The Health Sciences Centre
Memorial University of Newfoundland
St. John's, Newfoundland A1B 3V6
CANADA

Dear Ms. Kennedy:

In response to your recent letter of December 4, 1996, I am happy to grant you permission to use items from the Patient Satisfaction Questionnaire (PSQ Forms 2 & 4) as well as the PRF-23 Survey. I am enclosing an article summarizing its development and testing that also sites other relevant references.

The reliability and validity of the PRF-23 has been studied in a pilot project and the results were summarized in a technical report. Please contact Mark Kosinski at (617) 636-8653 for the results of this pilot project.

Good luck with your study and please let us know if we can be of further assistance.

Sincerely,

John E. Ware, Jr., Ph.D.
Senior Scientist
Director, Healthcare Assessment Laboratory

Research Professor of Psychiatry
Tufts University School of Medicine

Adjunct Professor of Health and Social Behavior
Harvard University School of Public Health

JEW/mir

Enclosure

h:\kennedy

The Health Institute
Division of Health Improvement

Alvin R. Tarlov, M.D.
Director
636-8092

Linda N. Abetz, B.A.
636-8646
Benjamin C. Amick III, Ph.D.
636-8149
Martha S. Bayliss, M.Sc.
636-8648
Chloe E. Bird, Ph.D.
636-8632
Kathleen M. Bungay, Pharm.D.
636-4505
Michelle M. Chapman, Pharm.D.
636-8602
James H. Forsythe, Ph.D. Cand.
636-4592
Barbara Gandek, M.S.
636-8650
Alison A. Geist, M.P.H.
636-4593
Elizabeth Goodman, M.D.
636-8726
Marianne Hedin, Ph.D.
636-8630
San Keller, Ph.D.
636-8656
Mark Kosinski, M.A.
636-8653
Jeanne M. Landgraf, M.A.
636-8647
Kathryn E. Lasch, Ph.D.
636-4589
Jennifer Lee, M.A.
636-8146
Debra J. Lerner, Ph.D.
636-8636
Sol Levine, Ph.D.
636-8091
Sue Malspeis, S.M.
636-8148
Xinhua Steve Ren, Ph.D.
636-8125
William H. Rogers, Ph.D.
636-8613
Robert H. Ross, Ph.D.
636-8634
Jenny Ruducha, Dr. P.H.
636-8633
Jennifer Prah Ruger, M.Sc.
636-8095
Dana Gelb Safran, Sc.D.
636-8611
Edward L. Schor, M.D.
636-8636
Anita Wagner, Pharm. D.
636-8623
John E. Ware, Ph.D.
636-8645

NEMC #345
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The principal teaching hospital for
Tufts University School of Medicin

HOSPITAL MANAGEMENT RESEARCH UNIT

University of Toronto
Dept. of Health Administration
12 Queen's Park Crescent W. Room 201
Toronto Ontario M5S 1A8
Telephone: (416) 978-6455
FAX: (416) 978-6177

December 13, 1996

Christine Kennedy
Div. of Community Medicine
Faculty of Medicine
Memorial University
St. John's, NF A1B 3V6

Dear Christine,

In response to your request, you certainly have my permission to use any or all of the questions from the survey instrument I developed for use at The Hospital for Sick Children in Toronto. You are aware that my survey incorporated some survey questions previously developed by researchers at the Hospital Management Research Unit at the University of Toronto.

Best wishes for your project.

Sincerely,

Sandra Leggat

QHP

QUEEN'S HEALTH POLICY

Queen's University
Kingston, Ontario, Canada
K7L 3N6
Tel 613 545-6387
Fax 613 545-6353

November 8, 1996

Dear Christine Kennedy,

Thank you for your interest in our survey entitled **"The Alternative Funding Plan and the Professional Activities of Medical Faculty"**. I am very pleased to provide any assistance I can to help you use/modify this survey for use with approximately 50 physicians within the Janeway Child Health Centre in 1997.

My only requests are the following:

1. Please attach a sticker, or print on each copy of the survey: **Copyright 1996, Queen's Health Policy Research Unit. For permission to use or reproduce this survey, contact Jarold Cosby @ Queen's Health Policy, Queen's University, Kingston, ON, K7L 3N6.**
2. If any changes or modifications must be made to the survey, please contact me prior to the implementation of the survey.
3. Please contact me and inform me of your results when you are ready to do so publically. I would also like to know when/if /where you decide to publish the results (it sounds like some exciting work you are doing, and I hope a publication is in your plans).

An internal report detailing the analysis I wrote and distributed to all department heads and all those involved with the evaluation is completed. At this time, we are still using this report as an internal working document. However, we hope it will be made public very soon.

Value judgements of an AFP are limited by how decision-makers define success/failure, so decision-makers should be included in the survey process before the survey is implemented so there is some understanding as to what certain findings may indicate. The survey is unable to indicate if there are implementation problems, rather than outcome problems, that may result in low ratings on the scales, so additional work must be done to determine 'why something is not working'.

The survey was designed using the Dillman method (D. A. Dillman, 1978, The Total Design Method, John Wiley & Sons), so maintaining a booklet format is very important to get a good response rate. As well, we had department heads include a letter of endorsement for the survey to all their members. You may want to begin a similar support process if at all possible.

I hope this has been helpful, and I wish you the best of luck.

Sincerely,

Jarold L. Cosby

Appendix G

Physician Presentation

Development of an Evaluation Protocol for an Alternative Funding Plan for Academic Pediatricians

Masters thesis project of
Christine Kennedy

Supervised by
Dr. Wayne Andrews and
Dr. Doreen Neville

AFP Rationale

Concerns have been expressed about the limitations of the current fee-for-service system. These include:
1. disproportionate recognition of procedures
2. undervaluation of counseling services
3. limited time to pursue other academic interests

Janeway Pilot Project

The pilot AFP proposed for Newfoundland academic physicians will entail a reorganization of the payment plan to a salary method of remuneration from a fee-for-service mechanism.

Goal

The ultimate goal of the AFP, as recognized by the Department of Pediatrics, is to ensure

an effective balance and increase in quality

of teaching, clinical care, research and administration duties among academic pediatricians at the Janeway.

AFP's Working Elsewhere:

Vanderbilt University (Pediatrics)
Oslo, Norway (General Practitioner)
University of Toronto (1990) Hospital for Sick Children
Queen's University (1994) SEAMO
Others: Dalhousie, Ottawa Civic, Hotel Dieu (U of Montreal)

My Thesis

1. This evaluation protocol will form a component of the development and implementation process for the proposed AFP

Objectives of my thesis

1. To develop the protocol and instrumentation for the evaluation of an alternative funding plan for academic pediatricians in Newfoundland.

2. To pre-test selected data collection instruments and procedures for the evaluation protocol.

The protocol should be able to measure the impact of the proposed AFP on the following:

- providers, (participating faculty) in research, teaching, administrative and clinical care activities
- consumer (parent/guardian) satisfaction
- medical student/resident satisfaction
- community-based non-academic provider satisfaction

Appendix H

Letter from Human Investigations Committee

Memorial
University of Newfoundland

Office of Research and Graduate Studies (Medicine)
Faculty of Medicine
The Health Sciences Centre

March 14, 1997

Reference #97.28

Ms. Christine Kennedy
c/o Community Medicine

Dear Ms. Kennedy:

This will acknowledge receipt of your correspondence dated February 21, 1997, wherein you clarify issues for the research application entitled **"Development of an Evaluation Protocol for Alternative Funding Programs of Academic Physicians".**

At a meeting held on March 13, 1997, the Human Investigation Committee granted full approval of your application

We take this opportunity to wish you every success with your research study.

Sincerely yours,

H. B. Younghusband, PhD
Chairman
Human Investigation Committee

HBY/jc

cc Dr. K.M.W. Keough, Vice-President, (Research)
Dr. E. Parsons, Vice-President, Medical Services, HCC

St. John's, NF, Canada A1B 3V6 • Tel.: (709) 737-6762 • Fax: (709) 737-5033 • email: rgs@morgan.ucs.mun.ca

Memorial
University of Newfoundland

Office of Research and Graduate Studies (Medicine)
Faculty of Medicine
The Health Sciences Centre

14 March 1997

TO: Ms. Christine Kennedy

FROM: Dr. Verna M. Skanes, Assistant Dean
Research & Graduate Studies (Medicine)

SUBJECT: Application to the Human Investigation Committee - #97.28

The Human Investigation Committee of the Faculty of Medicine has reviewed your proposal for the study entitled **"Development of an Evaluation Protocol for Alternative Funding Programs of Academic Physicians".**

Full approval has been granted for one year, from point of view of ethics as defined in the terms of reference of this Faculty Committee.

For a hospital-based study, it is **your responsibility to seek necessary approval from the Health Care Corporation of St. John's.**

Notwithstanding the approval of the HIC, the primary responsibility for the ethical conduct of the investigation remains with you.

Verna M. Skanes, Ph.D.
Assistant Dean

cc Dr. K.M.W. Keough, Vice-President (Research)
Dr. E. Parsons, Vice-President, Medical Services, HCC

St. John's, NF, Canada A1B 3V6 • Tel.: (709) 737-6762 • Fax: (709) 737-5033 • email: rgs@morgan.ucs.mun.ca

HealthCare
Corporation of St. John's

1997 04 17

TO: **Ms. C. Kennedy/Dr. D. Neville**

FROM: **Eric R. Parsons, MD,CCFP,**

SUBJECT: **Research Proposal**

Your research proposal **HIC # 97.28 - "Development of an Evaluation Protocol for Alternative Funding Programs of Academic Physicians"** has been considered by the Research Proposal Approval Committee (RPAC) of the Health Care Corporation of St. John's at their most recent meeting.

The committee has approved your proposal to be conducted at the General/Cancer Treatment Clinic Site within the Health Care Corporation of St. John's. This approval is contingent on the appropriate funding being provided and continued throughout the project and on the provision of regular progress reports at least annually to the RPAC Committee.

ERIC R. PARSONS, MD,CCFP,
Vice-President, Medical Services

ERP/sh
c.c. Linda Purchase, Research Centre

Memorial
University of Newfoundland

Division of Community Medicine
Faculty of Medicine
The Health Sciences Centre

January 22, 1997

Dr. Alan Goodridge
Dean of Undergraduate Medical Studies
Faculty of Medicine
Memorial University

Dear Dr. Goodridge,

As part of a masters thesis in Community Medicine I am currently developing the evaluation protocol for the proposed Alternative Funding Plan for the academic pediatricians at the Janeway Child Health Care Centre. This evaluation will look at four potential areas of impact on the duties of academic pediatricians:1/ education/ teaching, 2/ clinical care, 3/ administration and, 4/ research.

In order to assess the impact of the proposed plan on teaching duties I will measure undergraduate medical student satisfaction with teaching and courses offered and taught by academic pediatricians at the Janeway. I believe these would include Growth and Development and Clinical Skills. I would like to administer the SIR questionnaire enclosed as "Student Perspectives on Teaching by Pediatric Faculty" to a pre-test sample of undergraduate students. The results from the SIR forms will be made available to you, as there is no specific course instructor involved. The policy of Memorial University is to only make the results of the SIR forms available to the instructors, however, in this case I would like to request your permission to review the results obtained as potential data affecting the development of the AFP evaluation protocol. The results will have no personal instructor identifiers as the courses of interest are collectively taught courses, therefore the confidentiality of the academic pediatricians involved will not be compromised.

Should you have any further questions please contact me at : 737-3889.

Kindest regards,

Christine Kennedy

Christine Kennedy
Graduate Student
Division of Community Medicine
Memorial University of NF
737-3889

W. Goodridge

St. John's, Newfoundland, Canada A1B 3V6 • Tel.: (709) 737-6693/6652 • Fax: (709) 737-7382 • Telex: 016-4101

HealthCare
Corporation of St. John's

January 16, 1997

Ms. Christine Kennedy
Division of Community Medicine
Faculty of Medicine
Memorial University of Newfoundland
St. John's, NF
A1B 3V6

Dear Ms. Kennedy:

As per your request, when your project has received HIC approval, you may have access to the following information:

- number of admissions
- length of stay
- waiting times from referrals
- number and type of services provided to patients by academic pediatricians.

We wish you every success with this project and would appreciate receiving a copy of your observations and project findings when the project is completed.

Yours sincerely,

Marilyn Pardy
Director - Child Health Program

Sorry for the delay!
HLe

Janeway Child Health Centre/Children's Rehabilitation Centre
Janeway Place, St. John's, Newfoundland, Canada A1A 1R8 Tel. (709)778-4222 Fax (709)778-4333

Appendix I

Information Systems "Report Request" Form

Information Systems

Software Acquisition/Development Form

Is this request for a) software purchase or b) software development?
(Please circle appropriate response).

Please list the identified needs this software will address.

_____
_____
_____
_____

Please provide a brief summary of how those needs are currently addressed.

_____
_____
_____

Are the benefits of this software acquisition/development
1. Tangible - Reducing operating cost?
2. Intangible - Improved decision making, information accuracy, information value?
3. Borderline - Certain intangible benefits have tangible value?
(Please circle most appropriate response).

Software Purchase:
Title:_____
Supplier:_____
Price:_____

Software Development:
Time frame for development:_____
Could this software be utilized by other Programs/Departments? a) Yes b) No c) Uncertain. (Please circle most appropriate response).

If software is developed, do your Program/Department already have the necessary PC(s) to utilize the software? a) Yes b) No c) Uncertain.
(Please circle most appropriate response).

Date of Request: _____

Program/Department:_____

Site:_____

Program/Department Director:_____

Corporate Team: _____
(Signature necessary only if member of Corporate Team making request).

Please print, complete and forward form to Manager, Applications Development and Support, Information Systems HCCSJ.

Appendix J

Faculty Database Fields

Faculty Database Fields

Faculty of Medicine
Memorial University of Newfoundland
Dean's Office

Administration Appointments
Administration Department
Cross and Joint Appointments
Degrees and Awards
Rank
Tenure
Discipline/Division
Personal
Financial (MUN salary, MPA Salary, HCCSJ Salary, Stipends)
Hospital Affiliation
Leaves
Promotions
Research
Students Supervised
Teaching load

Appendix K

Benchmark MCP Billing Codes for Community Providers

BENCH-MARK CODES FOR ALTERNATE FUNDING EVALUATION

005	Food poisoning (bacterial)
008	Intestinal Infections due to other organisms
009	Ill defined intestinal infections
033	Whooping cough
034	Streptococcal sore throat & scarletina
041	Bacterial infections in conditions classified elsewhere and of unspecified site
052	Chicken pox
072	Mumps
079	Viral infections in conditions classified elsewhere & of unspecified site
269	Other nutritional deficiencies
280	Iron deficiency anaemias
346	Migraine
372	Disorders of the conjunctiva
373	Inflammation of the eyelids
379	Other disorders of the eye
380	Disorders of the external ear
381	Nonsuppurative otitis media and eustachian tube disorders
382	Suppurative & unspecified otitis media
460	Acute nasopharyngitis (common cold)
461	Acute sinusitis
462	Acute pharyngitis
463	Acute tonsillitis
464	Acute Laryngitis
465	Acute upper respiratory infections of multiple or unspecified sites
466	Acute bronchitis and bronchiolitis
473	Chronic sinusitis
474	Chronic disease of tonsils and adenoids
477	Allergic rhinitis
480	Viral pneumonia
482	Other bacterial pneumonia
487	Influenza
490	Bronchitis, not specified as acute or chronic
493	Asthma
537	Other disorders of stomach and duodenum
564	Functional digestive disorders not elsewhere classified
590	Infections of kidney
595	Cystitis
680	Carbuncle and furuncle
681	Cellulitis and abscess of finger and toe
684	Impetigo
691	Atopic dermatitis
692	Contact dermatitis and other eczema
695	Erythematous conditions
708	Urticaria
780	No illness diagnosed
789	Other symptoms involving abdomen and pelvis

Appendix L

Provider Qualitative Comments

Table L.1: Provider Qualitative Item Responses Summary by Category and Percentage of Total Comments

Category	Comments
1/AFP (61%)	"I lack information about the AFP" "I have my reservations" "I don't have details of what exactly AFP means. Sorry."
	"Essential for survival" "Stabilize and sustain department""AFP is a necessity to maintain existing clinical service" "helps retention"
(Respon-sability?)	"Will we, as part-time faculty, end up doing more clinical work to make up for full-time faculty?"
	"How will you decide each person's salary? Should be a minimum set for clinical work of each person"
	"Division of responsibilities (clinical, teaching, admin)?
	""the AFP is being seen by PT faculty as a way for FT to make a living with less effort" "I would like the AFP if I can have some economic guarantees with a little less clinical burden."
2/Survey (22%)	"We should have all the baseline information before jumping in"
	"Questions on "next 2 years stuff" difficult to answer given few details re $ are available and some questions difficult for fee-for-service individuals to answer"
	"It would have been more useful to fill this questionnaire 1-2 yrs after the implementation of AFP"
3/Other (17%)	"I'm already AFP!"
	"Primary issue is fair employment terms: job security and not excessive out-of-hours work"

Appendix M

Resident Qualitative Comments

Table M.1: Resident Qualitative Item Results

Program	Comments
Strengths	"a number of excellent role models with regards to holistic approach to the patient" "caring staff people"
	"excellent access and communication with sub specialty" "small program"
	"Good interpersonal relations, some high quality teachers""academic ½days" "very helpful and encouraging"
	"Dr.X and Dr.Y's teaching sessions"
	"Faculty approachable and accessible"
Weaknesses	"lack of research" "not enough research opportunity/ encouragement"
	"too much inpt. Related rotations" "not enough direct observation and feedback of clinical performance from staff persons"
	"Many staff are apathetic with respect to clinical teaching responsibilities" "lack of research activity by staff" "not enough outpatient exposure" "too much ICU service" "Career planning and counseling needed"
	"In critical situation areas lack of supervision" "occasional lack of support and backup when expertise is needed"
	"Some staff very good others think you're there for service only" "NO research"

Appendix N

Non-academic Community-based Providers Interview

Non-Academic Community-Based Provider Interview Question

How do you feel your practice will be impacted upon by the introduction of the proposed Alternative Funding Plan for academic pediatricians in the Child Health Program, HCCSJ, and the Department of Pediatrics, Memorial University of Newfoundland?

[This was an open-ended, qualitative question.]

Appendix O

Survey Protocol

Mail-out Survey Protocol:

Epoch 1 Project Begins

Totals requested for identified quarter
- number of patients in each sub group
  - epoch sample size calculated

Data report printed for identified quarter
- address and mother's name

Questionnaires prepared
- sponsoring agent identified appropriately on consent

1st Mailing

Mail post-card reminder (after 1 week)

2nd Mailing to non-respondents (3 weeks after 1st mailing)

Close field; end of surveying period (6-7 weeks after 1st mailing)

Questionnaire data is to be entered as it comes in
*note date received to allow for further analysis

Data is analyzed and stored for comparative analysis with other epoch data

Appendix P

Out of Town Clinic Numbers

Table P.1: Out of Town Pediatric Clinics per year

Department or Physician	Patients [a]	Place	Frequency /yr
Child Development Program	500	Various	22
Dr. A R Cooper	504	Carbonear	24
Dr. C. Hobeika	120	Labrador City	4
Genetics Group	not available	Grand Falls Gander Corner Brook	22
Cystic Fibrosis Group	26	Various	2

[a] Includes both new and recheck patients.

Table 4.3: Outpatient Clinic Sizes Jan-Mar 1997

Outpatient Clinics	New Patient Totals	Rechecks
Asthma	12	26
Cardiology	115	148
Cystic Fibrosis	0	28
Clinical Medicine	316	410
Diabetes	2	115
Endocrinology	121	90
Immunology	141	36
Neurology	130	262
Palate[a]	3	19
Total[b]	840	1134

[a] Child Development also sees approximately 75 new patients per quarter.

[b] Several pediatricians also see private patients which are not captured by the overall clinic data.

Appendix Q

New Undergraduate Medical Student Questionnaire

Undergraduate Perceptions of Faculty Teaching

NA= Not Applicable
SA= Strongly Agree
A= Agree
D= Disagree
SD= Strongly Disagree

Instructions:

Please check (✓) **one response** for each question. Please answer these questions based on **the most current instructor**.

	NA	SA	A	D	SD
Lecture Preparation and Organization:					
1. The instructor's announced objectives of the classes agreed with what her/him actually taught	☐	☐	☐	☐	☐
2. The instructor used class time well	☐	☐	☐	☐	☐
3. The instructor summarized or emphasized major points in lectures or discussions	☐	☐	☐	☐	☐
4. Due to the lectures given by the instructor my interest in the subject has been stimulated	☐	☐	☐	☐	☐
5. The instructor raised challenging questions or problems for discussion	☐	☐	☐	☐	☐
6. This instructor's lectures facilitated learning of the material	☐	☐	☐	☐	☐
Accessibility:					
7. The instructor advertised and kept office hours or was readily available (before or after class) for consultation with students	☐	☐	☐	☐	☐
8. The instructor was approachable	☐	☐	☐	☐	☐
Learning:					
9. The instructor seemed to know when students didn't understand the material	☐	☐	☐	☐	☐
10. The instructor gave lectures that included useful information other than that which was in the assigned readings	☐	☐	☐	☐	☐
11. The instructor encouraged students to think for themselves	☐	☐	☐	☐	☐
12. The instructor seemed genuinely concerned with students' progress and was actively helpful	☐	☐	☐	☐	☐
13. The instructor made helpful comments on assignments or in tutorials	☐	☐	☐	☐	☐
Tutorial Facilitation:					
14. On average the instructor facilitated tutorials which corresponded to the topics actually taught in the sections	☐	☐	☐	☐	☐
15. The instructor raised challenging questions or problems for discussion in tutorial	☐	☐	☐	☐	☐
16. The instructor was open to other viewpoints	☐	☐	☐	☐	☐
17. The instructor led tutorial discussions which were of high quality	☐	☐	☐	☐	☐
18. The instructor's tutorials facilitated learning of the material	☐	☐	☐	☐	☐
Overall:	Poor	Fair	Good	Very Good	Excellent
19. The instructor's overall teaching effectiveness was	☐	☐	☐	☐	☐
20. The instructor's enthusiasm for teaching was	☐	☐	☐	☐	☐

What, if any, were the **strengths** of **this instructor**?_____

What, if any, were the **weaknesses** of **this instructor**?_____

Thank you for your time and effort in completing this questionnaire.

Appendix R

Statistical Analysis
Categories for Indicators

Table R.1: Variable Type and Method of Statistical Analysis

Group	Domain	Indicator	Variable Type	Statistical Analysis
1. Providers	A. Clinical Care	a. work satisfaction and workload	Ordinal	Non-parametric
		b. number and type of services provided	Discrete and Nominal	Chi-squared
		c. length of stay	Continuous	Analysis of Variance
		d. waiting times (referral to consultation)	Continuous	Analysis of Variance
		e. emergency room visits	Discrete	Chi-squared
		f. number of admissions	Discrete	Chi-squared
	B. Administration	a. overall budget	Continuous	Analysis of Variance
		b. provider income	Continuous	Analysis of Variance

Group	Domain	Indicator	Variable Type	Statistical Analysis
Providers con't.	Admin. Con't	c. physician turnover and recruitment	Discrete	Chi-squared
		d. degree of continuing education	Discrete	Chi-squared
		e. number and depth of innovations (eg: traveling clinics)	Discrete	Chi-squared
		f. activity in professional orgs. and public or community service	Discrete	Chi-squared
	C. Research	a. number of academic publications (peer and non peer review)	Discrete	Chi-squared
		b. number of citations from published materials	Discrete	Chi-squared

Group	Domain	Indicator	Variable Type	Statistical Analysis
Providers con't.	Research con't.	c. Proposals written (all positively reviewed, funded or unfunded)	Discrete	Chi-squared
		d. Externally funded research projects	Discrete	Chi-squared
		e. number of clinical trials (funded and unfunded)	Discrete	Chi-squared
		f. Gross Research Funding	Continuous	Analysis of Variance
		g. academic awards	Nominal	Descriptives (frequencies, modes)
	D. teaching	see cell (3Aa)		
2. Consumers	A. Quality of Care	a. Satisfaction with Care	Ordinal	Non-parametric Analysis
3. Under-graduate Medical Students	A. Satisfaction with Teaching	a. student course evaluation	Ordinal	Non-parametric Analysis

Group	Domain	Indicator	Variable Type	Statistical Analysis
undergrad. *Con't.*	teaching *satisfaction* con't.	b. number of *student* research projects and papers written	Discrete	Chi-squared
4. Post-graduate Medical Students	A. satisfaction with teaching and supervision	a. program evaluation	Ordinal	Non-parametric Analysis
		b. supervisory positions of faculty	Discrete	Chi-squared
5. Community Based Non-academic providers	A. Clinical services	a. MCP billing practice changes (pediatric population only)	Discrete	Chi-squared