



# Saskatchewan Drug Information Service

## Annual Report

April 1, 2006 – March 31, 2007



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## EXECUTIVE SUMMARY

The Saskatchewan Drug Information Service (SDIS) received 4707 requests for information between April 1<sup>st</sup>, 2006 and March 31<sup>st</sup>, 2007; 2621 from healthcare professionals and 2086 from consumers. This is a decrease of eight percent compared with the total number of requests in the 2005 – 2006 year. .

The most frequent callers to the healthcare professional line were community pharmacists, accounting for 65 % of information requests. This was, however, a substantial decrease (255 calls – 13 %) as compared to the previous year and suggests the need to become more proactive in promoting the service to community pharmacists. Calls to the SDIS professional line were made from 87 different Saskatchewan communities. The highest percentage of calls continue to originate in Saskatoon increasing from a low of 31 % in the previous year to 38 % this year. The type of drug information most commonly requested involved drug interaction, therapeutic use, side effects, dosage and product availability. SDIS staff continued to provide timely service to callers, responding to 88 % of calls the same day the requests were submitted.

The consumer line responded to 2086 requests for information, 119 fewer than in the previous year. Caller demographics were very similar to those in the previous year: 81 % of callers were women; 54 % were between the ages of 30 and 65 years. Requests for information came from all of the Saskatchewan Regional Health Authorities (RHAs) with the percentage of calls originating from each RHA remaining relatively constant. The highest number of calls were from the Saskatoon RHA (844 – 40.5 %) followed by the Regina Qu'Appelle RHA (410 – 19.5 %). The most common questions concerned side effects, therapeutic use, drug interaction, general product information and dosage. Research time needed to answer the majority of questions was five minutes and discussion time was five to ten minutes. Referrals from the HealthLine were the source of 44 % of consumer calls, slightly less than last year. This suggests that the influence of the HealthLine on the consumer line call volume at current hours of operation may have peaked. Almost one-third of calls (30 %) were from previous callers, implying that consumers are satisfied with the information provided by the service.

SDIS consultants were active in several related areas. Four issues of the SDIS Drug Information Newsletter were distributed to Saskatchewan pharmacists and three Frequently Asked Question information memos were posted on the SDIS website. Consultants provided drug interaction lectures, drug toxicology lectures, drug information tutorials and experiential training in the specialty of drug information to curricular undergraduate education at the College of Pharmacy and Nutrition, University of Saskatchewan. In addition, SDIS consultants exhibited posters and gave oral presentations at various pharmacy and medical association conferences.

The ninth meeting of the Advisory Board was held August 9<sup>th</sup>, 2006. The Board assists SDIS in strategic planning and meeting goals and objectives. On-going priorities for SDIS in 2007 - 2008 are: maintaining or increasing call volumes for both the healthcare professional and consumer arms of the service; providing timely and quality service to callers; promoting collaboration with the HealthLine and Primary Health Care; improving the SDIS website; facilitating networking among Canadian drug information services; continuing to incorporate call-backs into the regular routine of the service; and updating the SDIS business plan

New initiatives include: a retreat to plan promotional strategies; expanding SDIS consumer information services to cover evenings and week-ends; a research project evaluating a role for drug information services in chronic disease care; developing quality assurance processes; and increasing awareness of the consumer service via oral presentations at various healthcare group meetings.

## **1. INTRODUCTION**

### **1.1 Background**

In September of 1974, the College of Pharmacy and the College of Medicine at the University of Saskatchewan established Dial Access, the first province-wide drug information service in Canada. This telephone inquiry service continues to be available to all healthcare professionals in Saskatchewan as an arm of the Saskatchewan Drug Information Service. A toll-free number (1-800-667-3425) is maintained to provide easy access for callers in all areas of the province. The service is staffed Monday to Friday, 8:30 AM to 4:30 PM, by licensed pharmacists who research and respond to queries. Voice mail facilities and question templates on the SDIS website allow callers to leave queries at their convenience 24 hours a day.

The Consumer Drug Information Centre was initiated in 1990 as a one-year pilot project for residents of Saskatoon and area. Funding for the project was provided by a grant from the Saskatchewan Minister of Health based on a recommendation of the Advisory Committee on the Safe Use of Medicines. In January of 1991, the centre was expanded to cover the entire province via a toll-free telephone line (1-800-665-3784) and approval was granted for subsequent years of operation. The consumer information line is open Monday to Friday, 8:00 AM to 5:00 PM. After hours queries can be left on voicemail or submitted on-line using the consumer question template on the SDIS website.

In 2001, the Dial Access Drug Information Service and the Consumer Drug Information Centre were consolidated into one organization, the Saskatchewan Drug Information Service (SDIS) in order to simplify administration and maximize the use of available resources.

### **1.2 Goals and Objectives of the Service**

#### **1.2.1 Healthcare Professional Information Service**

- Upon request, provide pharmacists and other healthcare providers in Saskatchewan access to objective, current and concise information on drugs and drug therapy, in a timely manner.
- To provide continuing education related to drugs and drug therapy to healthcare professionals in the province.
- To serve as an experiential training site for pharmacy students, pharmacy residents and postgraduate students.
- To contribute to the advancement of knowledge in the area of drug information.

### **1.2.2 Consumer Information Service**

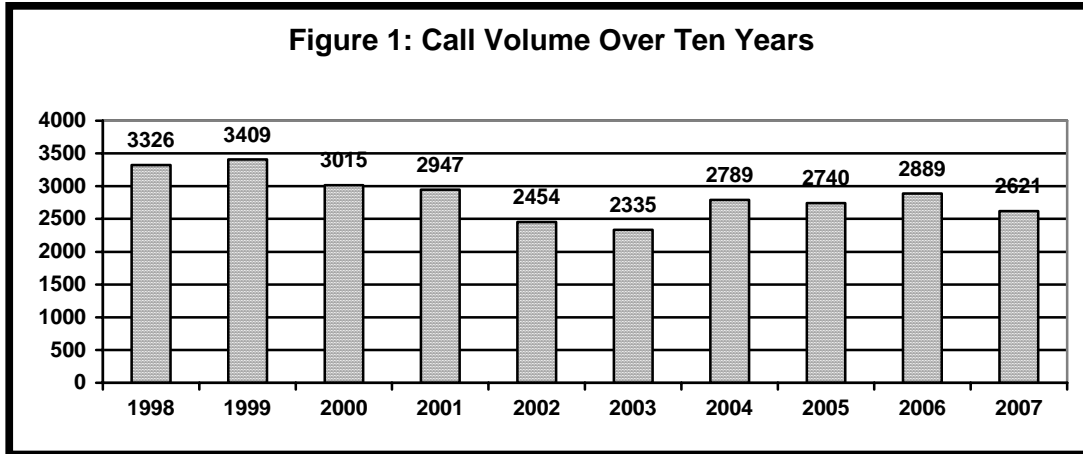
- To provide Saskatchewan healthcare consumers with immediate access to objective, current and concise information on drug-related questions.
- To direct patients with serious adverse reactions and other problems to adequate medical follow-up.
- To provide and enhance educational and training programs for a variety of audiences including consumers and health professionals.
- To develop a comprehensive database of information by gathering epidemiological information regarding drug-related problems in the community. This information can be used to assist regional planning agencies.
- To enhance the public image of healthcare professionals, in particular pharmacists.

## 2. UTILIZATION STATISTICS: APRIL 2006 – MARCH 2007

### 2.1 Healthcare Professional Service

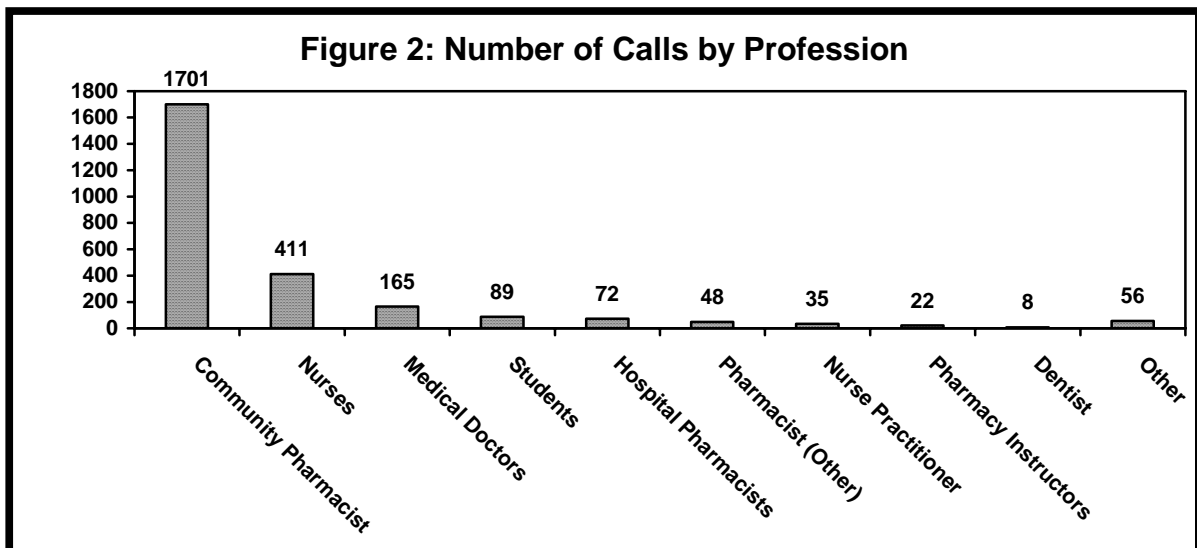
#### a) Number of Calls Received

The healthcare professional line received **2,621** requests for information during the 2006 – 2007 fiscal year, 268 (9 %) fewer than in the previous year. Call volumes for the last 10 years are shown in Figure 1.



#### b) Profession of Callers

As usual, the majority of calls (65 %) were from community pharmacists. There were, however, 255 fewer calls from community pharmacists this year. This was the major factor in the decrease in professional line calls. Nurses (public health, travel clinics, etc.) were the next largest group accounting for 16 % of the professional calls, followed by physicians at 6 % and hospital pharmacists at 3.0 %. Figure 2 details the number of calls by profession.



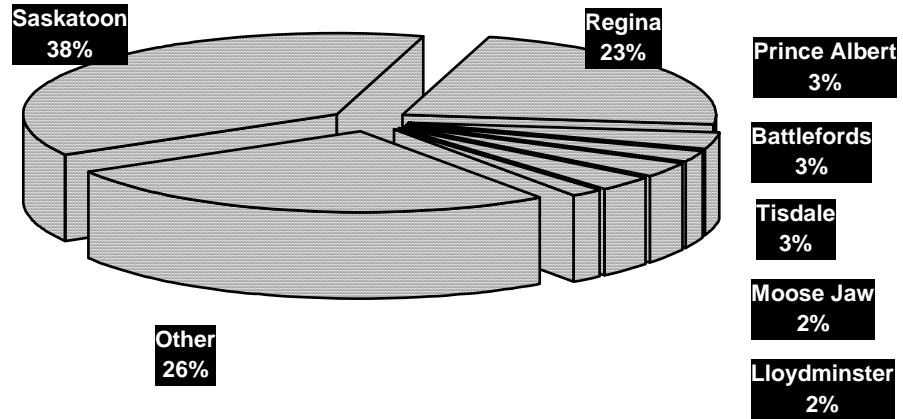
### c) Geographical Location of Callers

As detailed in Table I, requests for information over the past year came from 87 different communities across Saskatchewan. There were also 32 calls from outside of Saskatchewan. The highest percentage of calls continues to originate in Saskatoon, increasing from a low of 31 % last year up to 38 % this year. The percentage of calls from Regina increased slightly from 21 % to 23 %. Figure 3 illustrates the frequency of calls by location.

**Table I: Location of Healthcare Professional Service Callers**

<b>SASKATCHEWAN</b>			
<b>Number of Calls</b>	<b>Community</b>	<b>Number of Calls</b>	<b>Community</b>
982	Saskatoon	24	Indian Head
584	Regina	23	Kerrobert
83	Tisdale	21	Stoney Rapids
78	Prince Albert	20	Swift Current
71	Humboldt	15	Rosetown
59	Moose Jaw	12	Carrot River
54	North Battleford	11	Leader, Imperial, Shellbrook
52	Unity	10	Buffalo Narrows, Kindersley, Turtleford, Ile-a-la-Crosse
40	Yorkton	9	Spiritwood, Wadena
40	Lloydminster	8	Biggar, Melville, Kelvington
37	Nipawin	7	Duck Lake, Wynyard, Outlook, Wakaw
34	Melfort	6	Langenburg, Hafford, Estevan, Assiniboia
30	Fort QuAppelle	5	St. Walburg, Rosthern
29	Weyburn	4	Cut Knife, Wolseley, Foam Lake, Davidson, Carnduff, Maidstone, Oxbow, Avonlea, Radville, Preeceville, Watrous
27	Battleford	3	Big River, La Ronge, Kipling, Meadow Lake
2	Christopher Lake, Paradise Hill, Watson, Broadview, Ituna, Lanigan, Nokomis, Luseland, Dinsmore		
1	Birch Hills, Arcola, Coronach, Carlyle, Blaine Lake, Black Lake, Milden, Shaunavon, Rocanville, Stoughton, Redvers, Pinehouse Lake, Moosomin, Esterhazy, Martensville, Lafleche, Wawota, Gull Lake, Eston		
<b>OUT OF PROVINCE</b>			
<b>Number of Calls</b>	<b>Province / Country</b>		
21 Out of Province	Calgary AB, Devon AB, Brandon MB, Flin Flon MB, Roblin MB, Verdon MB, Ottawa ON, Vancouver BC, HAY River, NWT, Yellowknife NWT, Bowanville, ON, Charlottetown, PEI		
11 Out of Country	Bangkok, Thailand; Henderson, USA: Houston, USA; Lakewood, Ohio, USA; Santa Clara, USA; Port Harcourt, Nigeria; Ubth, Nigeria; Collingwood, Australia; Germany; Abu-Dhabi, United Arab Emirates		

**Figure 3: Origin of Healthcare Professional Calls**



**d) Contact Method**

Most of the questions (92 %) were submitted by telephone. Of these, 1875 (78 %) were taken in person by drug information consultants and 535 (22 %) were left on voicemail. One hundred and seventy-nine questions (7 %) were received by e-mail or via the website.

**e) Nature of Information**

The most common types of questions posed to the service were regarding drug interaction, therapeutic use, side effect / adverse reaction, dosage and product availability. A complete list of the nature of professional calls by number and frequency is shown in Table II.

**Table II: Nature of Information Requested by Healthcare Professionals**

Nature of Request	Number	Percentage
Drug Interaction	391	15
Therapeutic use	358	14
Side Effect / Adverse Reaction	276	10
Dose	248	9.5
Availability	246	9.5
General Information	181	7
Formulation	157	6
Contraindication	129	5
Administration	103	4
Identification	79	3
Pregnancy	75	3
Lactation	72	3
Stability	42	1.5
Kinetics	36	1.5
Coverage / legalities	29	1
Other	199	7

The percentage of questions involving herbal products this year was 6.7%, slightly lower than in the previous year (7.1 %).

f) Time Required to Answer Requests

The length of time required to research questions varied from zero to five hours. Table III provides a comparison of research times over the past 3 years. Responses to most questions (80%) were formulated within 30 minutes. Answers were provided on the same day as the query for the majority (88 %) of callers. When appropriate, additional documentation concerning the request was sent to the caller by mail, facsimile or email.

**Table III: Time Required to Research Requests**

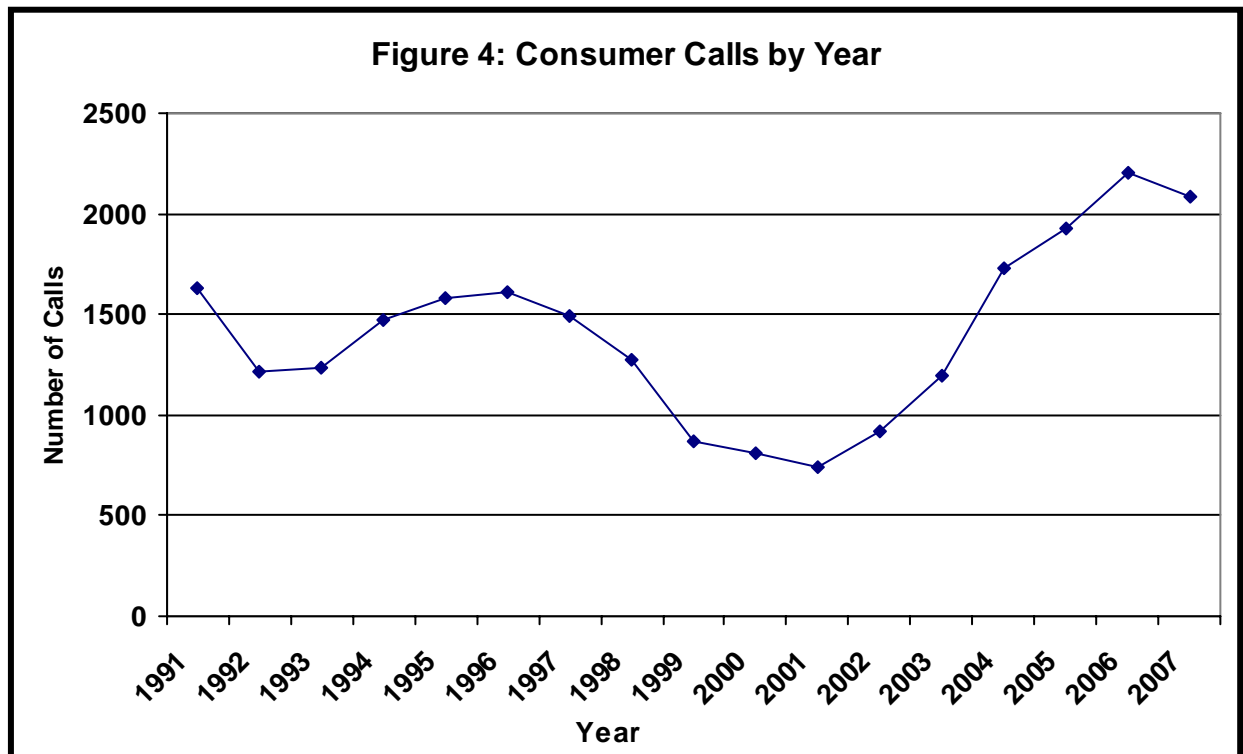
Time Required	Percentage of Requests			
	2003-2004	2004-2005	2005-2006	2006-2007
5 min. or less	30 %	35 %	37 %	37 %
6 – 15 min.	42 %	25 %	20 %	19 %
16 – 30 min.	19 %	28 %	24 %	24 %
31 – 60 min.	7.5 %	11 %	12.5 %	13 %
> 60 min.	1.5 %	1.5 %	6.5 %	7 %



## 2.2 Consumer Service

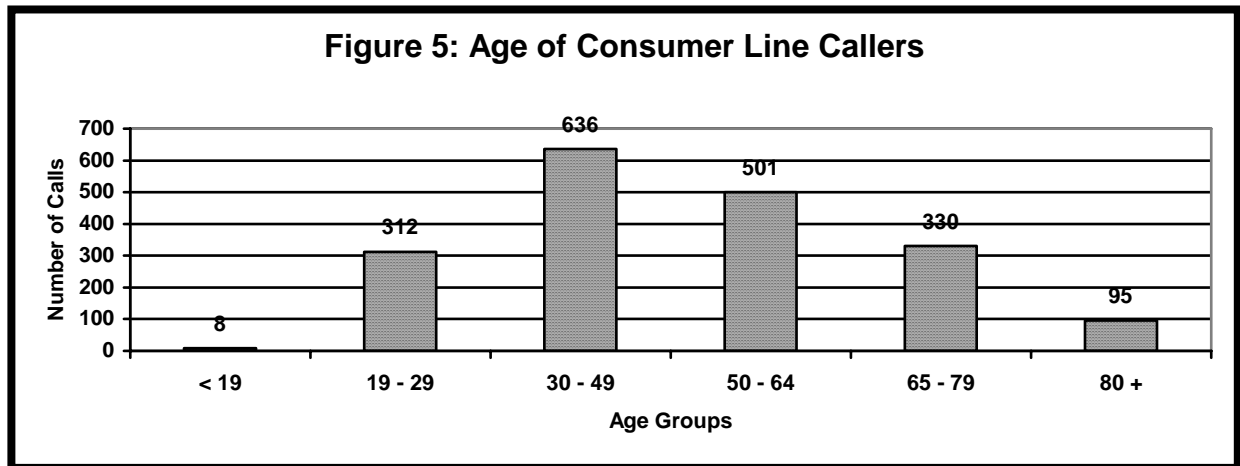
### a) Number of Information Queries

There were **2086** consumer queries in 2006 – 2007 compared to 2205 queries during the corresponding time period in 2005 – 2006. Figure 4 illustrates the trends in annual call totals since the inception of the consumer information service in 1991. The consumer line hours of service were reduced due to lack of funds from July 1999 through to September 2001 contributing to the trend of decreasing numbers of calls that began in 1997. When the consumer and healthcare lines were amalgamated into the Saskatchewan Drug Information Service (SDIS) in 2001, regular hours of service and promotion of the consumer line were resumed and the number of calls steadily increased. Recent increases, however, can be mainly attributed to referrals from the HealthLine, the 24 hour nurses health advice line initiated in August, 2003 by Saskatchewan Health. (See Figure 7.) The decrease in the number of consumer queries this year may indicate that this effect has reached its maximum for the current hours of operation of the consumer line.



### b) Caller Demographics

As in previous years, the majority of callers were women (81 %). The age pattern of callers also remained relatively the same as in the previous year: the highest percentage of calls (30 %) were from persons in the 30 – 49 year old age group, the next highest (24 %) from the 50 – 64 year old group followed by the 65 – 79 year old group (16 %) and the 30 – 49 year old group (15 %). Figure 5 illustrates the age distribution of callers.



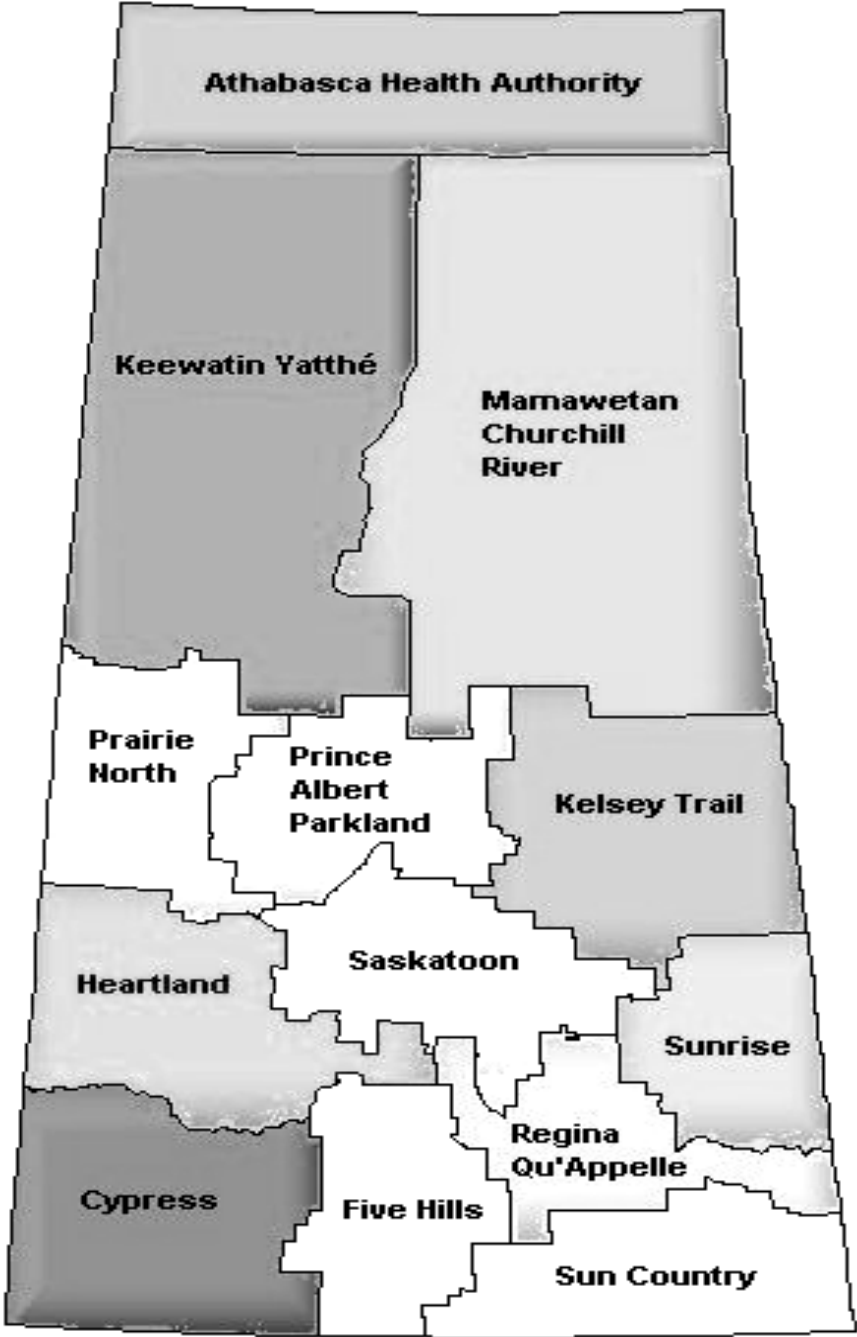
c) Geographical Location of Callers

The highest percentages of calls were from Saskatchewan’s two largest cities, Saskatoon (737 calls – 35 %) and Regina (342 calls – 16 %). The remainder originated in more than 200 different communities from all twelve of the Saskatchewan Regional Health Authorities (Figure 6). Healthcare consumers within the Saskatoon Regional Health Authority continue to make the largest percentage of calls (40.5 %) to SDIS. This figure, however, has been declining which suggests that the service is receiving calls from a wider range of communities. Regina Qu’Appelle was the next highest source of calls at 19.5 %. See Table IV for a detailed breakdown of calls by Regional Health Authority.

**Table IV: Consumer Calls by Regional Health Authority**

Regional Health Authority	Number of Calls	Percentage of Total Calls
Saskatoon	844	40.5
Regina Qu’Appelle	410	19.5
Sunrise	121	6.0
Cypress	95	4.5
Prince Albert Parkland	86	4.0
Prairie North	82	4.0
Five Hills	76	3.5
Sun Country	75	3.5
Heartland	70	3.5
Kelsey Trail	60	3.0
Mamawetan Churchill River	26	0.5
Keewatin Yatthe	11	0.25
Athabasca	1	0.05
Outside Saskatchewan	8	0.5
Unknown (Anonymous)	121	6.0

Figure 6: Saskatchewan Regional Health Authorities



#### d) Contact Method

Most consumers submitted questions by telephone (97 %). Ninety percent (1827) of these were taken in person by a drug information consultant and the remainder (195) were left on the voicemail system. The number of questions submitted by email decreased from 60 last year to 43 this year.

#### e) Nature of Information Requested

The most frequent requests for information from consumers were in regards to side effects / adverse reactions (22 %), therapeutic use of medication (15 %), drug interactions (12 %), general information (11 %) and dosage (7 %) (See Table V). Twelve percent of requests involved information about herbal products compared to 10.5 % last year.

**Table V: Summary of Calls by Nature of Information**

Nature of Request	Number of Calls	% of Total
Side effects / Adverse reactions	467	22
Therapeutic use	308	15
Drug Interactions	246	12
General Information	225	11
Dosage	142	7
Pregnancy	109	5
Lactation	107	5
Administration	74	3.5
Drug Abuse	58	3
Availability	52	2.5
Formulation	48	2.5
Coverage / legalities	40	2
Contraindications, stability, identification, kinetics, toxicity, pharmacology, compatibility, new products		≤ 1 % each
Other	66	3

#### f) Potential Severity of Inquiry

All consumer requests for drug information are subjectively ranked as to the potential severity of the situation from which the question arises. Most of the calls (1858 – 89 %) were classified as “not serious”. In instances where requests were thought to be “potentially serious” (190) the patient was strongly encouraged to contact his/her physician or the appropriate healthcare professional. “Serious” calls (4) were referred immediately to the Poison Control Centre or to the nearest hospital emergency department.

g) Time Required to Answer Requests

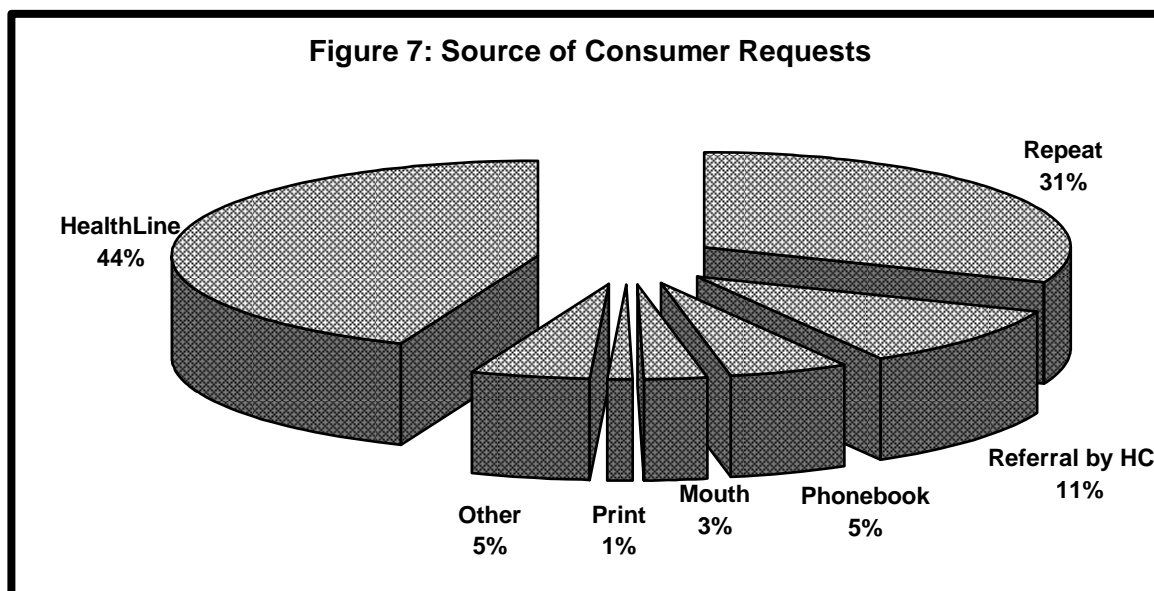
Table VI provides a detailed breakdown of the time required to research and discuss consumer questions. When requested, additional information was sent to callers by mail or facsimile.

**Table VI: Time Required for Question Research / Discussion with Caller**

Time Required Per Question	Research	Discussion
0 – 5 minutes	1514 (72 %)	1466 (70 %)
6 – 10 minutes	210 (10 %)	489 (23 %)
11 – 15 minutes	77 (4 %)	65 ( 3 %)
16 – 30 minutes	222 (11 %)	86 ( 4 %)
31 – 60 minutes	57 (3 %)	3 (0.01 %)
More than 60 minutes	3 calls	0

h) Source of Consumer calls

To determine the most effective strategies for promotion of the SDIS consumer line to Saskatchewan residents, callers are asked how they learned about the service. Figure 7 summarizes the answers provided to that question in 2006 – 2007. Although the number of callers referred from the HealthLine and the number of repeat callers were somewhat lower than in the previous year, the proportion of calls in each category remained fairly constant.



### HealthLine Referrals

The HealthLine refers callers with questions about drugs and drug-related therapy to their physician, their pharmacy and the SDIS consumer line. Since the establishment of the HealthLine August 1, 2003, referrals from this line have become the most common source of consumer calls. Forty-four percent of callers (918) reported being referred to SDIS by the HealthLine.

### Repeat Callers

Repeat calls accounted for 31 % (652) of the inquiries on the consumer line. This suggests that utilization increases once consumers are aware of the service and that consumers are satisfied with the information provided by the consumer line drug information consultants.

### Professional Referrals

Referrals by healthcare professionals (other than HealthLine nurses) were responsible for 11 % (221) of calls made to the consumer line. SDIS consultants continue to encourage pharmacists to contact the service on the patient's behalf rather than recommending the patient call him/herself.

### Phone Books

Listings in phone books continue to be a modestly effective means of directing Saskatchewan residents to the consumer information line. Approximately 5 % of callers (112) reported they had learned about the service by coming across the consumer line number in the phone book.

### Print

We did a minimal amount of promotion for the consumer line because we felt that referral by the HealthLine nurses was providing adequate advertisement of the service. Consequently only 23 callers became aware of the service through the print medium.

## **2.3 Summary of Utilization Statistics**

Overall SDIS received a total of **4707 calls** in the 2005 – 2006 year, a decrease of 8 % (387 calls) compared to last year's total. This decrease was largely due to fewer community pharmacists utilizing the healthcare professional line. On the consumer line, there were fewer referrals from the HealthLine and fewer repeat callers.

## **3. SDIS PERSONNEL 2006 – 2007**

Several staffing changes occurred last year. Priya Sharma left SDIS to move to England. We were very sorry to see her leave but wish her all the best in her new home and career. At the same time we are pleased to welcome Gary Berg who has taken over Priya's position on the consumer information line and Lisa Hupka who is doing relief work on both the healthcare professional and consumer lines. As of March 31, 2007, the SDIS personnel profile was as follows:

- Director: Dr. Yvonne Shevchuk PharmD, BSP
- Manager: Karen Jensen MSc, BSP
- Healthcare professional DI consultant: Carmen Bell BSP
- Consumer DI consultants: Gary Berg BSP, Karen Jensen MSc, BSP
- Casual staff: Barbara Pollock BSP, Lisa Hupka BSP

## **4. ADDITIONAL SDIS ACTIVITIES**

### **a) Follow-up calls**

SDIS drug information consultants followed up on 28 calls in 2006 – 2007. An ongoing objective of the Service is to increase the percentage of follow-up calls. The type of information provided by follow-ups gives a clearer assessment of the impact of the Drug Information Service on patient outcomes.

### **b) Frequently Asked Question (FAQ) information**

SDIS staff prepared the following FAQ information memos:

1. Depot Neuroleptics
2. Hoodia for Weight Loss: Dispelling the Hype
3. Cardiovascular risk of COX-2 Selective and Non-Selective NSAIDs

FAQs were posted on the SDIS website under Hot Topics. The article on NSAIDs was also faxed out to Saskatchewan pharmacies by the Saskatchewan College of Pharmacy.

### **c) Newsletters**

Four issues of the SDIS Drug News were mailed to Saskatchewan pharmacists in the 2006 – 2007 fiscal year:

1. Combinations of Alpha-Adrenergic Blockers and 5-Alpha Reductase Inhibitors for BPH
2. Natural Weight Loss Products – NHPD Regulations
3. Nicotine Replacement Therapy During Pregnancy and Lactation
4. New Drugs: Ciclesonide and Varenicline

The newsletters were also posted on the SDIS website.

### **d) Consultation / Contracts**

- SDIS contracted with the Lung Association of Saskatchewan to review and update information in the drug therapy section of the Canadian Lung Association website. This contract was completed in July 2006.

### **e) Undergraduate Education**

- NUTR 440.6: Clinical Nutrition – 1 lecture on “Food – Drug Interaction” (*K.Jensen*).
- PHAR 372.2: Research Methods and Evidence-Based Practice – computer lab tutorials on “Electronic Drug Information Resources” and “Evaluation of Internet Information” (*K. Jensen*).
- PHAR 417.4: Management in Pharmacy - 1 lecture on “Women in Pharmacy” (*K. Jensen*).
- PHAR 418.2 Issues in Pharmacy I – 4 lectures on toxicology (*C. Bell*).
- PHAR 455.7: Pharmacotherapeutics I - 3 lectures on “Principles of Drug Interaction” (*K. Jensen*); 2 tutorials on drug interaction (*C. Bell*).
- PHAR 472.2: Evidence-Based Practice – Computer lab tutorials on “Evidence-Based Medicine Resources” (*K. Jensen*) and “Collecting Data for a Drug Information Request” (*C. Bell, K. Jensen*); 1 lecture on “Drug Information for Consumers” (*K.Jensen*).

- PHAR 400.1: Pharmacy Skills IV – Orientation and supervision of third year students (individually or in pairs) in an introductory experience in drug information service.
- PHAR 557.6 Pharmacotherapeutics III - 3 lectures on toxicology (*C.Bell*).
- PHAR 580.16: Structured Practice Experience – SDIS provided a specialty practice site for four fourth year students' Structured Practice Experience Program rotations.

#### **f) Post-graduate Education**

- SDIS provided a drug Information rotation site for a hospital resident from the Regina Qu'Appelle Health Region in December, 2006.

#### **g) Presentations**

Oral presentations by SDIS staff are listed below:

- In-service orientation on the Consumer Drug Information Service to new nursing staff at the HealthLine Call Centre in Regina, September 2006. (*K. Jensen*).
- "The Top Ten: Drug Interactions and Strategies to Avoid Them" at the Drug Therapy Decision Making Conference March 2007 in Regina (*K.Jensen*)

#### **h) Poster Presentations**

Posters promoting the health professional and consumer drug information services were displayed at the following events:

- Representative Board of Saskatchewan Pharmacists annual conference in Prince Albert, April 2006.
- Canadian Society of Hospital Pharmacists – Saskatchewan Branch Conference October 2006 in Regina.

#### **i) Promotion / Fundraising**

An advertisement for the SDIS consumer service was placed in the fall issue of *Gray Matters*. *Gray Matters* is a quarterly newsletter published by the Saskatchewan Seniors Mechanism, a voluntary nonprofit organization representing more than 100,000 seniors throughout the province.

A Christmas message from SDIS was mailed to Saskatchewan pharmacies and SDIS stakeholders in December, 2006. Brochures and business cards were distributed at conventions and continuing education seminars attended by SDIS staff.

Lisa Green, College of Pharmacy & Nutrition Development Officer, and Karen worked together on the annual fund-raising campaigns. Letters were sent to Rx&D and generic drug companies in October 2006 requesting contributions to SDIS. Pharmacies were targeted in March, 2007. Donation appeal letters were mailed out to all Saskatchewan pharmacy managers / owners.



## **j) Research**

To investigate the impact of information provided by SDIS on the caller, our 2006 summer research student, Bea Ashton, designed a mail questionnaire survey for consumer line callers. The survey was administered to all consumers calling the Consumer Drug Information service who met the study criteria during the summer of 2006. The study will be presented in poster format at the Canadian Pharmacists Association Convention in June 2007. The study abstract is attached. (Appendix III)

This summer (2007), SDIS will be sharing a research student with Dr. Yvonne Shevchuk and Dr. Dave Blackburn. The topics of the student's projects are "Follow-up of Physician-Selected Cardiovascular Patients on Chronic Multiple-Drug Therapy by Drug Information Service Consultants" and "Time to First Dose of Antibiotics in Hospitalized Patients".

## **k) Other**

Karen was a participant in the 2006 Saskatchewan Institute of Health Leadership program. The aim of the Institute is to bring together professionals from all disciplines and all levels within the healthcare system to foster leadership potential, skills and the creation of a leadership community that works together to promote, support and sustain good health. Karen's participation in the program was sponsored by the Saskatchewan College of Pharmacists (SCP).

## **5. PARTNERSHIPS WITH OTHER HEALTHCARE ORGANIZATIONS**

### **a) SaskAR Program**

The Saskatchewan Regional Adverse Reaction Centre (SaskAR) was transferred out of the SDIS office at the end of March, 2006. After several months without a provincial centre for adverse reaction reporting, the office has reopened at the following address: Room 412, 4<sup>th</sup> Floor, 101 – 22<sup>nd</sup> St. E, Saskatoon SK S7K 0E1. Carmen Bell, SDIS healthcare professional consultant has made an initial contact with the new AR consultant, Nancy Saunders.

### **b) HealthLine**

The HealthLine, a 24 hour toll-free telephone health advice service staffed by registered nurses, was set up by Saskatchewan Health in 2003. Callers with drug-related questions are referred by the HealthLine to their physicians, their pharmacies, or the SDIS consumer information line. As part of their orientation, HealthLine staff receive a one hour presentation on the consumer drug information service from an SDIS drug information consultant. Referrals from the HealthLine now account for almost one-half of the calls on the consumer line. We continue to pursue the possibility of extending the hours the consumer line is available in order to better accommodate callers referred from the HealthLine. Karen Jensen and Yvonne Shevchuk took part in a preliminary meeting about this issue in Regina in October, 2006 with several interested stakeholders including Fay Schuster (Primary Health Care), Margaret Baker (Saskatchewan Prescription Drug Plan) and John Masters (HealthLine).

### **c) RxFiles**

SDIS and the RxFiles continue to collaborate on drug information research and newsletter distribution. SDIS consultants investigated several drug information questions for RxFiles academic detailers. The charts and newsletters provided by RxFiles are very useful references for SDIS consultants. Two issues of SDIS Drug News were mailed to pharmacists in a joint package with RxFiles newsletters.

### **d) Mother-Baby Breastfeeding Initiative (MBBI) Committee**

Karen is a member of the multidisciplinary MBBI Committee. As part of a global initiative for optimal child health, the MBBI Committee is working to protect, promote and support breastfeeding as the optimal method of infant feeding within the local community. The appropriate advice on drug use during lactation can factor into a mother's choice to continue breastfeeding. As documented in Tables II and V, SDIS receives a number of questions regarding the use of drugs during lactation.

SDIS serves as a consultation service on drug use and lactation for the MBBI committee. At the request of the MBBI Committee, SDIS developed guidelines for the use of nicotine replacement therapy during pregnancy and lactation. These guidelines were subsequently distributed to pharmacists in a SDIS newsletter.

### **e) Provincial Drug Information Services**

Poison and Drug Information Service (PADIS), Calgary AB:

Karen visited PADIS in February 2007 to observe their operating systems for the provision of healthcare professional and consumer information. Staff at PADIS would be interested in some type of affiliation or networking among drug information services. Dr Ingrid Vicas, PADIS director and Karen also discussed the feasibility of collaboration between the Saskatchewan and Alberta services to cover evening calls from consumers.

Drug Information Regional Centre (DIRC), Toronto ON:

In March 2007, Carmen visited DIRC and was given a tour of their pharmacy and consumer information services. DIRC director, Scott Gavura, also expressed interest in networking with other drug information services.

## **6. ADVISORY BOARD**

The purpose of our Advisory Board is to ensure that SDIS is meeting its goals and objectives and continuing to implement the initiatives outlined in the 1997 Strategic Business Plan. Advisory Board members for the year 2006 – 2007 were:

- Saskatchewan College of Pharmacists – Ray Joubert
- Saskatchewan Health – Kevin Wilson
- Canadian Society of Hospital Pharmacists (SK branch) – Paul Berg
- Canada's Research-Based Pharmaceutical Companies – Theo Pauls (Pfizer Canada Inc.)
- Canadian Drug Manufacturers Association – Bill Read (Novopharm Ltd.)
- College of Pharmacy and Nutrition – Yvonne Shevchuk
- Community Pharmacy Representative – Brenda Yuzdepski

The ninth annual meeting of the Advisory Board was held on August 9<sup>th</sup>, 2006. We greatly appreciate the valuable advice and support the board members provide us, both at the annual meeting and throughout the year.

## **7. PRIORITIES FOR 2007 - 2008**

### **a) Ongoing priorities**

- Maintain or increase current call volumes on the healthcare professional and consumer information service lines.
- Continue to provide timely and quality service to callers on both lines.
- Continue to promote collaboration with the HealthLine and Primary Health Care.
- Continue to improve and promote the use of the SDIS website.
- Facilitate a system for networking with other Canadian drug information services.
- Continue to incorporate call-backs into the regular routine in the healthcare professional and consumer services.
- Update the SDIS business plan.

### **b) Future initiatives**

- Host a retreat with SDIS personnel and interested stakeholders to plan promotion ( and fundraising) activities.
- Expand SDIS consumer information services to cover evening and week-end calls.
- A research project to investigate an expanded role for drug information services in chronic disease care.
- Develop quality assurance procedures for SDIS
- Promote the consumer drug information service via oral presentations at various healthcare association meetings for the general public.

## 8. FINANCIAL REPORT

The 2006 – 2007 Balance Sheet, the 2006 – 2007 Statement of Income and Expenditures, and the 2007 – 2008 Budget are attached (Appendix I).

We wish to express our sincere appreciation to the organizations that provided financial support for the Saskatchewan Drug Information Service over the past year:

- Saskatchewan Health, Prescription Drug Services Branch
- Saskatchewan College of Pharmacists
- College of Pharmacy and Nutrition, University of Saskatchewan
- Many Saskatchewan pharmacies ( See Appendix II)

We also gratefully acknowledge the generous contributions made to SDIS business plan activities by the following pharmaceutical companies:

- Apotex Inc.
- AstraZeneca Canada Inc.
- Eli Lilly Canada Inc.
- GlaxoSmithKline Canada
- Teva Novopharm
- Pfizer Canada Inc.
- Wyeth Consumer Healthcare Inc.
- Altana Pharma Inc.
- Purdue Pharma
- Servier Canada Inc.

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Dennis K. J. Gorecki, PhD  
Dean of Pharmacy and Nutrition

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Y. M. Shevchuk, Pharm D  
Director

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K. A. Jensen, MSc, BSP  
Manager

## APPENDIX I

### Saskatchewan Drug Information Service Financial Statements 2006 – 2007

#### Balance Sheet As of March 31, 2007

#### ASSETS

Chequing / Savings U of S	
U of S Fund 103515 SDIS	7,332.00
U of S Fund 102641 CDIC	4,098.00
Final installment SK Health grant (pending)	9,021.00
Committed Expenses	
(11,303.00)	
Adjustment for duplicate charge (Micromedex)	647.00
Total U of S Funds	
<b>9,795.00</b>	

#### LIABILITIES & EQUITY

Equity	
Opening Balance Equity	
SDIS Fund	6,480.00
CDIC Fund	6,657.00
Retained Earnings	(3,342.00)
Total Liabilities & Equity	
<b>9,795.00</b>	

## Profit and Loss Statement April 2006 to March 2007

### INCOME

Saskatchewan Health	108,253.00
Saskatchewan College of Pharmacists	33,000.00
Stipends	550.00
Donations	
Industry	28,500.00
Pharmacies / Pharmacists	27,645.00
CSHP	-
Fees	
Contracts	4,000.00

### TOTAL

**201,948.00**

### EXPENSES

Salaries	178,479.00
Materials / supplies	
Books	248.00
Electronic databases	13,016.00
Office supplies	214.00
Services	-
Printing and duplication	4,441.00
Postage	2,628.00
Computers	1,067.00
Telephone and Fax	2,724.00
Hospitality/Working lunches	104.00
Professional Development	2,210.00
Promotion	149.00
Other Expenses	10.00

### TOTAL

**205,290.00**

### Net Income

**- 3,342.00**

## Budget for 2007 – 2008

### INCOME

Saskatchewan Health	131,000
Saskatchewan College of Pharmacy	36,000
Donations	
Industry	35,000
Pharmacies	25,000
Stipends - College of Pharm & Nutrit	1,000
Contracts	1,000

### TOTAL

**229,000**

### EXPENSES

Salaries	210,000
Materials / supplies	
Books	2,000
Electronic Databases	6,000
Office Supplies	750
Computers	-
Services	250
Printing & duplication	5,000
Postage	3,000
Telephone and Fax	3,000
Professional Development	2,000
Advertising	500
Other	

### TOTAL

**232,500**

### BALANCE

**- 3,500**



## APPENDIX II

### Donations from Saskatchewan Pharmacies / Pharmacists 2006- 2007

<u>Pharmacy/Pharmacist</u>	<u>Address</u>
A E Walker Drugs Saskatoon Ltd	Saskatoon
Battleford Drug Mart	Battleford
Bick's Drugs	Kerrobert
Brunskill Pharmacy Inc	Saskatoon
Carlton Trail Pharmacy	Duck Lake
Carrot River Pharmacy	Carrot River
College Avenue Drugs	Regina
Cupar Drug Hall Ltd	Cupar
Cutknife Pharmacy	Cut Knife
Dale Toni	Moose Jaw3
Donald Bick	Kerrobert
Dragan Drugs	Indian Head
Earl's Pharmacy	Saskatoon
Edmunds Pharmacy Ltd	Tisdale
Family Centre Prescription Plus Inc.	Moose Jaw
Fisher's Drug Store	North Battleford
Foam Lake Pharmacy	Fom Lake
Friesen Drug 1994 Ltd	Rosthern
Galloway's Pharmacy Ltd	Central Butte
George's Pharmacy Ltd	Langenburg
Glencairn Drug Mart	Regina
Granger Drugs Ltd	Bruno
Gravelbourg Drugs	Gravelbourg
Gray Chemists Ltd	Prince Albert
Gray's Pharmacy	Wawota
Harbour Pharmacy	La Ronge
Homstol Pharmacy	Meadow Lake
Kelvington Rx Pharma Choice	Kelvington
L.D.Preddy	Estevan
Lacroix Drug	Tisdale
Lansdall Pharmacy	Maple Creek
Laurier Drive Pharmacy Ltd.	Saskatoon
Leonard Meek	Langenburg
London Drugs Limited	Saskatoon / Regina
Lorne Drugs	Regina
Loucks Medi-Health Pharmacy	Yorkton
Luseland Pharmacy Ltd	Luseland
Maidstone Pharmacy (1991) Ltd	Maidstone
McQuoid's Pharmacy Ltd	Wolseley
Medical Arts Pharmacy	Saskatoon
Medicine Shoppe 5th Ave	Saskatoon
Medicine Shoppe 8th St E	Saskatoon
Midtown Medical Pharmacy	Saskatoon

Midway Pharmacy  
**Pharmacy/Pharmacist**

Nokomis Pharmacy  
Nordon Drugs  
Onion Lake Pharmacy  
Our Drug Store  
Paul's Drugs  
Pharmasave #415  
Pharmasave #424  
Pioneer Village Pharmacy Inc.  
Proudlove's Pharmacy Ltd  
Quayle Pharmacy  
R & C Drugs  
R.G.Gaertner  
Raymore Pharmacy  
Redberry Pharmacy  
Redvers Pharmacy Ltd  
River Heights Drugs  
Rose Valley Pharmacy Ltd  
Rosetown Co-operative Ltd.  
Rosthern Pharmacy (1994) Ltd  
Royal Drug Mart  
Rx PharmaChoice  
Sametz Pharmacy Ltd  
Sereda's Pharmacy  
Shellbrook Pharmacy Ltd  
Shoppers Drug Mart  
Shoppers Drug Mart 22nd St W  
Shoppers Drug Mart Midtown Plaza  
Slobodian Pharmacy Ltd  
Soutland Co-operative  
Spiritwood Pharmacy Ltd  
Stueck Pharmacy Ltd  
Townsend's Central Drugs Ltd  
University Park Pharmacy  
Valley Drug Mart Ltd  
Victoria Square Pharmacy  
Wadena Drugs Ltd.  
Wakaw Pharmacy  
Watrous Pharmacy  
Weyburn Co-operative  
Wheatland Drugs  
Wynyard Pharmacy

Davidson  
**Address**

Nokomis  
Saskatoon  
Onion Lake  
Unity  
Preeceville  
Biggar  
Moose Jaw  
Regina  
Eston  
Birch Hills  
Regina  
Nipawin  
Raymore  
Hafford  
Redvers  
Regina  
Rose Valley  
Rosetown  
Rosthern  
Melville  
Biggar  
Ituna  
Lanigan  
Shellbrook  
  
Saskatoon  
Saskatoon  
Porcupine Plain  
Assiniboia  
Spiritwood  
Leader  
Wynyard  
Regina  
Fort Qu'Appelle  
Prince Albert  
Wadena  
Wakaw  
Watrous  
Weyburn  
Rosetown  
Wynyard

## APPENDIX IV

### 2006 Summer Student Research Project Abstract

#### **Drug Information in the Twenty-First Century: Exploration of the Impact of a Drug Information Service (DIS) for Consumers**

*Karen A. Jensen MSc, BSP Saskatchewan Drug Information Service, 110 Science Place, Saskatoon SK S7N 5C9; Beatrice Ashton, 368 Lockwood Road, Regina SK S4S 6E2; Yvonne M. Shevchuk, PharmD, College of Pharmacy and Nutrition, University of Saskatchewan, 110 Science Place, Saskatoon SK S7N 5C9*

College of Pharmacy and Nutrition, University of Saskatchewan

#### **Plain Language Statement:**

This study surveyed callers to a pharmacist-operated DIS for the general public. The results of the survey indicated that callers were very likely to follow recommendations given by DIS pharmacists and that most callers felt their call to the DIS had improved their use of medications and / or health.

#### **Study Objectives:**

The role of pharmacists as patient educators will become increasingly important in the next 100 years. Patients are being encouraged to share in decisions regarding their health and drug therapy and to take more control in their own treatment. Well-informed patients are better able to do this. The objectives of this study were to measure the effect of information and recommendations provided by pharmacists working in a consumer DIS. Primary outcomes: use of the provided information / recommendations and health outcomes. Secondary outcomes: satisfaction with the service and value of the service as a source of drug information.

#### **Method:**

Mail survey of callers to a consumer DIS.

#### **Results:**

Response rate 63% (129/206). Use of information: 76% of respondents were given recommendations by DIS consultants, 96% reported following this advice. Forty percent accessed another part of the health care system as a result of this advice. Six percent reported forgetting to take their medications less frequently; 10% chose not to take their medication less often. Outcomes: 83% of all respondents felt their call to the DIS brought about at least one improvement to their health and/or use of medications; 65% said the information and advice received brought them greater peace of mind: none reported a worsening of their situation as a result of advice provided by a DI consultant. Satisfaction: 95% of respondents were quite or completely satisfied with the service; 93% indicated they would recommend the service to another person. Value as an information source: 50% of respondents felt more sure their medication was safe; 48% felt more sure it was helpful; 56% and 37% indicated feeling more informed about their medication and health condition, respectively, after contacting the DIS.

#### **Conclusions:**

This study suggests healthcare consumers are likely to follow the advice given by DIS consultants. Although medication compliance did not improve significantly, consumers perceived an improvement in their use of medication and their health as a result of their call to the DIS. Satisfaction with the DIS was very high suggesting that consumers value this DIS system of drug information provision.