THE DEMISE OF THE SASKATCHEWAN DENTAL PLAN

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The expulsion of the Saskatchewan Dental Plan is an extremely challenging and involving subject. In the following pages, I have attempted to summarize an immense amount of material while including only information relevant to an evaluation of the program. The paper begins by analyzing the determinant issues which reflected the requirement of a dental program for the youth of Saskatchewan. The next stage of the paper leads toward the program description which reveals the sought objectives of the program, followed by a description of the beneficiaries, and finally a look at some of the key features and components of the program. After acquainting the reader with the topic, the paper then moves directly to the evaluations that have taken place on the program on the basis of cost-effectiveness, quality of care, program accessibility, prevention orientation, and finally patient and public acceptance. This investigation of evaluations guides us toward the controversial decision of the government to eliminate the program in favour of privatization. In this final section, critical comparisons will be made between the former and new programs in attempt to reveal the quality of the government's decision, given the limited details of the new program.

In the late 1960's and early 1970's, the dental health of Saskatchewan children was observed to be very poor. A preliminary dental survey of school children in Regina and Saskatoon was conducted by the Dental Health Division of the Saskatchewan Department of Public Health in 1968, revealing the inadequacy of dental care. Initial research conducted by the Canadian Dental Association had disclosed that approximately one-half hour of dental care annually, was received by those persons 18 years of age and under in the province of Saskatchewan.

A research pilot project was conducted in Oxbow, Saskatchewan, in 1971 under assistance from the federal government. The pilot project utilized two British-trained dental nurses who worked in a team consisting of a dentist, two dental nurses, and two dental assistants. The project revealed that every child required an average of three hours of dental care upon his/her initial acceptance into the program.[1]

Dental manpower was seen as a key factor contributing to the problem of high demand for dental services. The number of practicing dentists in Saskatchewan was perceived as insufficient to provide widespread dental care. An immense magnitude of people did not have immediate access to dental services because of the very narrow distribution of practicing dentists in Saskatchewan. In November of 1972, it was estimated that the approximate number of practicing dentists was 185. Be associating the number of practicing dentists to the total population of approximately 925,000 in 1972, the Research and Planning Branch of the Department of Public Health for Saskatchewan came up with a ratio of approximately 1:5000, which was second worst in Canada. In addition, approximately one-half of the dentists were practicing in Saskatchewan's two major centres, Regina and Saskatoon. The principle problem reflected in this distribution was that these two centres only accounted for approximately 30 percent of Saskatchewan's population.[2] This problem was not to be easily rectified as emigration of dentists to Saskatchewan, the point of Canada with the lowest retention index, would be very difficult to obtain.[3] In the time span of 1957 to 1970, Saskatchewan had a net gain of only four licensed dentists. Therefore, in 1970, there appeared to be little hope of increasing the number of dentists by their estimated need of approximately 50 percent.[4]

Economic factors also appeared to play a major role in influencing the government decision to take corrective action in the dental health of Saskatchewan children. The reason for government intervention in providing Saskatchewan children with a healthy dentition was that a large proportion of families would find the financial burden of obtaining adequate dental care for their children to be enormously large, and therefore unattainable in a privately financed venture.

The idea of water fluoridation was introduced at this time, and although evidence revealed it to successfully reduce dental disease by 50 to 60 percent, the fact that roughly 35 percent of Saskatchewan's population would have access to fluoridated water sources suggested that other remedial actions were required to treat the problem of dental disease.[5]

The government of Saskatchewan, in view of the problem at hand, designed a project proposal in attempt to alleviate the issue. The first objective of the Saskatchewan government in developing a publicly provided dental plan was to improve the dental health of people in Saskatchewan by providing a program for the prevention and treatment of dental disease among children from ages 3 to 12 inclusive. It was felt that if an appropriate level of dental health could be achieved early in life, it could be maintained much easier later in one's life.

The second objective of the Saskatchewan government was to maximize the benefits achieved from the program by encouraging high utilization of services by making them as accessible as possible. By attaining a high utilization rate, the government felt they could reduce dental disease through increased prevention, as well as reducing the costs of future dental

treatment. The government of Saskatchewan were also confident they could maximize the benefits of the program by making the best possible use of the various kinds of dental manpower, conformable with each kind's apparent level of competence. A third way to maximize the program benefits was through the promotion of public awareness towards preventative measures to maintain good dental health both at the individual and community levels. In addition, the promotion was to include the values of fluoridated public water supplies to dental health.[6]

The beneficiaries of this dental program were proposed to be children of the province of Saskatchewan from ages 3 to 12, with exception of native children who resided on a reserve. The program recommended the extension to the age of 18 and the inclusion of native children after receiving consent from the native representatives. In attempt to reach the native population, the provincial government suggested negotiations with the federal government to obtain complete compensation for the provincial services provided to native occupants of reserves.

Based on the Oxbow Pilot Project, it was assumed there would be utilization rates of 90 percent for pre-school children (ages 6 to 12). The initial proposal of the program required it to be complete in its coverage, thus including clinics in special education schools, group homes, institutions, etc., in order to conform to children in specific situations.

The program did not require the child to meet any specific qualifications besides age. To be included, children meeting age requirements were only required to submit a parental consent form. Programs such as the one in New Zealand contained a continuity clause which simply meant that if continuity of visits was

discontinued at any time, the child's dental health would have to be restored at the expense of the parents in order to recover eligible standing in the program. The initiators of the Saskatchewan program had recognized a great difficulty and expense involved in dispensing rigid eligibility rules in the dental program. Thus, they found it to be relatively unjustified to impose restrictions until actual confirmation of the system's abuse was evident.[7] The number of children expected to use the program in any year was estimated at approximately 140,000.[8]

The features of the program consisted of three main integral parts: positive preventive services; basic restorative services; and dental health education. A great percentage of the basic services would be provided by a dental team consisting of a dental nurse and a certified dental assistant. Those services beyond the capabilities of the team were to be referred to practicing dentists: of the patient's choice; employed by the government program on a salary or contract basis; or to a dentist who provided services to public institutions.[9]

The dental health education element is an interesting excerpt worthy of further attention. School teachers were viewed as the main resource for health education and the clinical teams could provide them with considerable information about dental health education. Rather than specify each team member's education role in the community, it was proposed that sufficient time and manpower be generally allotted for this prominent function.

There are several components that worked together in the composition of the program. One such component was the provision of regional dental consultants for functional and technical supervision of the dental nurse and certified dental assistant

teams. There were to be 12 regional dental consultants distributed between 10 regions (1 in each of 8 regions and 2 in both Regina and Saskatoon). There was also proposed to be approximately 107 dental nurse - certified dental assistant teams to provide services through the community-based dental clinics.[10] The proposal accentuated the efficient utilization of distinctive talents and skills that had been developed and tested throughout the extensive duration of their training. Specific quality controls were suggested including the following: intermittent audits by the Dental Technical Review Board; functional supervision of performance by the regional dental consultant; an evaluation of the effectiveness of the program using a data processing system; and initial screening of each child by the regional dental consultants as well as checkups, conducted by the consultants at least every five years.

It is of relevance to role that the dental plan, in its opening stages, was seen as being experimental in nature because it was the beginning of any such program in North America. On the other hand, it must be stressed that none of the services administered in the program's operation were considered experimental. Thus was the case and was verified by the fact that all of the preventive and treatment procedures included in the plan were well-proven, confirmed procedures, that were known to be effective.

The program's experimental nature in its functioning called for imagination and daring even to undertake a scheme of this magnitude, as well as calling for care and caution in prompt problem identification and immediate performance toward correcting them. Thus, careful and continuous monitoring and evaluation were

required along with a high degree of flexibility integrated into the system to allow for alterations as the problems occurred. The flexibility requirement was also reflected by the fact that data from the Oxbow experiment was used extensively in estimating the number of clinics, personnel; work potential, etc.. Although this was the only baseline data available, it was recognized that there were possible mistakes to be made in the data's utilization.[12] It was also proposed that the program offered a flexible system for continuous education for the dental teams in that they would be learning from experience and because there would be consistent changes in the system from the initial adoption of the project, onward into the future.

There were considered to be two phases in initiating the dental program to be deliberated later in the evaluation. The first phase which was the initial implementation (phase-in) period conveyed a different type of problem as opposed to the second phase which was the maintenance period. In the phase-in period, there were relatively few teams of personnel who were relatively inexperienced. This problem, along with the fact that clinical problems were much more intricate and severe as well as the fact that the problems were numerically larger, had to be considered in relation to the maintenance phase. In the second phase, the functioning would become more routine as the "learning curve" would take effect and problems would be much easier to control. The implications of these two phases showed that as the experience factor had grown, it was possible for procedures of the first stage to be altered (ie. tight supervision could be loosened a great deal).

In budgeting for the program, it was proposed that annual appropriation would be the most suitable, once the program was fully implemented. However, during the phase-in period when increasing monetary resources required allocation on a year by year basis in accordance with the scheduling of a very complicated sequence of events, the annual appropriation method was not seen as appropriate. This simply means that the phase-in program may have lost out to equally attractive programs with higher priority. It was for this reason that the proposal was made for a multi-year appropriation or trust fund arrangement, for the implementation period which would cover approximately 4 or 5 years.

In consideration of the facilities and equipment to be provided for the program, there were four alternatives considered: permanent clinics (where staff would be available full time); temporary clinics using portable equipment (where service would be periodic); organized transportation of school children to clinics; and mobile clinics, designed with 2 chairs costing $24,000.[13] Of the four alternatives, the model proposed was a design including the best features of the four alternatives; The proposed delivery system's main characteristics were:

a) Flexibility of resource allocation and method of service (ie. there are no formal boundaries, but rather, a series of delivery areas which can be altered readily for population changes, school construction or closures, etc.).

b) Physically, dental clinics would be associated as closely as possible to schools. In fact, where possible, they would be in the schools.

c) Centres with over 1000 children of eligible age, within a 50 mile radius would justify the placement of a permanent clinic (about 51 in Saskatchewan. Centres with at least 50 children would support a temporary clinic with portable equipment (or a mobile unit if space was unavailable) - (approximately 328 - 380 in Saskatchewan).

d) All other centres would be serviced in the most appropriate manner, as dictated by costs and manpower availability, including voluntary and organized transportation systems. The maximum travel distance would be 50 miles with a maximum lost time from school, per appointment of one-half day (these centres approximate 150 to 200).

e) Preschoolers would be expected to be brought in by private transportation arrangements.[14]

In light of the proposed program, the costs were estimated at approximately $4.5 million by 1979 (which is approximately $32.49 per beneficiary) when the program would have been totally phased-in. It is important to distinguish that this value was estimated in 1972 dollars.[15]

At this point, the essay turns to the evaluation that had taken place on the project. In evaluating the proposed project, the government projected a constant drop in the cost per beneficiary through the year 1979 (see Appendix A for details). They were correct with respect to the decrease in cost per beneficiary, but they were incorrect in the magnitude of the costs. This fact was directly related to their use of 1972 price figures throughout the analysis. In fact, their proposed $4.5

million or $32.49 per beneficiary was actually approximately $8.3 million or $69.02 per beneficiary. The projected number of beneficiaries for the year 1979 was seen to be approximately 137,700 which was a projected decline from the previous year's forecast. While in actuality, the number of beneficiaries was lower than their projected amount at 122,139, but was steadily increasing. This trend of continual increase persisted each year until the program's demise in 1987 (last available figures, as shown in Appendix A, revealed 166,634 beneficiaries using the program in 1986-1987). Costs of the services had been increasing at a consistent rate from approximately $1.3 million in its year of conception, to approximately $15.4 million in 1983-84 where it had reached its highest total cost. From the 1984-85 costs, to the project's demise in 1987, the actual costs had decreased from this 1984-85 "high".

In the first few years of operation, the program costs were perceptually high relative to the number of children enrolled in the program. These costs were due to the expenditures for equipment purchases, administrative costs and field staff salaries including travel costs. Premature, although justifiable, concerns had been raised in the first few years of operation due to the attributable high cost per enrolled child. It was for this reason D.W. Lewis felt it necessary to include an assessment of the financial picture, as provided by the program, in his "Performance Report of the Saskatchewan Health Dental Plan".

In the scope of his analysis, Lewis deviated from the annual report by including the Department of Education's clinic establishment costs and offsetting revenues generated by the program (such as registration and licensure of dental nurses, and

reimbursements from the Department of National Health and Welfare for care to enrolled registered Indian children) which had been subtracted to provide for the total costs estimate.[16]

> The most striking observation is the contrast between the overall large growth in total expenditures and the high decrease in various cost components on a per capita basis over time as enrollment in the S.H.D.P. enlarges.[17] (see Appendix B)

The above passage revealed the expected results of economics of scale that were accredited to the immense increase in the number of enrolled children and their more intense utilization of treatment in each school.

Referring to Appendix C, table 1, Lewis has made it quite clear that while project costs have escalated by approximately 300 percent, costs per child enrolled have decreased by approximately 58 percent over the six years examined. Although a portion of the decrease in cost per child enrolled was imputable to the enormous decreases in some of the program components (ie. central administration dropped by about 80 percent), and even though the data appears to reflect efficient operation of the program over time, Lewis felt it necessary to assess further to assure improved efficiency. The main reason was to assure the reliability of statistical measures.

Thus, two additional efficiency criteria were introduced by Lewis in belief that a more blunt evaluation could be made. These two criteria were the cost per visit and the cost per service, with both revealing the real costs, unadjusted (see Appendix C, table 2). Although figures in this table showed an apparent improvement in efficiency over the first four years, it was shown earlier in the paper that required services would change over time as the program utilization was expected to improve dentition of

the patients. This factor constrained the use of these criteria to a great extent. To use this criteria as a strong basis would require the addition of a standardized aggregate measure of annual productivity to be compared to the costs.

The next efficiency criteria analyzed was the aspect of the dental nurse teams. Since a large proportion of the salaries paid to the regional field staff, which was a large percentage of costs, was paid to the dental nurse teams, it was deemed as an inexcusable part of an efficiency analysis (see Appendix C, table 3). The numbers definitely have indicated by the steady increase in patients served, that over time the dental nurse teams are able to provide services to more patients. This revealed that the "experience curve" mentioned earlier did, in fact, apply to the situation. Other reasons this ample efficiency had occurred may be presented by the fact that the program, over time, had been reducing the need for dental services and the staff travel time had seen a reduction. A relevant inclusion to support the efficiency standpoint was that there was no noticeable sacrifice in care or quality of service to the patients.

A quality assessment of the program costs for the dental plan, would also require the comparison to similar plans in relatively close proximity. In the performance evaluation of D.W. Lewis, he chose to use four other provincially operated, children's dental programs for evaluation (see Appendix C, table 4). In examining this table, Lewis pointed out that the administrative costs of the other four programs were not included. He also alluded to the fact that in 1978, costs compared between the programs appeared to be quite similar with exception being made to Saskatchewan's plan which had its central administrative

costs included. By taking the years from 1977-78 onwards and subtracting the administrative costs which approximated $5 to $5.50, Lewis hoped to gain an impartial comparison of the estimates. In fact, his findings had shown that through equalizing the cost per enroller, by subtracting administrative costs and capital expenditures, Lewis was able to show the Saskatchewan plan offering a lower cost per enroller in light of the greater utilization and provision of services.[18]

In the evaluation of a socially provided program such as the Saskatchewan Dental Plan, it was essential to examine the quality of care provided to determine the effectiveness of the program. This challenging issue was accepted by three highly qualified dentists. The examiners were: Dr. E.R. Ambrose, Dean and former chairman of operative dentistry at McGill University; Dr. A.B. Hord, chairman of restorative dentistry at University of Toronto; and Dr. W.J. Simpson, chairman of children's dentistry at University of Alberta.

It was agreed that there were three apparent ways to evaluate the quality of care provided. These included evaluation by: assessment of structure (evaluation of settings and instrumentalities used); assessment by process (evaluation of dentists and dental teams); and assessment of outcomes (evaluation of final evidence). There were foreseeable problems in the first two methods of evaluation, such as: criteria for the evaluating process under assessment of structure were by no means agreed upon and relating the process to quality of care was unsubstantial. It was for this reason that the evaluation team decided to examine and results as a basis for quality of care. This method would eliminate the problems found in the first two suggested methods by implying a more direct evaluation.[19]

In their analysis was an outstanding characteristic to provide a comparison of the quality of care provided by dental teams as opposed to the quality care of dentists. This characteristic was called the "blind" technique. In this technique, sample classrooms were chosen, in which all children were examined and dental work was evaluated. Children were then classified into one of two groups: those enrolled in the program; and those not enrolled in the program (and who were assumed to have had dental work completed by dentists). The "Blind" aspect referred to the fact that evaluation was completed without prior knowledge as to the source of treatment.[20]

In the actual analysis, several results were obtained favoring the quality of dental teams over that of practicing dentists. This fact, along with the fact that the services were at a generally high level, presented the high-ranking examiners with the idea that quality of care provided may not have been an issue. In light that this study was conducted just two years into the program's operation suggested efficient operation. This study applied a considerable amount of pressure and likely embarrassment to the College of Dental Surgeons who held positions such as:

> Most preventive measures can be done when the dentist is absent from the clinic, but WE ARE ADAMANT IN THE BELIEF THAT A DENTIST MUST BE PRESENT AT ALL TIMES TO DIRECTLY SUPERVISE ANY AUXILIARY PERFORMING TREATMENT SERVICES such as cavity preparation, insertion of fillings, extractions, etc.[21]

> The College is firm in its belief that this direct supervision is essential. We cannot accept and are opposed to any plan which proposes to utilize nurses performing treatment under anything other than direct supervision.[22]

To examine these statements clarifies the view held by the College of Dental Surgeons toward the quality of dental teams. To

further complicate the problem of their opposition to the program, the study conducted by Ambrose, Hord, and Simpson revealed the following about supervision:

> On the basis of data presented here, it would be difficult to insist that more direct supervision of dental nurses take place without making the same suggestion in the case of dentists. . . . On the whole, it would appear that the essential ingredient in a successful dental nurse program is not supervision as much as it is good organization.[23]

Overall, the quality of care was seen as exceptional for the Saskatchewan Dental Plan considering the restricted evaluation that was available at the stage of development in 1976, which was only its second year of operation. Evidence to show the continuation of quality of care by the plan was revealed in the 1981 study of D.W. Lewis where he found that treatment levels improved over time.

An evaluation of the program would be rather incomplete without reference to the program's accessibility. The results of the program from its time of conception to its demise have spoken for themselves. Results have revealed the fact that there was a constant increase in the number of children being reached by the program each year. By implementing the facilities within the schools, they effectively made it easier for children to access the required dental care in a more convenient matter. It was more convenient in that there was educational values taught about proper dentition by the school and parents did not have to go out of their way to see that proper dental care was achieved.

By program accessibility, we must also refer to the long-standing problem Saskatchewan had of poor distribution of dental manpower. The dental plan had taken care of this problem by implementing approximately 600 clinics province-wide over the

period of its operation, including remote northern areas of Saskatchewan. As mentioned earlier in the paper, there were no exclusions to be made on a basis of eligibility requirements. If the child was within the proper age group and obtained parental consent, he/she was then included in the program. There was generally a very low refusal rate by parents over the years of program operation. In the beginning years, the non-response rate has dropped and the enrollment rate has risen considerably.[24] The problem of accessibility had, quite apparently been alleviated by the school-based program.

Another essential valuative factor that was assessed was the prevention orientation of the program. As well as including all aspects of dental treatment, preventative dentistry involves exertion in obtaining behavioral change towards a healthier dentition. In the 1976 study conducted by Ambrose, Hord, and Simpson, it was found that although results from preventative services were not yet apparent because of the program's infancy, the dental teams had attempted to place prevention in proper focus. It was also revealed that children in the program were absorbing the emphasis on prevention and they were practicing preventive measures. In this aspect, the preventative counselling of the teams was outstanding. The teams also required periodic parental reinforcement which was usually developed at early stages by having the parents present at the first appointment.[25]

A subsequent study in 1981 by D.W. Lewis found preventative services to be very high in cost and used on a continual basis. Lewis suggested that as time progressed, the number of restorations had declined and that if this continue to occur, potential for preventative "over-servicing" would grow.[26] This

basically just suggested that a control mechanism be placed on preventive servicing to apply it more efficiently. For example, the treatments (restorations) provided earlier to a patient who has been in the plan for a longer period may confound effects perceived by preventative services.

Now that evaluations of areas in the program's operations have been identified, it is now useful to see how the program was viewed in terms of patient and public acceptance. Satisfaction of those involved with the program was considered an important valuative criteria by Saskatchewan Health. For this reason, they conducted a survey of 600 families with children in the dental plan. The first level of study was the general satisfaction with the dental plan. It was discovered that there was an extremely high level of satisfaction with the program across all regions of the province and that approximately 80 percent of those surveyed felt the program should be extended to 18 years of age. The second level of study was the satisfaction of services provided by the dental plan staff. Approximately 90 percent of those surveyed revealed satisfaction with services provided. The one major source of dissatisfaction, although very low at approximately 2 percent, was the pain experienced by children. Satisfaction with the care provided by dental staff ranked approximately 94 percent and the preparation of treatment plans were approximately 86 percent. The third level of research was the satisfaction level with respect to organization and delivery of services. Of the 84.7 percent of respondents invited to visit a dental clinic, 80.5 percent had taken advantage of the offer, with 91.9 percent stating the visit to be a valuable experience. The fourth and final level of research conducted by Saskatchewan Health was the

use and cost of private dental services. While 13.2 percent of those surveyed had children requiring private dental services and 3.7 percent had not received the treatment, 94.5 percent received the necessary services and 90.6 percent did not receive any direct costs associated with the treatments.[27]

To summarize the results of the survey conducted by Saskatchewan Health, the evidence conveyed a broadly established acceptance of the Saskatchewan Dental Plan by those involved with the program.

This leads us to the topic of extensive current political debate, which is the government decision to eliminate the school-based dental program in favour of a privatized system. The principal problem viewed in this alteration was that the benefits originally offered by the program would diminish substantially. This fact is easily apparent through several factors. The first factor was that children from ages 14 to 17 years of age would no longer be obtaining treatment. It was revealed through earlier studies that to terminate the program at this age would only cause declining dentition of the youth as they entered adulthood. A second factor of concern is the availability of dentists to the remote rural areas of the province. Previous research revealed the problem of availability of dental care relating to poor dental health. The school-based program effectively controlled the problem of availability of dental care, but for the privatized plan to do so may be a much larger problem in that children must be provided with a private means of being transported to the clinics. The dental health problems of the past may recur as a result because several people may not be willing or able to sacrifice time to make a routine trip to the dentist and may just

visit the dental clinics after there is an apparent dental problem. A third factor to be considered is that even in urban centres, leaving responsibility for dental care of children with parents will likely not be as efficient as the school-based program. Such evidence of this could be derived from the number of increasing dual-career households and working mothers in our society. These people are quite likely to be under considerable time constraints and may be unable to allocate the time needed to see that their children receive proper dental care.

Saskatchewan's Health Minister, George McLeod stated his expected new dental plan would save the government approximately $5.5 million annually. While based on its own unreleased figures, the provincial government is likely to save closer to $500,000 as a result of privatization of the Saskatchewan Dental Plan. Costs of services to adolescents under the privatized measures averaged approximately $103 per child as compared to approximately $92 for treatment under the government's own dental therapists. According to the annual report dealing with the period ended August 31, 1986, the total expenditure actually declined marginally from the previous year (review Appendix A). Of a total budget of approximately $15.2 million in 1985-86, approximately $12.1 million went to the school based program provided by dental teams. The remainder was allocated to private dentists for treatment of adolescents and emergency referrals. Subtracting the costs of services to adolescents by dental therapists and private practitioners from the plan's budget leaves the cost of delivering elementary school service by dental therapists which approximates $11.4 million. This figure can be compared to a cost of approximately $11 million for the new system supplied by private dentists (see Appendix D).[28]

Further information was later revealed by Health Minister McLeod disclosing the new program agreement with the College of Dental Surgeons would not exceed a cost of $8.5 million for the first year of operation. We must include the $1.2 million for administration and advertising thus moving the cost to $9.7 million.[29] The explanation for this drastic cost reduction can be conveyed in one justifiable way. It was best stated by Maxine Borowko, the President of the Saskatchewan Dental Therapists Association, who identified the reason for the government's cost saving as resulting from a lower program utilization rate. The former plan had a utilization rate of over 90 percent and although Dr. Peacock, of the College of Dental Surgeons, suggested a wishful 80 percent goal for the new project's utilization rate, he admitted it would probably be more in the range of 50 percent utilization.

Another problem associated with the government decision is the resulting problem of unemployment of dental therapists and the related problem of the extra workload for dentists. It was estimated by Health Minister McLeod that as a result of the elimination of the former Saskatchewan Dental Plan, approximately 294 workers, most of which were dental therapists, would be out of work. The S.G.E.U., on the other hand, placed the figure at 419 positions. McLeod added that he projected approximately 150 of those unemployed would be employed immediately by dentists as a result of the increased demand for service.[30] One factor which may not have been considered by McLeod was that the salaries originally paid to the dental therapists were paid by the government and now, to have them employed by dentists, puts a larger cost burden on the dentists. This additional cost could

possibly be part of the explanation why so few of the approximated 400 dental therapists have found jobs to this date. As of October of 1987, only 35 of the fired dental therapists found employment in the field of dentistry, with private dentists. Health Minister George McLeod still expressed his belief that his estimate of 150 would retain jobs in the field of dentistry.[31] To this very date, this projected figure has not been reached, thus forcing several previously employed dental nurses and technicians to try to further their education while currently a problem of lack of dentists is being experienced in rural areas. This is evident through the fact that by November of 1987 only 11 or 12 new dental practices were established in rural areas. There were several areas still in need at this time such as the Gravelbourg and Leader district which was still without a dentist by November of 1987.[32]

The future effects of the newly formed, privatized dental plan were projected by Dr. Murray Dickson, an International Oral Health Consultant. Dickson said we can expect overall poorer oral health because children will have less access to care and to obtain less health will cost just as much money. In addition, Dickson stated that there will be a negative income transfer with tax dollars from persons less able to participate including persons in smaller communities, helping to pay for children from families that are more able. Such consequences, he added, would be inequitable.[33]

It is difficult to analyze the problem efficiently and effectively because of the lack of available information. One can suppose, however, that because the annual reports for the two fiscal years, 1986-87 and 1987-88, have not been released, it is

highly probably that the actual results of the privatization are going to be suspect to strong criticism. Saskatchewan Premier Grant Devine provided information that may have supported this assumption to some extent. Premier Grant Devine told a Conservative convention on November 14, 1987 that his government had made a mistake in its changes to the dental plan. In addition, he promised a new plan, possibly consisting of dental therapists, would be forthcoming.[34]

On the basis of the provided information, several factors have been presented contributing to the notion that the decision of the government of Saskatchewan to privatize dental services was ineffective, inequitable and inefficient. It is my belief that evidence provided in this paper has substantiated the injustice of the decision to an enormous extent. Emphasis must be placed on the fact that the government has released no actual figures for the new program to this date, and until such figures are made available, the new program can not be genuinely compared to the former dental plan.

APPENDIX A

	1974-75		1975-76	
	Projected	Actual	Projected	Actual
costs ($)	1,273,000	2,079,968.53	2,272,800	4,052,293.87
beneficiaries	14,100	13,140	41,300	37,571
/beneficiary ($)	90.28	158.29	55.03	107.86

	1976-77		1977-78	
	Projected	Actual	Projected	Actual
costs ($)	3,265,600	5,030,521.33	3,895,700	6,250,163.79
beneficiaries	81,800	60,231	110,400	84,052
/beneficiary ($)	39.92	83.52	35.29	74.36

	1978-79		1979-80	
	Projected	Actual	Projected	Actual
costs ($)	4,887,200	7,758,578.31	4,474,000	8,429,429.52
beneficiaries	140,100	109,751	137,700	122,139
/beneficiary ($)	34.88	70.69	32.49	69.02

1980-81 (no projected figures)	1981-82
Actual	Actual
10,424,308.57	13,632,734.34
134,673	155,481
77.40	87.68

1982-83	1983-84
Actual	Actual
14,695,092.70	15,424,594.36
159,946	161,784
91.98	95.34

APPENDIX A (Cont'd)

	1984-85	1985-86
	Actual	Actual
costs ($)	15,281,424.17	15,326,415.58
beneficiaries	165,101	166,634
st/beneficiary ($)	92.56	91.98

(Actual figures obtained from annual reports 1974-1986 and Projected figures obtained from "Proposal for a Dental Program for Children in Saskatchewan", page 88).

SUMMARY FINANCIAL STATEMENT OF S.E.D.P. 1974-75 TO 1979-80

OPERATING EXPENSES*	1974-75 Total	1974-75 Per Enrollee	1975-76 Total	1975-76 Per Enrollee	1976-77 Total	1976-77 Per Enrollee	1977-78 Total	1977-78 Per Enrollee	1978-79 Total	1978-79 Per Enrollee	1979-80 Total	1979-80 Per Enrollee
	$	(n=13,140)	$	(n=37,571)	$	(n=60,231)	$	(n=84,052)	$	(n=109,751)	$	(n=122,139)
Central Administration (Regina)	341,519.	825.99	349,951.	10.62	439,495.	7.30	468,346.	5.57	542,983.	4.95	663,735.	5.43
Program Expenses												
-Salaries	1,348,235.	102.61	2,689,449.	71.58	3,511,425.	58.30	4,411,455.	52.48	5,649,039.	65.54	6,121,084.	50.12
-Travel	196,393.	14.95	365,953.	9.74	482,292.	8.01	543,397.	6.47	606,512	5.53	596,678.	4.84
-All other	473,797.	36.06	447,780.	11.92	621,166.	10.31	707,195.	8.41	937,653.	8.54	976,770.	8.00
Subtotal	2,018,425.		3,503,182.		4,614,883.		5,662,247.		7,193,204.		7,694,532.	
Total Operating Expenditure	2,359,945.		3,907,133.		5,054,378.		6,130,594.		7,736,188.		8,358,267.	
Capital Equipment Purchases	447,397		252,898.		14,320.		68,073.		47,730.		158,811.	
TOTAL EXPENDITURES*	2,807,342.		4,155,032.		5,068,698.		6,198,667.		7,783,919.		8,517,079.	
ACTUAL COST OF SERVICES**	1,079,968.	158.39	4,052,293.	107.86	5,030,521.	83.52	6,250,163.	74.36	7,758,578.	70.69	8,429,429.	69.02
DEPARTMENT EDUCATION**												
Accumulative Costs to Date of Establishing Dental Clinics	170,000.		1,251,459.		1,502,253.		1,557,652.		1,683,156.		1,910,500.	
Plus Current Fiscal Year Costs	1,081,459.		250,794.		55,398.		125,504.		227,346.		397,291.	
Cost of Ab[illegible] Using SI												
Depreciation	62,573.	4.76	75,113.	2.00	77,882.	1.29	84,158.	1.00	93,525.	0.87	115,390.	0.94
TOTAL OFFSETTING REVENUES***	-		-14,050.		-67,283.		-128,412.		-170,327.		-239,499.	
GRAND TOTAL COSTS (3+5-6)	2,142,541.	163.05	4,113,356.	109.48	5,041,120.	83.70	6,205,909.	73.83	7,683,776.	70.01	8,305,320.	68.00

Statement 1 of S.E.D.P. Annual Reports.

Statement 3 of S.E.D.P. Annual Reports.

Introduction to expenditure statements in S.E.D.P. Annual Reports.

APPENDIX C

Table 1

INDEX NUMBERS FOR SELECTED S.H.D.P. COSTS* 1974-75 TO 1979-80

S.H.D.P. Program Year	Grand Total Costs**	Actual Cost of Services***	Selected Program Component Costs Per Enrolled Child: Central Administration	Staff Travel	Establish Clinics***	Cost per Enrolled Child
1974-75	100.0 (=$2,142,541)	100.0 (=$2,079,965)	100.0 (=$25.99)	100.0 (=$14.95)	100.0 (=$5.76)	100.0 (=$163.05)
1975-76	192.0	194.8	40.9	65.2	42.0	67.1
1976-77	235.3	241.9	26.1	53.6	27.1	51.3
1977-78	289.7	300.5	21.4	43.3	21.0	45.3
1978-79	358.6	373.0	19.0	37.0	18.3	49.9
1979-80	387.6 (=$8,305,320)	405.3 (=$8,429,429)	20.9 (=$5.43)	32.5 (=$4.86)	19.7 (=$0.94)	41.7 (=$68.00

*Real dollars
**"Grand total costs" are derived in Table 32 while "actual total costs of services" originate from Statement 3 of the S.H.D.P. Annual Reports.
***Costs incurred by Department of Educa. on for establishment of dental clinics.

Table 2

COST PER VISIT AND COST PER SERVICE

S.H.D.P. Program Year	Cost Per Visit* $	Cost Per Service** $
1974-75	-	12.99
1975-76	28.89	9.30
1976-77	21.63	7.16
1977-78	20.24	6.51
1978-79	19.07	6.61
1979-80	20.03	7.19

ermined by dividing Actual Cost of Services by number of visits appropriate program years (PH 8079). Necessary visit data unilable for 1974-75.

ermined by dividing Actual Cost of Services by Grand Total of vices for appropriate program years (Table 32).

Table 3

ENROLLED CHILDREN PER DENTAL NURSE BY PROGRAM YEAR

Program Year	Enrolled Children Per Dental Nurse: Number	Index
1974-75	262	71.2
1975-76	368	100.0
1976-77	494	134.2
1977-78*	539	146.5
1978-79	705	191.6
1979-80	638	173.4

*Ratio is distorted because children born in 1973 only became eligible to enroll in February, 1978.

Table 4

PROVINCIAL CHILDREN'S DENTICARE COST* COMPARISONS 1974-80

Year	Quebec Cost/ Beneficiary	P.E. Island Cost/ Clinic Patient	Program Year	Nova Scotia Cost/ Beneficiary	Newfoundland Cost/ Treat. Child	S.H.D.P. Cost/ Enrollee
1974	$32.92	about	1974-75	-	$28.25	$163.05
1975	[illegible]	$50.	1975-76	$56.06	44.09	109.48
1976	64.33	-	1976-77	48.63	45.49	83.70
1977	61.30	-	1977-78	53.13	42.86	73.83
1978	59.2****	55.-60.	1978-79	58.61	54.41	70.01
1979	55.[illegible]	-	1979-80	62.28	-	68.00

*Notes: (1) costs for S.H.D.P. are administrative travel and capital costs included; (2) S.H.D.P. appears to provide about 33% to 50% more services per patient, and (3) is the same number per patient as in Quebec;
(4) each program now treats children up to age 13 or 14 years.
**Expenditures affected by dentists temporarily opting out of denticare program to speed up fee schedule revision.

APPENDIX D

(figures as released estimates by Health Minister George McLeod)

131,500 eligible elementary children x $75 fee/child	=	$9.8 million
+ administrative and advertising costs	=	1.2 million
TOTAL		$ 11 million

(This $11 millicn figure assumes full utilization of the program)

FOOTNOTES

1. A Proposal for a Dental Program for Children in Saskatchewan. p. 1-2.
2. Ibid. p. 2.
3. A Quality Evaluation of Specific Dental Services Provided by the Saskatchewan Dental Plan: Final Report, February 1976. p. 3.
4. A Proposal for a Dental Program for Children in Saskatchewan. p. 2.
5. Ibid. p. 2.
6. Ibid. p. 5.
7. Ibid. p. 7.
8. Abstract of a Proposal for a Dental Program for Children in Saskatchewan. p. 3.
9. Ibid. p. 4.
10. A Proposal for a Dental Program for Children in Saskatchewan. p. 40.
11. Abstract of a Proposal for a Dental Program for Children in Saskatchewan. p. 7.
12. Report: Saskatchewan Advisory Committee on Dental Care for Children, March 31, 1973. p. 13.
13. Abstract of a Proposal for a Dental Program for Children in Saskatchewan. p. 11.
14. A Proposal for a Dental Program for Children in Saskatchewan. p. 31.
15. Ibid. p. 88.
16. Performance of the Saskatchewan Health Dental Plan, 1974-1980. p. 68.
17. Ibid. p. 68.
18. Ibid. p. 69-73.
19. A Quality Evaluation of Specific Dental Services Provided by the Saskatchewan Dental Plan: Final Report, February 1976. p. 2-3.
20. Ibid. p. 5.
21. A Dental Care Plan for the Children of Saskatchewan: Principles and Concepts, January 1973. p. 3.
22. Ibid. p. 9.

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- As well as viewpoints from Maxine Borowko, President of the Saskatchewan Dental Therapists Association.

23. A Quality Evaluation of Specific Dental Services Provided by the Saskatchewan Dental Plan: Final Report, February 1976. p. 15.

24. Performance of the Saskatchewan Health Dental Plan, 1974 - 1980. p. 8.

25. A Quality Evaluation of Specific Dental Services Provided by the Saskatchewan Dental Plan: Final Report, February 1976. p. 13.

26. Performance of the Saskatchewan Health Dental Plan, 1974 - 1980. p. 35.

27. An Attitude Survey of Families Enrolled in the Saskatchewan Dental Plan, October 1979. p. 2-3.

28. Dale Eisler. "Dental plan savings for below prediction". Regina Leader-Post, June 16, 1987.

29. Dale Eisler. "Dental plan cost report denied". Regina Leader-Post, June 20, 1987.

30. Beverly Spencer. "Health Plan will die without cuts: McLeod". Regina Leader-Post, June 12, 1987.

31. Vern Greenshields. "Few dental therapists have jobs". Saskatoon Star-Phoenix, November 12, 1987.

32. Elizabeth Smillie. "Extracting the Dental Plan". Briarpatch: Volume 16 number 10. Regina, December 1987/January 1988.

33. Murray Dickson, International Oral Health Consultant. Saskatoon Star-Phoenix, November 12, 1987.

34. Smillie. "Extracting the Dental Plan".