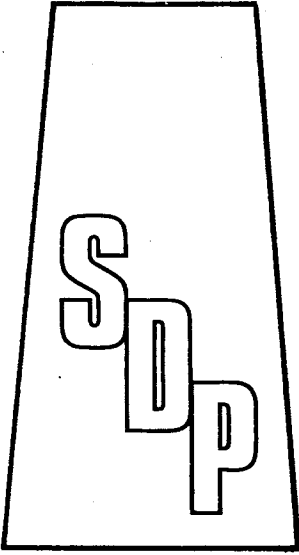


AZ
H
SA 226
330
A56

e 2



SASKATCHEWAN DENTAL PLAN

SASK. LEGISLATIVE
LIBRARY
APR 13 1976
REGINA

AUGUST 1975

Saskatchewan

Dental

Plan

Report

First Year of Operation

September 1, 1974 to August 31, 1975



PROVINCE OF SASKATCHEWAN
DEPARTMENT OF HEALTH
3211 ALBERT STREET, REGINA
S4S 0A6

DEPARTMENT OF HEALTH

Regina, March, 1976

TO THE HONOURABLE G. PORTEOUS,
Lieutenant Governor of Saskatchewan.

MAY IT PLEASE YOUR HONOUR:

I beg to present herewith for your consideration the Annual Report of the Saskatchewan Dental Plan for the year ending August 31, 1975.

Respectfully submitted,

W. A. ROBBINS,
Minister of Health.

DEPARTMENT OF HEALTH

Regina, March, 1976

TO THE HONOURABLE W. A. ROBBINS
Minister of Health.

SIR:

I have the honour to present herewith the Annual Report of the Saskatchewan Dental Plan for the year ending August 31, 1975.

Respectfully submitted,

M. B. DERRICK,
Deputy Minister.

TABLE OF CONTENTS

	Page
Executive Director's Remarks	7
Background	8
Organization and Administration	9
Profile of Saskatchewan Dental Plan Clinical Personnel	12
Training of Dental Nurses in Saskatchewan	13
Organization of Delivery	13
Summer Activities	16
Dental Clinics	16
Clinic Design Rationale	17
Equipment	17
Enrollment of Eligible Children	20
Dental Health of Enrolled Children	20
Services Provided by the Saskatchewan Dental Plan	21
Referrals and Emergency Services	23
Expenditures	25

LIST OF TABLES

<i>Table Number and Title</i>	Page
1. Equipment in Permanent and Portable Clinics, Saskatchewan Dental Plan, September, 1974 — August, 1975	19
2. Saskatchewan Dental Plan Enrollments, September, 1974 — June, 1975	20
3. Dental Health of Enrolled Children, Saskatchewan Dental Plan, September, 1974 — August, 1975	21
4. Services Provided by Clinical Staff, Saskatchewan Dental Plan, September, 1974 — August, 1975	22
5. Number of Preventive Services Provided by Grade, Saskatchewan Dental Plan, September, 1974 — August, 1975	23
6. Referrals and Emergency Services Provided by Private Practitioners to Children Enrolled in the Saskatchewan Dental Plan, September, 1974 — August, 1975	24

LIST OF FIGURES

<i>Figure Number and Title</i>	Page
1. Saskatchewan Dental Plan Administrative Organization	10
2. Saskatchewan Dental Plan Administrative Regions	11

EXECUTIVE DIRECTOR'S REMARKS

The Saskatchewan Dental Plan commenced operation in September, 1974. The objective of the Plan is to improve the dental health of young people in Saskatchewan by ultimately providing comprehensive dental care to children between the ages of 3 and 12. This care is provided by teams of dentists, dental nurses, and dental assistants in clinics which have been set up in elementary schools and special clinics across the province.

The Saskatchewan Dental Plan operates through school clinics and its activities are more closely related to the school year than to the government fiscal year. In order that the activities of the Saskatchewan Dental Plan can be more meaningfully presented and its costs and services more closely correlated, Dental Plan annual reports will be based on the operational year September 1st to August 31st.

The Saskatchewan Dental Plan is the first province-wide children's dental program to be established in North America. Keen interest in the development of the Plan has been shown by the *Department of National Health and Welfare*, provincial departments of health, professional dental associations, and colleges of dentistry. The present report is an objective description of the activities of the Saskatchewan Dental Plan which, it is hoped, will prove valuable to other agencies in the development of their own programs.

M. H. Lewis, D.D.S., D.D.P.H.
Executive Director
Saskatchewan Dental Plan

BACKGROUND

In 1968, the Saskatchewan Department of Health conducted surveys in Regina and Saskatoon which showed that the level of dental health of children in these cities was far from satisfactory. On the basis of the survey results, the Dental Division of the Department of Health proposed that the federal government allocate funds for a dental pilot project in the province. The project was to provide dental health education, preventive services, and treatment services to children through a dental team consisting of a dentist, two dental nurses, three dental assistants and one receptionist-recorder.

The dental nurses were formally trained to provide educational, preventive, and treatment services to children, including deciduous tooth extractions and amalgam and composite fillings in deciduous and permanent teeth. The three dental assistants were formally trained to provide chairside assistance, simple prophylaxis, and application of anticariogenic agents.

Services were made available to children from 3 to 12 years of age in the Oxbow area of Southeastern Saskatchewan. The dental team was housed in a mobile clinic equipped with four dental units, an X-ray machine, a laboratory, and a reception room. The project lasted for three years. It demonstrated that high-quality care could be provided by such a program and also that parents were prepared to enroll their children in a dental program in which care was provided by dental nurses. It was important to establish that a dental program making use of dental nurses could be successful because one of the main reasons for testing such a program was the chronic shortage of dentists in the province, especially in rural areas.¹

On the basis of the successful Oxbow pilot project, the Government of Saskatchewan announced in March, 1972, that a province-wide dental program would be established to provide comprehensive dental care to children between the ages of 3 and 12. The program commenced in September, 1974, and during its first year of operation it provided dental care to children born in 1968. Children in other age groups will be gradually integrated into the program in subsequent years. All children enrolled in the program are first examined by a fully qualified dentist, who prescribes necessary treatment and decides how often a child should be examined. Dental nurses, supported by dental assistants, provide most of the dental services under the supervision of the dentist. Services provided by the program, but beyond the scope of the dental nurse, are provided by the dentist.

With the cooperation of the Saskatchewan *Department of Education* and local school boards, dental clinics have been located in schools to make access more convenient for children and parents. More clinics will be added as the program expands. In cases where space for clinics is not available in schools, alternative space or mobile dental clinics are used.

In order to train dental nurses for the Saskatchewan Dental Plan, a Dental Nursing Training School was established in September, 1972, at Wascana Institute of Applied Arts and Sciences in Regina. The two-year course initially had an enrollment capacity of 35 per year, but this has been increased to 60 per year. The first class graduated in the summer of 1974, just prior to the commencement of the Dental Plan.

¹ Saskatchewan has an average of one dentist for every 3,600 people. In rural areas the ratio is one dentist for every 7,000 people. These figures compare with a national dentist-to-population ratio of 1:2,900.

ORGANIZATION AND ADMINISTRATION

Legislative and Regulatory Authority

In 1973, *The Saskatchewan Dental Nurses' Act* was passed. This act created a Saskatchewan Dental Nurses Board to establish and maintain rules for the licensing of dental nurses, to set standards of professional conduct for dental nurses, to advise the Minister of Health on matters referred to the Board, and to ensure that the regulations and standards of professional conduct are met by all registrants. The first Board was appointed on September 25, 1973, and held three meetings during the year to develop regulations concerning the registration and licensing of dental nurses and to define the scope of dental nursing services.

In the following year, *The Dental Care Act, 1974* was passed. This act gives the Department of Health broad authority to operate a children's dental care program. The act authorizes the Minister of Health to enter into agreements with or to employ dentists, dental nurses, and certified dental assistants and to do whatever else is necessary for the establishment and operation of the dental care program.

Administrative Structure

The administrative organization is outlined in the Organization Chart on page 10. The Saskatchewan Dental Plan is administered through a central headquarters staff consisting of an Executive Director, an Associate Director, administrative staff, and warehouse and stores personnel. A Dental Health Education Specialist provides consultation and coordination services to all regions. The province is divided into six administrative regions. Regional headquarters are located in Swift Current, Regina, Yorkton, Saskatoon, Prince Albert and North Battleford.¹ The Saskatchewan Dental Plan does not provide coverage to children in the northern part of the province. The *Department of Northern Saskatchewan* operates its own dental plan for children in this area, but receives consultation services and advice from the Saskatchewan Dental Plan.

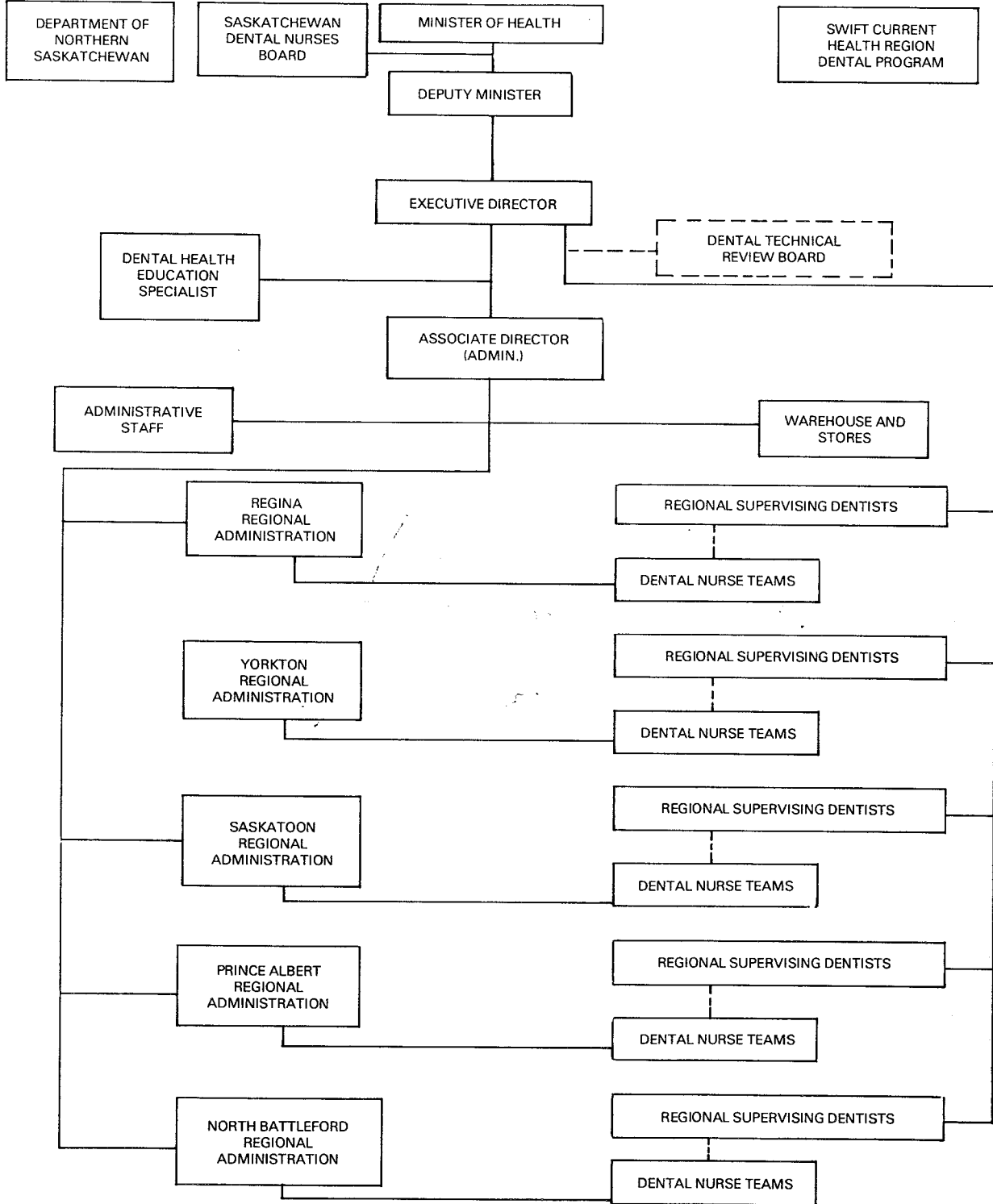
¹ The six Dental Plan administrative regions and headquarter locations for dental nurses are shown on the map on page 11.

A separate Dental Technical Review Board has been established to report on quality evaluation and control in the Saskatchewan Dental Plan.

All regions except Swift Current are staffed by supervising dentists, dental nurses and dental assistants, together with an administrator, an equipment maintenance technician and clerical personnel. Health Region #1 in Swift Current has had a children's dental program for almost 30 years. The Swift Current Regional Board of Health agreed to provide dental care in the Region at the same level as that provided by the Saskatchewan Dental Plan and to hire dental nurses to deliver services in clinics established in elementary schools. The Saskatchewan Dental Plan agreed to provide necessary dental equipment on a loan basis and to reimburse the Regional Board for the cost of providing the service. The Swift Current Health Region is considered part of the Saskatchewan Dental Plan for clinical purposes, but not for administrative purposes. Staff in the region report to the Swift Current Regional Health Board rather than to the Executive Director of the Dental Plan.

Figure 1

SASKATCHEWAN DENTAL PLAN ADMINISTRATIVE ORGANIZATION

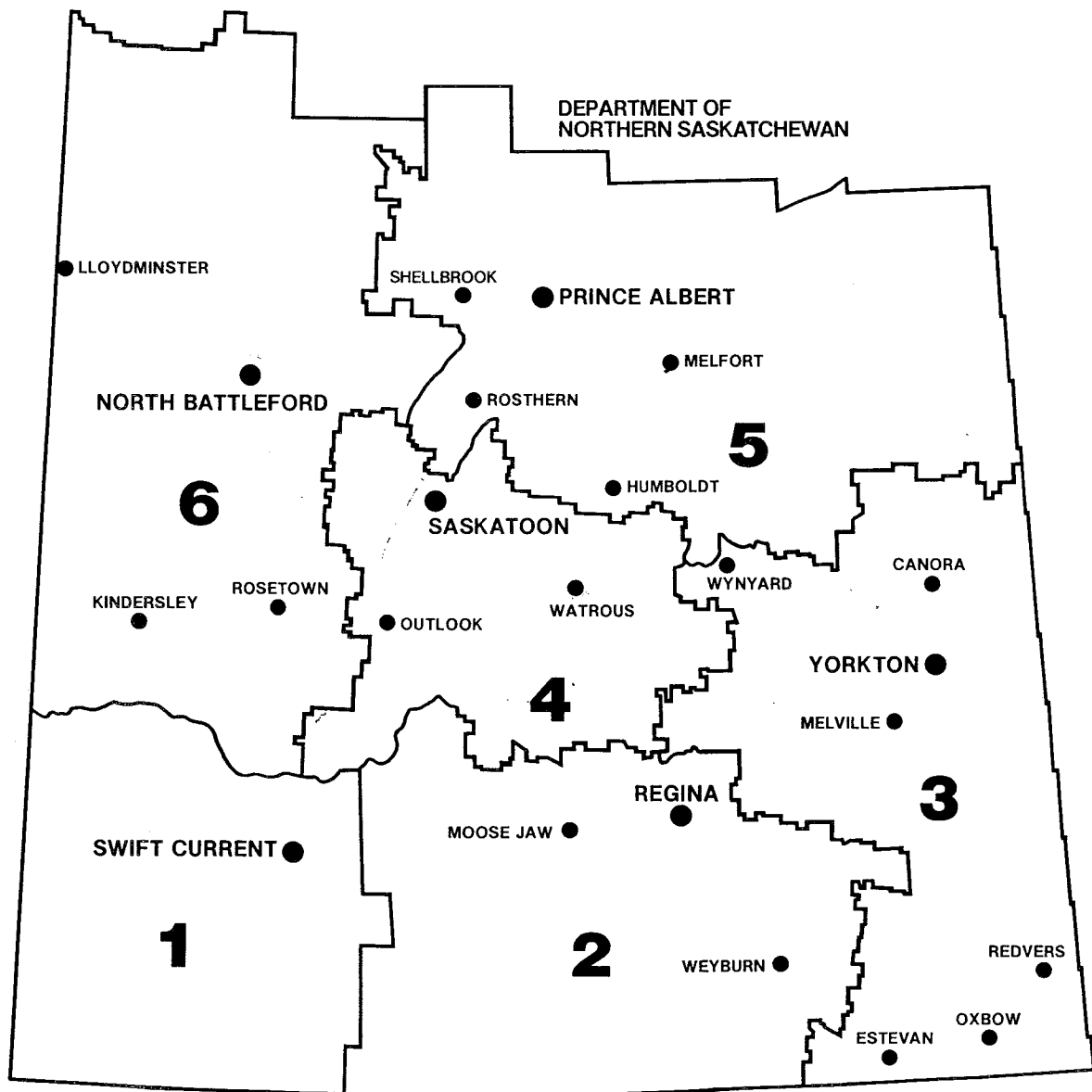


--- Denotes professional and clinical supervision.

August 31, 1975

Figure 2

SASKATCHEWAN DENTAL PLAN ADMINISTRATIVE REGIONS



KEY TO ADMINISTRATIVE REGIONS

- | | |
|---------------------|------------------------|
| NO. 1 SWIFT CURRENT | NO. 4 SASKATOON |
| NO. 2 REGINA | NO. 5 PRINCE ALBERT |
| NO. 3 YORKTON | NO. 6 NORTH BATTLEFORD |

PROFILE OF SASKATCHEWAN DENTAL PLAN CLINICAL PERSONNEL

Dental Nurse

The Saskatchewan Dental Nurse is a graduate of a two-year Dental Nursing Program and is trained to deal with children in both the clinical and classroom situations.

A large part of the dental nurse's clinical time is spent restoring permanent and primary teeth with silver amalgam, composite resins and stainless steel crowns. The dental nurse also performs pulpotomies, extracts primary teeth, places space maintainers, takes radiographs, cleans and polishes teeth, applies topical fluoride, and gives complete diet and oral hygiene instruction to the patient and parent. Working in conjunction with the supervising dentist, each dental nurse is responsible for the dental treatment of several hundred children.

Certified Dental Assistant

The certified dental assistant, who is a graduate of a one-year course, plays a dual role within the dental team. She performs many chairside duties for the nurse, such as suctioning, retraction, preparation of restorative materials and sterilization; and she also takes radiographs, cleans and polishes teeth, applies topical fluoride and provides oral hygiene instruction.

With the long-term benefits of preventive dentistry in mind, dental teams also provide classroom instruction to children in age groups not yet enrolled in the Saskatchewan Dental Plan. The educational sessions vary greatly, depending on the age of children in the class. Puppet shows are often staged for the young children, while the older children receive classroom talks with question and answer periods. The instructional sessions stress the cause of dental disease, diet, professional preventive measures and, most important, daily home care. Sessions may be followed by active participation of children in a fluoride brush-in, followed by a fluoride rinse.

Supervising Dentist

The supervising dentist performs a variety of duties in close cooperation with the seven or eight dental nursing teams assigned to each area. The dentist spends a great deal of time examining and formulating treatment plans for enrolled children and carries out services which are beyond the scope of the dental nurse. Lines of communication are always open between the team and the dentist in order to provide the team with immediate consultation or assistance when necessary. As supervisor the dentist constantly monitors the quality and quantity of work being performed by the teams, and sees that priorities and schedules are being arranged and met.

The dentist meets constantly with parents, superintendents, principals, teachers and local officials and thus plays a significant role in public relations. All field staff are essentially public relations officers, but it is the supervising dentist (together with the regional administrator) who must assess and deal with specific difficulties and judge public sentiment.

Dental Hygienist

The Saskatchewan Dental plan employs five dental hygienists. These hygienists provide a comprehensive and concentrated preventive dentistry program to children with especially serious oral hygiene problems. Often this instruction is given in the children's own homes to both the children and parents. The hygienists also provide group oral hygiene instruction and perform a general public relations function by addressing home and school associations and similar groups. Each hygienist works throughout a dental region and occasionally moves from one region to another in the course of duties.

Staff Employed

As of June 30, 1975, the Saskatchewan Dental Plan employed the following clinical staff:

TOTAL	132
Dentists	11
Dental Nurses	46
Dental Assistants	64
Dental Hygienists	5
Equipment Technicians	6

Attrition among dental nurses from September 1, 1974 to August 31, 1975 was as follows:

	Dental Nurses			
	On Staff	Hired	Resigned	Total
September, 1974	—	47	—	47
October	47	1	—	48
November	48	2	—	50
December	50	—	1	49
January, 1975	49	1	2	48
March	48	—	1	47
April	47	—	1	46
July	46	—	2	44
August	44	—	4 ¹	40

¹ Three dental nurses transferred to the Wascana Institute of Applied Arts and Sciences in Regina as dental nurse instructors.

TRAINING OF DENTAL NURSES IN SASKATCHEWAN

In September 1972, a two-year Dental Nursing Program was established at the Wascana Institute of Applied Arts and Sciences in Regina with an enrollment capacity of 35 students per year. This enrollment has been expanded to 60 students in subsequent years. The two-year program prepares the students to provide dental care to pre-school and school age children through the Saskatchewan Dental Plan. Great emphasis is placed on prevention of dental disease, but in addition the dental nurses are fully trained in clinical restorative dentistry for children and are able to provide most of their dental needs. The training program consists of co-ordinated classroom and clinical experience. Total scheduled time exceeds 2,300 hours in the two years of the program. In July, 1974, thirty-five students graduated from this program followed by fifty-four students in July, 1975.

Entrance Requirements

EDUCATION —

complete Grade XII with two of the three sciences at the Grade XII level.

HEALTH —

applicants should be medically and dentally fit.

PERSONAL QUALITIES —

applicants should have a liking for and an understanding of children and a genuine desire to do dental work. Manual dexterity and ability to do fine

work with the hands are desirable, especially if supported by an understanding of simple mechanical principles.

Applicants may be single or married, male or female.

Curriculum

Year I

SEMESTER I

Anatomy and Physiology (including Histology), Dental Histology and Dental Morphology, Co-ordination and Skills Development, and Preventive Dentistry.

SEMESTER II

Preventive Dentistry, General Pathology, Communication Skills (including Child Psychology and Behavioural Sciences, Public Speaking, Dental Health Project Development, Education), Pharmacology and Therapeutics, Dental Pathology, and Restorative Dentistry for Children (including dental materials and maintenance and use of dental equipment).

Year II

BOTH SEMESTERS

Clinical experience in Restorative Dentistry, Radiography and Preventive Dentistry techniques.

Other classes include recognition of Dental Pathology and Public Health Dentistry.

ORGANIZATION OF DELIVERY

The Saskatchewan Dental Plan uses a team approach to provide dental services in the elementary school setting. Each team consists of a dental nurse or a dentist and a certified dental assistant. Associated with each dental nursing team is a supervising dentist. Each supervising dentist works in close conjunction with seven or eight teams and can thus utilize his skills to a greater extent on a more concentrated group of patients.

A great deal of preliminary work is done before dental teams begin actual dental treatment. School superintendents and principals are contacted in order to explain all pertinent facets of dental treatment within the school environment. The teams explain the operation of the Plan to the teachers involved and discuss the schedules within each particular school. A few days before the child's initial visit to the dental clinic, parents are contacted by phone or letter.

On the first clinical visit, the child is examined and questioned in order to determine which diagnostic X-rays

are necessary. These radiographs are taken and immediately processed to make certain that they are of good diagnostic quality.

On the second visit, the patient is given a full clinical and radiographic examination by the examining dentist. Parents are encouraged to be present for this visit so that pertinent diagnostic findings and treatment planning can be discussed directly with them. At this time, diet and oral hygiene are also discussed with the parent and child. The prevention of dental disease is of great importance and the dental team stresses preventive measures with the parents and patient throughout the course of treatment. Variations in this delivery sequence occur as each team selects the best method to meet the needs of individual children.

Except for emergencies and urgent problems, the actual dental treatment usually commences at the third clinical session. A dental nurse and certified dental assistant carry out treatment in accordance with the treat-

ment plan prescribed by the examining dentist. As treatment progresses, any necessary modifications in the treatment plan are made in consultation with the examining dentist. Treatments are always carried out on a priority basis and the dental teams are encouraged to perform quadrant dentistry, whereby all necessary treatments in any quarter of the mouth are performed during one visit.

Treatment schedules of dental teams vary from region to region. However, in most cases teams work for one or two weeks at a school and then move on to the next school. The schools in any particular area are therefore visited several times during the school year.

This schedule is followed for several reasons:

- (a) It allows a greater number of children to be seen early in the year and thus to receive priority care sooner;
- (b) It minimizes classroom disruption;
- (c) It gives the children a longer rest time between clinical sessions, which is especially important in small schools where a few children would be seen too frequently if rotation were not used; *and*
- (d) It allows the dental teams to identify work loads earlier in the year and thus permits better long-range scheduling by dental teams, principals and teachers.

SUMMER ACTIVITIES

During the summer of 1975, clinics were operated throughout the province on a regular basis, though because of school vacation dental teams found it difficult to organize full work schedules. Further, staff are expected to take their vacation during school holidays and also to participate in continuing education courses.

In July, a one-week refresher course in oral diagnosis and treatment planning was conducted by Dr. Keith Davey of the School for Dental Therapists in Fort Smith, North West Territories. The course was given to dental nurses with one year of field experience. It covered a broad spectrum of oral diagnosis situations and treatment planning problems.

In mid-August, a course in four-handed dentistry (dentistry in which treatment is provided by two persons coordinating specific functions) was presented by Dr. Eric Spohn, Dr. Tom Berry and Miss Wendy Halowski, R.D.H., all of the University of Kentucky. This three-day lecture and clinical course covered all aspects of four-handed dentistry technique. The course will undoubtedly enable the dental nursing teams to provide high-quality dental care more quickly and with greater comfort for the patient, assistant, and operator.

DENTAL CLINICS

Dental teams work in three different types of clinic locations: permanent clinics, temporary clinics, and mobile clinics.

Permanent Dental Clinics

Most of the dental work provided by the dental teams is performed in permanent dental clinics. There are 215 such clinics located in elementary schools throughout Saskatchewan. Additional clinics will be established as the other age groups are phased into the Plan.

Permanent clinics have been established in schools with the greatest number of children eligible for enrollment in the Saskatchewan Dental Plan. Because of declining school enrollment, most of these schools had an extra room or a vacant classroom in which a dental clinic could be built. Patients in schools adjacent to permanent clinics walk to the clinic if it is within one block or they are transported by car by the dental team or parent.

The permanent dental clinics consist of a large, bright, well-painted room, often with adjoining waiting

room and washroom. All the clinics have increased overhead fluorescent lighting, a ventilation fan and extra electrical plug-ins. Each clinic has a lockable cupboard with a stainless steel sink and counter work area. Located in the school as close as possible to the clinic is a large fixed air compressor. A portable, self-contained dental unit is attached to the compressed air line by means of a quick-connect coupler in the clinic.

Each permanent clinic is furnished with a motorized dental chair and attached light, operator and assistant stools, mobile dental cabinet, sterilizer, amalgamator and X-ray machine wall bracket.

All instruments and supplies are carried from clinic to clinic by the dental teams and dentists. For this purpose a large metal instrument and supplies case is furnished.

Temporary Dental Clinics

Portable equipment in temporary clinics is used to provide dental services in small village schools without

clinics where transportation to the closest permanent clinic is not feasible. Temporary clinics have also been established in those few larger schools in which permanent clinic space is not presently available.

A vacant classroom, a make-ready room, or an infrequently used home economics room is the usual location for a temporary clinic. Using portable equipment, the dental team can provide high quality dental care for children in virtually any well-lit clean school area. A temporary clinic consists of a portable dental chair, fibreoptic light, portable stools, dental unit, portable compressor, and sterilizer, all housed within an adequate room.

Mobile Clinics

In addition to the permanent and temporary clinics, the Dental Plan operates two mobile dental clinics throughout the province during the good weather. Winter conditions in Saskatchewan virtually preclude the use of the motorhome clinics during the winter months. However, during the spring, summer, and fall, they are proving to be invaluable in providing full clinic facilities at some schools in remote locations and in providing X-ray services at many other locations in Saskatchewan. Both motorhomes are self-contained units with their own water and electrical generating systems.

CLINIC DESIGN RATIONALE

The Saskatchewan Dental Plan uses one-chair clinics as the principal type of permanent clinic. In the cities of Prince Albert, Regina and Saskatoon, multiple chair clinics are in operation. These clinics are being used to test the feasibility of transporting patients to large clinics as opposed to treating them in one or two-chair clinics in each school. Prince Albert has a ten-chair clinic to which all the city children are transported for treatment. Regina and Saskatoon each have a four-chair clinic to which children are transported as well as several one-chair permanent clinics.

During the initial planning stages of the Saskatchewan Dental Plan, it was considered better to bring the service to the child than to bring the child to the service. Dental teams save time by having other children readily

available in the classroom if the scheduled child is unable to attend, and by not having to transport the children. Dental teams also appreciate the advantage of treating children in one-chair clinics: children appear to accept treatment more readily in the familiar surrounding of their own school.

At the present time, it appears that the one-chair clinic in the elementary schools is more acceptable to parents and teachers than larger, centralized clinics. Moving the children from their school to a dental clinic in an adjacent school upsets some parents and disrupts classroom schedules. As more age groups are phased into the program, advantages or disadvantages of one type of clinic over another may become more apparent.

EQUIPMENT

The Saskatchewan Dental Plan has several major items of equipment in service. The equipment has been centrally assigned to each region on an allotment basis determined by the number of clinics. Within each region every individual piece of major equipment is under a serial number control system. All equipment is located with the dental nursing team, in a permanent clinic or in the regional office.

Located in each permanent dental clinic is a fully motorized dental chair. For the purposes of the Saskatchewan Dental Plan the gear drive is the mechanism of choice for a dental chair. Hydraulic drives tend to be much heavier than gear drives and hydraulic oil tends to spill and eventually leak from worn hydraulic cylinders. In addition, hydraulic oil also has a tendency to solidify when accidentally subjected to sub-zero temperatures during a power failure. Fixed to each motorized chair is an operating light with a fully articulated arm.

The dental nursing teams use a folding portable dental chair in the temporary dental clinics. This chair is

fabricated from aluminum; its light weight (35 pounds) facilitates transport by Plan personnel. Mounted laterally on the portable chair is an operating light which utilizes a large fibreoptic bundle to conduct an intense white light from the quartz iodide bulb to the oral cavity.

The Plan employs a dental X-ray machine modified to allow it to be separated into two easily portable components — controls and head. In each permanent clinic and most temporary clinics a metal bracket is attached to the wall to support the assembled X-ray machine. Patients are protected from excess scattered radiation by a full lead apron. In order to shield the operator and other personnel in a school clinic, portable X-ray screens are used. The exact location of each X-ray machine and precise placement of lead screens are sanctioned by the Radiation Safety Unit of the Saskatchewan *Department of Labour*. X-ray films are processed in each clinic by means of a portable semi-automatic processing machine that uses standard processing solutions.

Sterilization of instruments is accomplished by two means. A chemiclave is used to sterilize all items except those fabricated from plastic. Plastic items are sterilized in a cold sterilization solution. In the chemiclave, sterilization is accomplished through a combination of heat and a chemical vapour. All instruments or sets of instruments are sterilized in sealed bags and are opened only upon use. The chemiclave is quite light in weight (35 pounds) and thus can be easily transported to a temporary clinic.

All clinics employ a completely mobile and portable self-contained dental unit. Located on the unit are five instruments used in the delivery of dental care. Two of the instruments are dynamic. One is an ultra high speed low torque handpiece and the other is a handpiece of low speed high torque design. A three way syringe on the dental unit provides a stream of compressed air, pressurized water or a combination of both. Two forms of suction are provided on the unit. The first suction is a low volume high vacuum type for purposes of saliva ejection and surgery. The other, a high volume suction, provides good suction for the rubber dam washed field technique used by all dental nurses. The unit also has its own distilled water supply and two separate waste traps for the low and high volume suction.

The dental unit is completely powered by compressed air conducted through one line at 90 P.S.I. The compressed air is supplied in a permanent clinic by a large twin cylinder vertical air compressor. When necessary, these compressors can quite adequately supply four dental units. In temporary clinics, the compressed air is supplied by small, portable, horizontally opposed twin cylinder air compressors. The compressor is placed outside the clinic area and the air conducted through plastic line to the dental unit.

Located in each permanent clinic is a mobile instrument cabinet. The cabinet has multiple drawers for storage of instruments and supplies. The top of the mobile cabinet when used in conjunction with the top of the dental unit provides an adequate work surface for the dental assistant. In a temporary clinic small portable tables are used to provide the required chairside work surface.

The following table summarizes the equipment contained in each permanent and portable clinic. The total cost of equipment in a permanent clinic is \$4,897.97, and in a portable clinic it is \$3,679.49.

Table 1.

**EQUIPMENT IN PERMANENT AND PORTABLE CLINICS,
SASKATCHEWAN DENTAL PLAN,
SEPTEMBER, 1974 — AUGUST, 1975**

Equipment item	Number required per clinic	Manufacturer (model)	Cost per clinic
<i>Permanent Clinic</i>			
Total			\$4,897.97
Air compressor	1	Webster (402-3)	525.00
Amalgamator*	1	Toothmaster (300)	68.78
Dental chair (fixed)	1	Vacudent (P-60-AIBS)	1,156.60
Dental light (fixed)	1	Pelton and Crane (Light Fantastic)	245.70
Dental cabinet	1	Denco (7 drawer)	176.32
Dental unit*	1	ADEC (Sask-Cart)	696.86
Sterilizer (chemiclave)*	1	Harvey (4000)	292.68
X-ray*	1	Siemens (Heliodont 60)	1,417.50
X-ray developer*	1	PROCOMAT (II)	197.40
Dental stools (portable)*	2	Office Specialty (708M)	94.72
Dental x-ray viewer*	1	Illuminator (14 1/8 × 5 3/8)	26.41
<i>Portable Clinic</i>			
Total			\$3,679.49
Air compressor	1	Scripline (¾ H.P. Motor, 6 gal. tank)	415.28
Amalgamator*	1	Toothmaster (300)	68.78
Dental chair (portable)	1	ADEC (c/w Light Post)	272.40
Dental light (portable)	1	Roland (Fibreoptic)	197.46
Dental unit*	1	ADEC (Sask-Cart)	696.86
Sterilizer (chemiclave)*	1	Harvey (4000)	292.68
X-ray*	1	Siemens (Heliodont 60)	1,417.50
X-ray developer*	1	PROCOMAT (II)	197.40
Dental stools (portable)*	2	Office Specialty (708M)	94.72
Dental x-ray viewer*	1	Illuminator (14 1/8 × 5 3/8)	26.41

* These items are common to both permanent and portable clinics and need not be duplicated except in situations where they may be required in two different locations simultaneously.

ENROLLMENT OF ELIGIBLE CHILDREN

Of the 14,347 children in Dental Plan regions who were born in 1968, 10,924 or 76.1 per cent had enrolled by June, 1975. Enrollment in the Oxbow Project by children in other age groups was somewhat lower, 2,146 or 70.1 per cent of the 3,059 eligible children enrolling.

In the summer of 1975, a survey was conducted among parents of non-enrolled children in Saskatchewan Dental Plan regions to determine the reasons for non-enrollment. The survey indicated that the parents of half these children either had recently enrolled them or in-

tended to enroll them for the 1975-76 school year. Thus, roughly 90 per cent of all eligible children born in 1968 were expected to be enrolled by September 1, 1975. Of the remaining 10 per cent, over half were not enrolled because their parents preferred to have their children treated by a private dentist. Less than two per cent of the eligible children were not enrolled because their parents were unaware of the Dental Plan or had not considered enrolling their children.

Table 2.

SASKATCHEWAN DENTAL PLAN ENROLLMENTS, SEPTEMBER, 1974 — JUNE, 1975

Group	Number of invitations sent	Number of children enrolled	Per cent of eligible enrolled	Number of refusals	Per cent refused	Number of no response	Per cent of no response
Total*	17,406	13,070	75.1	203	1.2	4,133	23.7
SDP Regions (children born 1968)	14,347	10,924	76.1	195	1.4	3,228	22.5
Other ages Oxbow Project†	3,059	2,146	70.1	8	.3	905	29.6

* In addition to these totals, 70 Registered Indian children are enrolled in the Plan. All six year old Indian children were eligible provided they were attending non-segregated schools. However, because of a number of circumstances peculiar to this group of children, their participation in the Dental Plan is minimal. Their enrollment figures have therefore been excluded to avoid distortion.

† Six year olds in Oxbow region are included in SDP region figures. These figures are for enrollees aged 3-5 and 7-17.

DENTAL HEALTH OF ENROLLED CHILDREN

As Table 3 below demonstrates, the dental health of children enrolled in the Dental Plan is very poor. Enrollees had, on average, 5.01 decayed teeth and only 1.10 filled teeth. Almost 40 per cent of enrollees had at least one decayed, missing, or filled permanent tooth.

Table 3

**DENTAL HEALTH OF ENROLLED CHILDREN,
SASKATCHEWAN DENTAL PLAN,
SEPTEMBER, 1974 — AUGUST, 1975**

Dental health indicators	Average number or per cent per child
Decayed, extracted, filled-deciduous teeth (DEF)	5.61
Decayed	4.11
Extracted	0.44
Filled	1.06
Decayed, missing, filled-permanent teeth (DMF)	0.94
Decayed	0.90
Extracted	0.00
Filled	0.04
Total DEF + DMF	6.55
Children with DMF of 0	61.78%
Children with DMF + DEF of 0	12.00%
Decayed deciduous and permanent teeth.	5.01
Filled deciduous and permanent teeth	1.10
Ratio filled deciduous and permanent teeth to DMF + DEF . .	0.17
Ratio missing and extracted to filled teeth.	0.40
Permanent teeth erupted and not decayed	3.36
Deciduous teeth filled and redecayed.	0.13

SERVICES PROVIDED BY THE SASKATCHEWAN DENTAL PLAN

From September 1, 1974, to August 31, 1975, oral examinations were given to 12,490 enrolled children. Dental prophylaxis was provided to 11,347 children, topical fluoride to 11,120 children, and individual oral hygiene instruction to 10,405 children. A total of 45,873 amalgam restorations were performed and 4,046 extractions. A complete list of services provided by clinical staff of the Saskatchewan Dental Plan is given in Tables 4 and 5.

Table 4.

**SERVICES PROVIDED BY CLINICAL STAFF,
SASKATCHEWAN DENTAL PLAN,
SEPTEMBER, 1974 — AUGUST, 1975***

Services	Number
Parent contacts	
In person	7,689
By phone	8,741
By letter	3,490
Diagnostic services	
Initial oral examination	12,126
Emergency oral examination	232
Specific oral examination	132
Recall examination	387
Radiographic services	
Periapical radiographs	8,973
Bitewing radiographs (single film)	22,680
Panoramic radiographs	33
Preventive services	
Dental prophylaxis	11,347
Polish amalgam	4,745
Topical fluoride	11,120
Nutritional counsel (individual)	783
Oral hygiene instruction (individual)	10,405
Restorative services	
Amalgam restorations (silver)	45,873
Composite restorations (white)	776
Stainless steel crowns	2,054
Pulp therapy services	
Direct pulp cap	790
Indirect pulp cap	522
Pulpotomy	2,729
Surgical services	
Removal of erupted tooth	4,046
Removal of residual roots (soft tissue coverage)	74
Initial management of completely evulsed tooth	9
Space maintainers and minor orthodontic services	
Band and loop type	168
Lingual arch type	35
S.S. Crown and loop type	73
Removable acrylic type	6
Tooth movement and space regaining	34
Prevention of thumb-sucking	2
Occlusal adjustment	46

* Includes six year olds in the Swift Current region *and* children aged 3-5 and 7-17 in the Oxbow region.

Table 5.

**NUMBER OF PREVENTIVE SERVICES PROVIDED BY GRADE,
SASKATCHEWAN DENTAL PLAN,
SEPTEMBER, 1974 — AUGUST, 1975***

Grade	Number of services	Group toothbrush instruction	Brush-ins zircate paste	Brush-ins zircate paste and fluoride rinse	Chairside prophylaxis and fluoride application
Total	63,736	53,163	1,058	7,169	2,346
Pre-School	8	1	—	—	7
Kindergarten	5,117	4,869	—	—	248
Grade I†	11,986	11,485	—	187	314
Grade II	10,175	9,455	—	416	304
Grade III	9,891	9,069	6	489	327
Grade IV	5,614	4,041	223	1,079	271
Grade V	5,966	4,321	177	1,162	306
Grade VI	5,967	4,044	350	1,332	241
Grade VII	4,379	2,824	124	1,256	175
Grade VIII	4,633	3,054	178	1,248	153

* These services were provided in visits to a total of 710 schools.

† Group toothbrush instruction and brush-ins include children enrolled in the Saskatchewan Dental Plan.

REFERRALS AND EMERGENCY SERVICES

The costs of services provided by private practitioners to children enrolled in the Dental Plan are not normally covered by the Plan. The two exceptions are referred services and emergency services.

Referrals to private practitioners are of two types. A permanent referral is given to a patient when the examining dentist feels that the management of the patient is beyond the capability of the dental nurse. Into the category of patient management fall individuals with such problems as mental or physical handicaps, and medical or emotional problems. Dental Plan dentists are qualified to deal with such situations, but intensive treatment of special cases is not their primary role in the Plan. Rather, their role is to examine all enrolled children and to supervise treatment. It is therefore considered preferable to refer children requiring extensive management to a private practitioner, who can devote more time to them and provide more intensive care.

Enrolled children are also given specific referrals to private practitioners for discrete dental problems beyond

the capability of the dental nurse. Into this category fall such services as treatment of minor orthodontic problems and extensive surgical procedures.

Private practitioners also provide emergency services to enrolled children. Emergency services are defined as the relief of pain, treatment of infection, or control of haemorrhage. In emergency cases, the patient does not need to be referred by a Dental Plan dentist in order for service costs to be covered.

In addition, ten private practitioners provided dental care to enrolled children on a contract basis. This arrangement was made only in certain rural areas of the province.

The following table outlines the types and costs of referred and emergency services provided by private practitioners to children enrolled in the Saskatchewan Dental Plan.

Table 6.

REFERRALS AND EMERGENCY SERVICES PROVIDED BY PRIVATE PRACTITIONERS TO CHILDREN ENROLLED IN THE SASKATCHEWAN DENTAL PLAN, SEPTEMBER, 1974 – AUGUST, 1975

Type of service	Total		Referral		Emergency	
	Number	Cost	Number	Cost	Number	Cost
Total	962	\$10,916.04*	496	\$5,494.05	466	\$4,179.75
Initial oral exam	54	483.00	51	465.00	3	18.00
Specific oral exam	21	147.00	19	133.00	2	14.00
Periapical X-rays	54	213.75	28	104.25	26	109.50
Bitewing X-rays	40	142.00	24	87.50	16	54.50
Panoramic X-rays	2	30.00	2	30.00	0	0.00
Cephalometric X-rays	1	15.00	1	15.00	0	0.00
Diagnostic models	1	6.00	1	6.00	0	0.00
Topical fluoride	18	180.50	17	178.50	1	2.00
Oral hygiene instruction	8	48.00	8	48.00	0	0.00
Fissure sealants	4	8.00	4	8.00	0	0.00
Amalgam restorations	288	3,298.05	160	1,832.80	128	1,465.25
Composite restorations	3	37.50	0	0.00	3	37.50
Stainless steel crowns	26	477.00	17	321.00	9	156.00
Pulpotomy	60	459.00	21	161.00	39	298.00
Removal of erupted teeth	349	2,931.00	111	936.00	238	1,995.00
Surgical removal of tooth	1	35.00	1	35.00	0	0.00
Tooth movement and/or space regaining	21	974.00	20	944.00	1	30.00
Prevention of thumb sucking	2	135.00	2	135.00	0	0.00
Observation (orthodontics)	9	54.00	9	54.00	0	0.00
Other services (undefined)	—	1,242.24	—	—	—	—

* An additional \$12,191.80 was paid to ten dentists in private practice on contract basis for a total cost of \$23,107.84 for referrals and emergency services.

EXPENDITURES

In a review of the following financial statements of the Saskatchewan Dental Plan, certain points should be noted:

1. Administrative, clerical and maintenance staff have been hired at a level able to support the Saskatchewan Dental Plan when all age groups (3-12) are enrolled. It is not feasible to employ part-time administrative and maintenance staff in the regions; however, they have been fully occupied in activities related to a new program such as public relations, establishment of new clinics, orientation of new staff, and the distribution and setting up of new equipment.
2. The decision to phase in the program by age group across the province rather than by all age groups region by region results in equality of benefits in all regions. It does result in higher staff travel and
3. Sufficient dental equipment was purchased to equip the 197 permanent dental clinics utilized during the first year of the program. As the number of enrolled children increases the depreciation expense per child will decrease. Additional dental equipment will need to be purchased as new dental clinics are established in more elementary schools.
4. Certain costs such as clinic space in schools and the related utility costs are not included because these facilities are provided without charge by school systems and because in many instances the space is shared by other school related activities. Office space costs are also excluded.

Statement 1

SASKATCHEWAN DENTAL PLAN STATEMENT OF PAYMENTS — OPERATING EXPENSES for the Period SEPTEMBER 1, 1974 TO AUGUST 31, 1975

ADMINISTRATION (Regina Head Office)	
Salaries and Honoraria	\$ 181,954.40
Travel	14,601.22
Public Information and Advertising	44,681.72
Office Expenses	18,840.79
Other Expenses	81,441.46
Sub Total	\$ 341,519.59
PROGRAM EXPENSES	
Salaries	\$1,348,235.83
Travel	196,393.86
Professional Dues and Staff Training	4,238.32
Office Expenses	43,871.24
Private Practitioner Services	23,107.84
Dental Supplies	264,357.56
Taxes and Licences	19,866.72
Grants and Contributions	93,096.00
Other Expenses	25,258.30
	\$2,018,425.67
Total Operating Expenditure	2,359,945.26 (See Statement 3)
Capital Equipment and Major Repair Parts	467,397.07
Total Expenditure	<u>\$2,827,342.33</u> (See Statement 2)

Statement 2

**EXPENDITURE STATEMENT
RECONCILIATION TO PUBLIC ACCOUNTS ⁽¹⁾**

	1974-75 Public Accounts	1974-75 Program Year
Expenditure April 1/74 — Aug. 31/74	\$1,047,518.25	(2)
Expenditure Sept. 1/74 — March 31/75	<u>1,598,184.49</u>	\$1,598,184.49
Total (Public Accounts Page F325)	<u><u>\$2,645,702.74</u></u>	
Expenditure April 1/75 — Aug. 31/75		\$1,229,157.84 ⁽³⁾
Total Expenditure Sept. 1/74 — Aug. 31/75 (from Statement 1)		<u><u>2,827,342.33</u></u>

-
- (1) This reconciliation is necessary because the Saskatchewan Dental Plan operates on the school year (begins September 1) rather than on the government fiscal year (begins April 1).
 - (2) Expenditures to August 31, 1974 represent certain start up expenditures and initial inventories, and include fixed assets and major repair purchases of \$658,483.65.
 - (3) These expenditures will be included in Public Accounts for the fiscal year 1975-76. Figures were obtained from Department of Finance monthly expenditure statements relating to the Saskatchewan Dental Plan.

Statement 3

ADJUSTMENT TO CASH EXPENDITURE STATEMENTS SHOWN IN STATEMENT 1 TO DETERMINE ACTUAL COSTS OF SERVICES RENDERED TO ENROLLED CHILDREN, SEPTEMBER 1, 1974 TO AUGUST 31, 1975

TOTAL OPERATING CASH EXPENDITURE		\$2,359,945.26
Dental supplies inventory at September 1/74 ..	\$ 92,908.79	
Dental supplies inventory at August 31/75	(216,183.67)	
Major repairs inventory at September 1/74	27,315.65	
Major repairs inventory at August 31/75	(14,875.96)	
Equipment losses	2,437.51 ⁽¹⁾	
Grant to Swift Current Health Region for preventive dental health services to 5,116 children not enrolled in Saskatchewan Dental Plan of \$6.00 each	(30,696.00)	
Preventive Dental Services provided by Saskatchewan Dental Plan to 50,596 children not enrolled in Plan at \$6.00 each	<u>(303,576.00)</u>	
		\$1,917,275.58
Depreciation ⁽²⁾		<u>162,692.95</u>
Actual cost of services		<u>\$2,079,968.53</u>
Average cost per enrolled child.....	\$158.29 ⁽³⁾	

(1) Equipment destroyed by school fire in Preeceville March 25, 1975

(2) Opening inventory — fixed assets and major repairs	\$ 658,483.65	
Purchases during year	467,397.07	
		<u>\$1,125,880.72</u>
Major repairs — not depreciable	(38,823.54)	
Equipment losses	<u>(2,437.51)</u>	
Depreciable fixed assets	<u>\$1,084,619.67</u>	

Depreciation calculated at 15 per cent of depreciable
fixed assets equals \$162,692.95.

(3) Calculated by dividing total actual cost of services
(\$2,079,968.53) by the number of students enrolled
in Plan (13,140).