



**Saskatchewan  
Drug  
Information  
Service**

**Annual Report**

April 1, 2010 – March 31, 2011



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## EXECUTIVE SUMMARY

The Saskatchewan Drug Information Service (SDIS) has been providing healthcare professionals and consumers with timely access to current, relevant, evidence-based information on drug therapy since 1974. Its core service consists of two toll-free telephone lines, one dedicated to healthcare professional callers and the other to the general public. The telephone lines are staffed by licensed pharmacists 365 days a year. SDIS has an essential role in the College of Pharmacy & Nutrition undergraduate program and also contributes to continuing education programs for practicing pharmacists and other healthcare providers. In addition, SDIS accepts contracts from other healthcare organizations for drug information-related projects.

### **ON-REQUEST DRUG INFORMATION**

During the past fiscal year (April 1, 2010 to March 31, 2011) SDIS received a total of 6793 calls, 2280 from healthcare professionals and 4713 from consumers. Calls numbers were down somewhat from the previous year on both lines; however 2009-10 was exceptionally busy because of the H1N1 pandemic.

#### ***Healthcare Professional Service Utilization***

Eighty percent of calls to the professional arm of the service were from pharmacists or pharmacy students and the other twenty percent from physicians, nurses and other healthcare professionals. Over 50 % of calls originated in Saskatoon and Regina, the province's two largest cities. The remainder were placed from 85 different communities within the province. The most frequently requested categories of drug information were therapeutic use (drug of choice), dosage, drug interaction, adverse reactions, formulation, and general information. Responses were provided to 92 % of callers within 24 hours of the initial call.

#### ***Consumer service***

Thirty-eight percent of calls to the consumer line were placed during regular office hours ( 8 AM to 5 PM, Monday to Friday) and 62 % during the evening on-call shifts (5 PM – 12 midnight, 7 days a week). The typical daytime caller was a woman between 50 and 64 years of age; the typical evening caller was a woman between 30 and 49 years of age. Calls were placed from every health region within the province. The geographic

distribution of callers correlates with community populations; over fifty percent of calls originated in Saskatoon or Regina. The most common question topics were adverse effects, general information, drug interaction, dosage and therapeutic use (drug of choice). HealthLine referral was responsible for 39 % of in-office and 79 % of on-call requests for information. Repeat callers accounted for 35 % of in-office and 12 % of on-call requests.

### ***Quality Assurance and Improvement***

An auditing process to evaluate the consumer information arm of the service was initiated in 2010-11 and involved both internal and external reviewers. Response accuracy and quality of conclusions were rated as good to excellent for the majority of calls. The auditing process provides reassurance that SDIS continues to deliver excellent service to callers and also suggests how we can make improvements to the service. Reassurance that SDIS consultants are excellent information to callers. We plan to implement a similar auditing process for the healthcare professional line in the coming year.

### **EDUCATION**

SDIS staff delivered lectures and tutorials to pharmacy and nutrition students on various drug information topics including drug interaction, drug toxicology, and drug information retrieval. SDIS also provided on-site experiential training to third and fourth year pharmacy students.

For practicing healthcare professionals, SDIS disseminated information via the SDIS Drug News (posted on the SDIS website and mailed to Saskatchewan pharmacies), presentations at a number of pharmacy and healthcare professional events and articles in various pharmacy newsletters and magazines.

For consumers, SDIS provided information in several formats: Question of the Week posted on the SDIS website, presentations to consumer groups and handouts for consumer healthcare organization seminars.

### **CONTRACTS / CONSULTATION**

SDIS provided consultant services to the Saskatchewan College of Pharmacists, Lung Association of Saskatchewan and RxFiles Academic Detailing program.

The service has developed and maintains guidelines on its website for pharmacist prescribing for minor ailments. SDIS is currently working with the Continuing Professional Development for Pharmacists program to provide training seminars for pharmacists on prescribing for minor ailments. SDIS also maintains a database of shorted drugs on its website. As well as providing information on drug availability, this database assists pharmacists and other healthcare providers in choosing alternatives for unavailable drugs.

## **GOVERNANCE**

The annual SDIS Advisory Board annual meeting was held August 13<sup>th</sup>, 2010. The board consists of representatives of the major stakeholders in the service. It assists SDIS in meeting its goals and objectives. At the board's request, SDIS is working on a new strategic plan. The results of this process will be taken to the next board meeting in 2011.

## **PRIORITIES FOR 2011-12**

- Maintain timely and quality on-request drug information service for healthcare professional and consumer callers.
- Set goals and develop an action plan for the future direction of the drug information service.
- Find additional sources of funding for the service.
- Investigate opportunities to partner with other healthcare initiatives.
- Expand quality assurance procedures.
- Additional priorities will be added as suggested by the Advisory Board at the 2011 meeting.

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## **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 (SDIS). 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 in office Monday to Friday, 8 AM to 5 PM, by licensed pharmacists who research and respond to queries. On-call service is available 5 PM – midnight daily. Question templates on the SDIS website ([www.druginfo.usask.ca](http://www.druginfo.usask.ca)) 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 line office hours are Monday to Friday, 8:00 AM to 5:00 PM. On-call service between 5:00 PM and 12:00 AM midnight was initiated in December, 2007 as a pilot project in collaboration with the HealthLine. The pilot project identified a demand for evening hours drug information and SDIS was contracted to provide this service. As well as by telephone, consumers can submit queries by leaving voicemail messages or by filling out the question template available on the SDIS website ([www.druginfo.usask.ca](http://www.druginfo.usask.ca)).

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 enhance interdisciplinary collaboration and the public image of healthcare professionals.
- 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.
- 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.

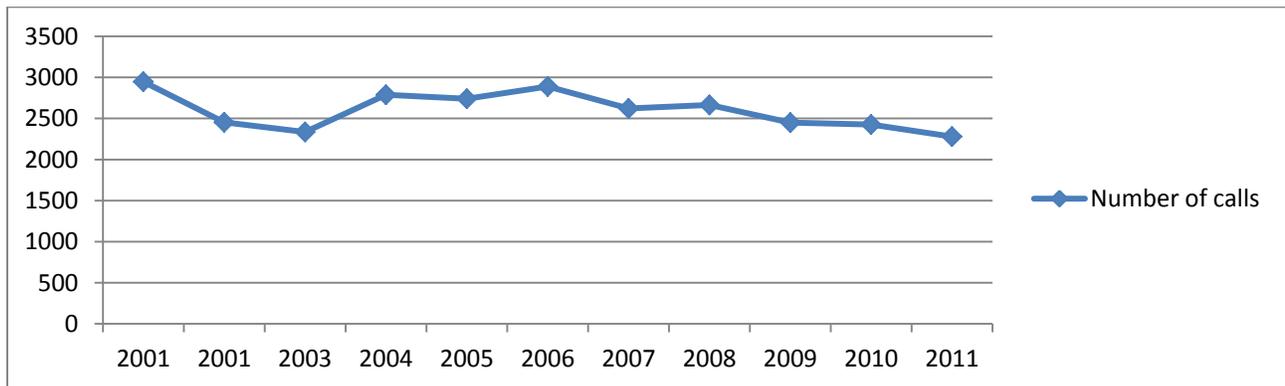
## 2. CORE SERVICES

### 2.1 Healthcare Professional Service

#### a) Number of Calls Received

The Saskatchewan Drug Information Service (SDIS) professional line received 2,280 requests for information in the fiscal year, April 1, 2010 – March 31, 2011, 146 fewer calls than in the previous year. Call volumes for the past ten years are shown in Figure 1. Call numbers have slowly trended downward over the past decade.

Figure 1: Number of healthcare professional calls by year



#### b) Profession of Callers

The majority of calls (70 %) were from community pharmacists. Nurses (public health, travel clinics, etc.) were the next largest group accounting for 10 % of the professional calls, followed by physicians and hospital pharmacists at 5 % respectively. Table I lists the number and percentage of calls placed by each profession.

Table I: Calls by Profession

Profession	Number (%)	Profession	Number (%)
Community pharmacist	1580 (70)	Nurse	222 (10)
Hospital pharmacist	106 ( 5)	Physician	115 ( 5)
Pharmacists (other)	47 ( 2)	Nurse practitioner	38 ( 1.5)
Pharmacy student	66 ( 3)	Other	33 (1.5)
Pharmacy instructor	17 (0.3)		

### c) Geographical Location of Callers

As detailed in Table II, requests for information over the past year came from 87 different communities across Saskatchewan. In addition, there were 17 calls from healthcare professionals practicing outside of Saskatchewan. The highest percentage of calls continued to originate in Saskatoon, decreasing slightly from 35 % last year to 32 % this year. The percentage of calls from Regina also decreased, from 26 % to 23 %.

**Table II: 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>
733	Saskatoon	17	St. Walberg, Weyburn
539	Regina	16	Indian Head, Wadena
72	Unity	15	Swift Current
69	North Battleford	12	Estevan
63	Yorkton	10	Assiniboia, Kindersley, Melfort
62	Moose Jaw	9	Kerrobert, Leader, Meadow Lake
60	Prince Albert	8	Carrot River, Maidstone, Oxbow, Rosetown
49	Lloydminster	7	Duck Lake, Fort Qu'Appelle, La Ronge, Moosomin
46	Humboldt	6	Hafford
41	Nipawin	5	Biggar, Broadview, Foam Lake, Ituna, Norquay, Radville, Wynyard
39	Tisdale	4	Esterhazy, Wakaw, Warman, Watrous, Whitewood
36	Battleford	3	Arcola, Kipling, Luseland, Spiritwood
29	Melville	2	Bengough, Carnduff, Central Butte, Christopher Lake, Imperial, Lanigan, Outlook, Porcupine Plain, Rocanville, Rosthern
25	Turtleford	1	Arcola, Bruno, Buffalo Narrows, Canora, Carlyle, Cold Lake, Cupar, Delisle, Eston, Furdale, Gravelbourg, Gull Lake, Landmark, Lafleche, Macklin, Preeceville, Raymore, Redvers, Rose Valley, Shaunavon, Strasbourg, Wollaston, Wolseley
19	Kelvington		
18	Shellbrook		
<b>OUTSIDE SASKATCHEWAN</b>			
<b>Number of Calls</b>	<b>City/ Province</b>		
17 Out of Province Calls	Calgary AB, Charlottetown PEI, Flin Flon MB, Hay River NWT, Lady Smith BC, Medicine Hat AB, Nelson BC, Osoyoos BC, Swan River MB, Toronto ON, Winnifield BC.		

#### d) Contact Method

Telephone remains the most popular method of accessing the drug information service. Eighty-nine percent of calls from health care professionals were placed by telephone; 85 % were taken in person by SDIS consultants and 15 % were left on voicemail. One hundred ninety-five (9 %) were submitted electronically, similar to the percentage of call received by this mode in the previous year.

#### e) Nature of Information

The most common question categories were therapeutic use, dosage, interaction, adverse reaction and formulation. Only two percent of questions involved herbal products.

A detailed list of the nature of professional calls by number and frequency is shown in Table III.

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

Nature of Request	Number	Percentage
Therapeutic Use/ Drug of Choice	278	12
Dosage	264	12
Interaction	250	11
Adverse reaction	189	8
Formulation	165	7
General information	143	6
Other	121	5
Administration	120	5
Precautions	86	4
Pediatric	69	3
Pregnancy	66	3
Stability	59	2
Identification	56	2
Lactation	53	2
Coverage/legalities	52	2
Availability	40	2
Contraindications	38	2
Kinetics	24	1
Abuse, toxicity, pharmacology, new product		< 1 %

**f) Time Required to Answer Requests**

The amount of time per call spent on research for individual calls ranged from zero to six hours per question. Table IV provides a comparison of research times over the past eight years. Since beginning to record this statistic in 2003, there has been a marked increase in the percentage of calls requiring more extensive research.

Answers were provided to most callers (92 %) the same day the query was submitted. When appropriate, additional documentation concerning the request was sent to the caller by postal mail, facsimile or email.

**Table IV: Research Time Required Per Call**

TIME	2003-04	2004-205	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11
15 min. or less	72 %	60 %	57 %	56 %	54 %	57 %	59 %	53 %
16 – 30 min.	19 %	28 %	24 %	24 %	26 %	25 %	23 %	25 %
31 – 60 min.	7.5 %	11 %	12.5 %	13 %	14 %	12 %	13 %	15 %
> 60 min.	1.5 %	1.5 %	6.5 %	7 %	6 %	6 %	5 %	7 %

**g) Difficulty of Questions**

As of October 1, 2009 DI consultants were asked to start rating the difficulty of each question . This is a component of the quality assurance audit (Section 2.3). The 2010-2011 statistics provide the first full year of data for this field. Twenty-one percent of questions required extra research or interpretation in order to provide an appropriate response. (Table V)

**Table V: Difficulty Rating of Questions**

Difficulty Rating	2009-10 Number (%)	2010-11 Number (%)
1 = not difficult; straight forward question	1004 (83 %)	1782 (79 %)
2 = required additional research and/or interpretation	199 (16 %)	444 (20 %)
3 = required extensive search and some interpretation	7 (1 %)	24 (1 % )
4 = required extensive search and extensive interpretation	1	

#### **h) On-Call Service for Healthcare Professionals**

One hundred thirty calls from healthcare professionals were received during evening shifts by on-call consultants. We have not advertised evening availability for professional calls as yet because of concern that an increased volume of professional calls might interfere with timely response to consumer calls.

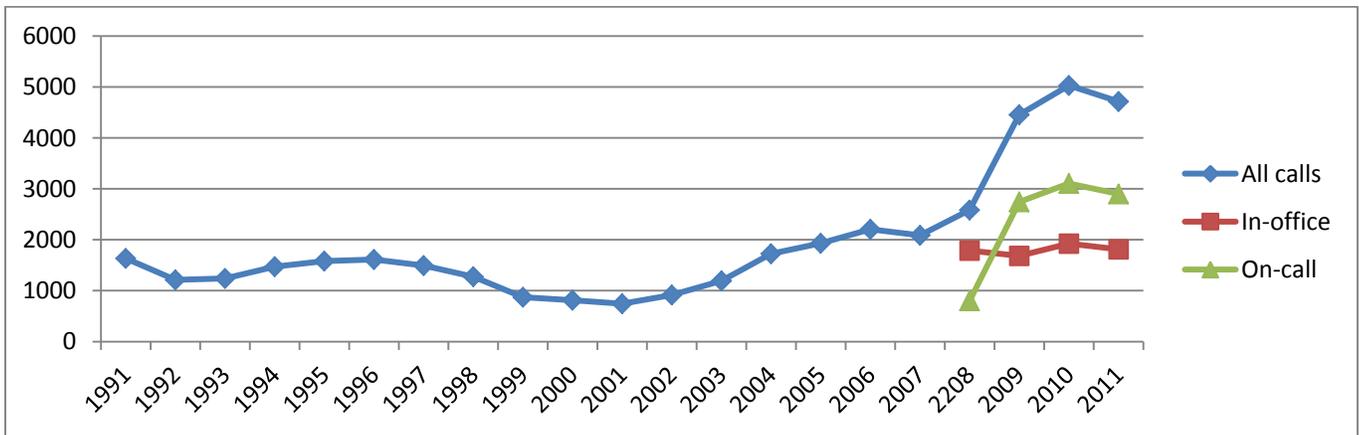
To address this concern, we are now piloting a system of “second call”. Consultants have been given a list of four SDIS pharmacists who can be contacted if the on-call consultant requires assistance in responding to a professional question either because of conflicting demands from the consumer line or because of the difficulty of the question. On-call pharmacists have less experience in responding to healthcare professional calls. If this strategy proves effective, we will begin promoting after-hours service to pharmacists and other healthcare professionals.

## 2.3 Consumer Service

### a) Number of Information Queries

A total of **4713** calls were received by the SDIS consumer service during the 2010 – 2011 fiscal year compared to 5031 during the 2010 – 2011 year. The lower number for the past year may represent a return to “normal” numbers after the flu pandemic of the previous year which initiated many inquiries. Figure 2 illustrates the trends in annual call totals since the inception of the consumer information service in 1991. Call volumes reflect variations in the hours of service provided over the years. The steep increase beginning in 2007 corresponds to the initiation of evening on-call service for the consumer line. During office hours (8:00 AM – 5:00 PM, Monday through Friday), 1813 calls were received, 113 (6 %) fewer than during the previous year. During evening hours (5 PM – 12 AM daily), 2900 calls were received, 206 fewer than the previous year, a decrease of 6.5 %.

**Figure 2: Number of consumer calls by year**

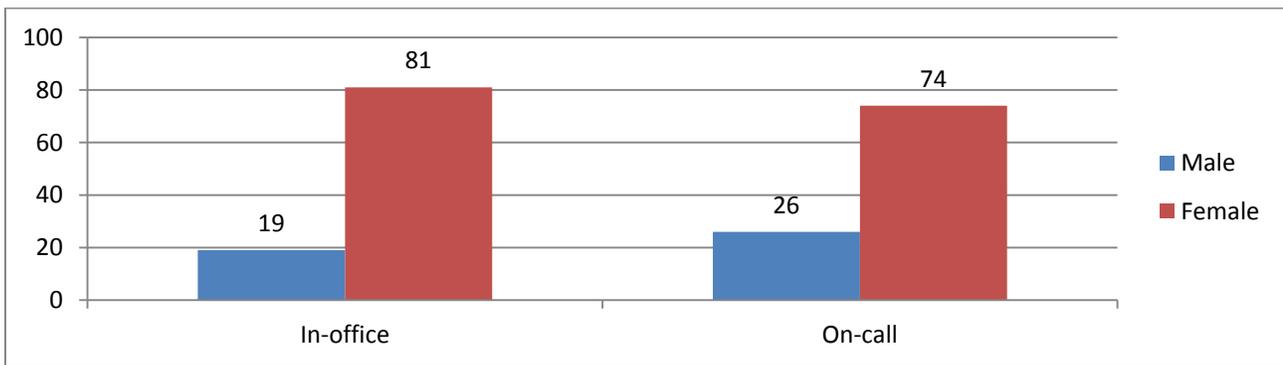


### b) Caller Demographics

#### Sex

As in previous years, the majority of callers were women. The gender ratio of calls has remained consistent at approximately 4:1 female to male for the past 10 years. (See Figure 3.)

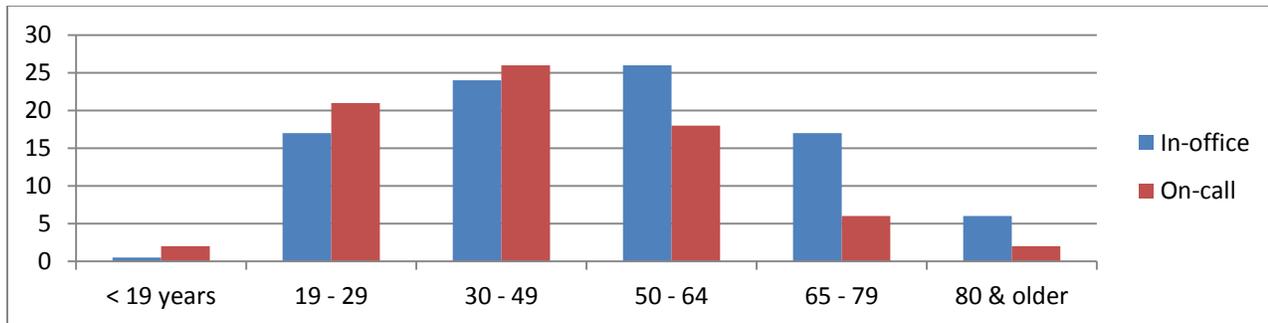
**Figure 3: Sex of caller (in percentages)**



## Age

The age categories of daytime callers are similar to those in previous years. Figure 4 compares the distribution of caller ages between daytime and evening hours. Callers in the evening tend to be younger than daytime callers.

**Figure 4: Age of callers (in percentages)**



## c) Geographical Location of Callers

Table VI details call numbers by Regional Health Authority. As in previous years, the highest percentage of calls originated in the Saskatoon region (39 % daytime hours; 31 % evening hours) and the Regina Qu'Appelle region (19 % daytime and 20 % evening). The remainder of calls were placed by residents from over 200 communities situated within the other Saskatchewan Health authorities. For a map of Saskatchewan Health Authorities, go to <http://www.health.gov.sk.ca/health-regions-map>. This information helps the service identify areas of low utilization and suggests targets for future promotion .

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

Regional Health Authority	Daytime Calls Number (%)	Evening Calls Number (%)
Saskatoon	713 (39)	911 (31)
Regina Qu'Appelle	339 (19)	579 (20)
Prairie North	106 ( 6)	190 (6.5)
Cypress	100 ( 6)	113 ( 4)
Prince Albert Parkland	77 ( 4)	199 (6.5)
Sunrise	71 ( 4)	138 (4.5)
Heartland	69( 4)	115 ( 4)
Five Hills	52 ( 3)	145 (4.5)
Sun Country	45 (3)	114 (4)
Kelsey Trail	27 ( 1.5)	107 (3.5)
Mamawetan Churchill River	23 ( 1.5)	64 (2)
Keewatin Yatthe	5 (0.2)	25 (1)
Athabasca	1	4

#### d) Contact Method

Most consumers submitted questions by telephone (98.5 % during office hours; 99.5 % during the evening). Calls were answered in person by a drug information consultant 89 % of the time during the day and 90 % of the time during the evening. Only seven questions were submitted electronically.

#### e) Nature of Information Requested

Table VII details the different categories of consumer information requests by frequency and time of call (daytime and evening hours). The type of information most frequently requested during both daytime and evening hours was side effects / adverse reactions. A higher percentage of calls during the day were about drug coverage /legalities, drug availability and drug abuse while a higher percentage of evening calls were about interactions, dosage /administration and pregnancy.

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

Nature of Request	Daytime Hours Number (%) of Calls	Evening Hours Number (%) of Calls
Adverse reaction	330 (18 %)	477 (16 %)
General information	308 (17 %)	472 (16 %)
Interaction	246 (13.5 %)	335 (11.5 %)
Dosage / administration	239 (13 %)	593 (20.5 %)
Therapeutic use / drug of choice	219 (12 %)	127 (4.5 %)
Lactation	99 (5.5 %)	137 ( 5 %)
Pregnancy	90 (5.5 %)	201 (7 %)
Other - availability, coverage, formulation, identification, kinetics, stability, contra-indication, etc.	25.5 %	19.5 %

Eight percent of daytime calls involved herbal or complementary products. Only three percent of evening callers inquired about herbal products.

### f) 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, daytime and evening were classified as “not serious”.

**Table VIII: Severity of Consumer Calls**

Severity Rating	Description	In-office Number (%) of Calls	On-call Number (%) of Calls
Not serious	No further action required	1671 (92 %)	2499 (86 %)
Potentially serious:	Information immediately available is provided, caller is referred to appropriate healthcare professional	141(8 %)	392(13.5%)
Serious	Caller is referred immediately to the Saskatchewan Poison Centre or nearest hospital emergency department	1	9 (0.5 %)

### g) Time Required to Answer Requests

Tables IX and X provide a breakdown of the time required to research and discuss consumer questions. When requested, additional information was sent to callers by mail or facsimile. More time is spent researching calls received in the office than for calls received during the evening on-call shifts..

**Table IX: Research Time Per Call**

Time Required Per Question	Daytime Calls	Evening Calls
0 – 5 minutes	919 (51 %)	2197 (76 %)
6 – 10 minutes	398 (22 %)	623 (19 %)
11 – 15 minutes	206 (11 %)	163 ( 6 %)
16 – 30 minutes	201 (11 %)	56 (2 %)
31 – 60 minutes	78 ( 4%)	20 (0.5 %)
More than 60 minutes	15 (1 %)	2

**Table X: Discussion Time Per Call**

Time Required Per Question	Daytime Calls	Evening Calls
0 – 5 minutes	1067 (59 %)	1378 (48 %)
6 – 10 minutes	507 (28 %)	963 (33 %)
11 – 15 minutes	145( 8 %)	328 (11 %)
16 – 30 minutes	86( 5 %)	57 (2 %)
31 – 60 minutes	7	11
> 60 minutes	1	2

### h) Difficulty of Questions

Consumer line consultants are also asked to rate question difficulty (Table XI). The majority of questions placed during 2010 – 2011 were rated as “not difficult”. Percentages for the different difficulty categories were similar for calls received in-office and during evening on-call shifts.

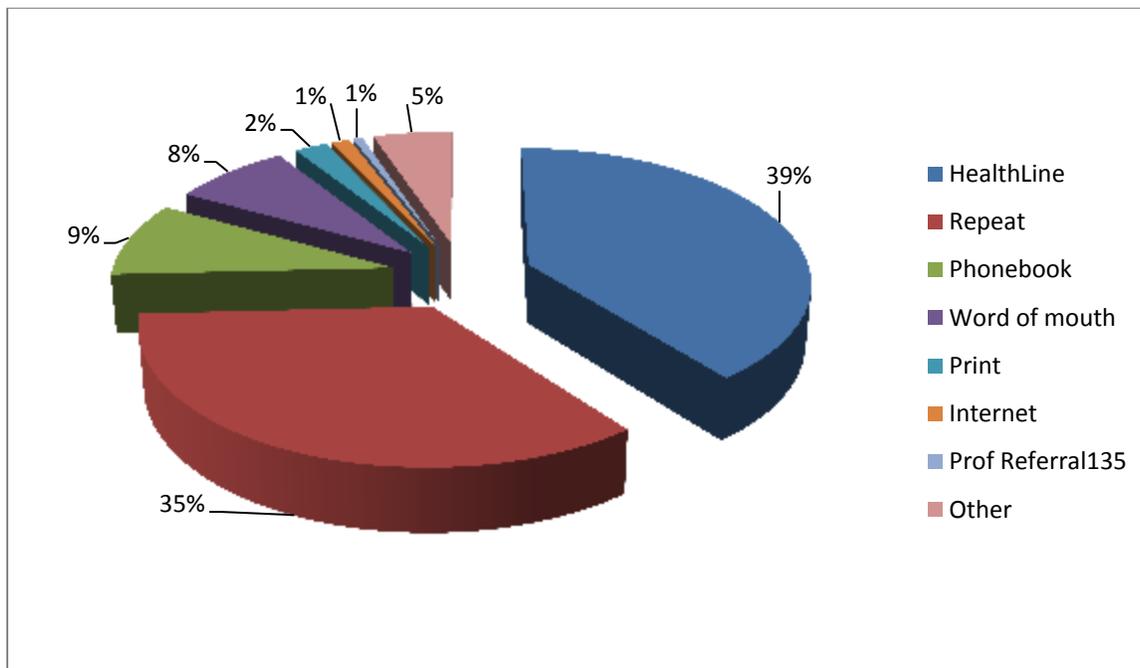
**Table XI: Difficulty Rating of Questions**

Difficulty Rating	In-office # (%)	On-call # (%)
1 = not difficult; straight forward question	1545 (85 %)	2464 (85 %)
2 = required additional research and/or interpretation	200 (11 %)	376 (13 %)
3 = required extensive search and some interpretation	2	9
4 = required extensive search and extensive interpretation	0	0

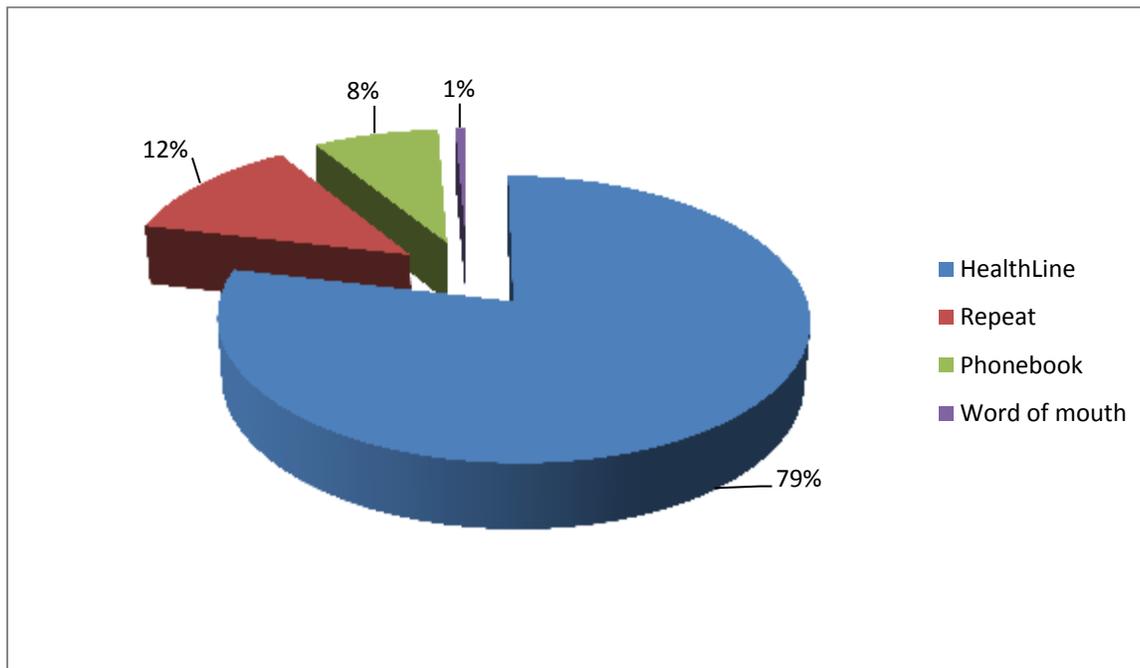
### i) Source of Consumer calls

To determine the most effective strategies for promotion of the SDIS consumer line to Saskatchewan residents, callers were asked how they learned about the service. Figures 5 and 6 summarize the answers provided to this question in 2010 – 2011. During regular office hours, repeat callers and referrals from HealthLine were the most frequent sources of calls. In the evening, most of the calls were referrals from HealthLine.

**Figure 5: Source of In-office Calls**



**Figure 6: Source of on-call calls**



### **2.3 Follow-up calls**

Drug information consultants followed up on 116 calls (0.25 %) during the 2010 – 2011 year. Consultants are asked to follow up with all serious and potentially serious calls to ensure caller safety. This target is not currently being achieved.

### **2.4 Quality Assurance and Improvement**

We have initiated a quality assurance program using an audit template adapted from the MUN School of Pharmacy. An external auditor used the template to assess a random sample of consumer line questions between April 1<sup>st</sup> and June 30<sup>th</sup>, 2010. Response accuracy and quality of conclusions were rated as good to excellent for 88 % of the assessed questions. In office, SDIS staff use the same process to assess responses provided during the on-call evening shifts. Accuracy and quality of conclusions consistently ranked as good to excellent for more than 80 % of calls over the past year. These results provide reassurance that SDIS consultants are providing quality information to our callers. As well, information provided by the audits targets areas which could be improved, such as the resources being used or the documentation process. We intend to institute a similar process to assess healthcare professional calls in the coming year.

### 3. SASKATCHEWAN DRUG INFORMATION SERVICE (SDIS) PERSONNEL 2010 – 2011

3.1 Director: Dr. Yvonne Shevchuk PharmD, BSP

3.2 Manager: Karen Jensen MSc, BSP

3.3 Drug Information Consultants:

#### **In-office staff**

- Carmen Bell BSP
- Lisa Hupka BSP
- Gurpreet Nijjar BSP
- Terry Damm BSP
- Alana Berg BSP

#### **On-call consultants**

- Aldona Torgunrud BSP
- Dorothy Sanderson BSP
- Jean Macpherson BSP
- Audrey McLelland BSP
- Charlene Chursinoff BSP
- Amanda Kongawi BSP
- Loren Regier BSP
- Terry Damm BSP
- Shannon Appel BSP
- Jahnaya Mann BSP

### 4. EDUCATION

#### **a) College of Pharmacy and Nutrition Undergraduate Curriculum**

SDIS personnel provided lectures, tutorials and experiential training to students in the College of Pharmacy and Nutrition as detailed below:

- 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*); Problem-Based Learning Tutorials (*L. Hupka, G. Nijjar*)
- PHAR 418.2 Issues in Pharmacy I – 3 lectures on toxicology (*C. Bell*).
- PHAR 455.7: Pharmacotherapeutics I - 3 lectures on “Principles of Drug Interaction” (*K. Jensen*); 1 lecture on “Adverse Drug Reactions” with Nancy Saunders, Co-ordinator of the AR Program (*K. Jensen*)
- 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 in an introductory experience in drug information research.
- PHAR 557.6: Pharmacotherapeutics III - 3 lectures on toxicology (*C. Bell*).
- PHAR 565.2: Drugs in Pregnancy – 1 lecture (*C. Bell*).

- PHAR 580.16: Structured Practice Experience – SDIS provides a specialty practice site for fourth year student rotations.

## **b) Continuing Education**

SDIS disseminated current pharmacotherapeutic information to pharmacists and other healthcare providers through a variety of venues:

- Newsletters and Hot Topic questions mailed to Saskatchewan pharmacies and posted on the SDIS website ([www.druginfo.usask.ca](http://www.druginfo.usask.ca)).

### Newsletters:

- Vol. 27, No.2 New Canadian Dyslipidemia Guidelines
- Vol. 27, No. 3 Managing Insomnia in the Geriatric Population
- Vol. 27, No. 4 Bisphosphonate Safety
- Vol. 27, No. 5 Opioids in the Elderly
- Vol. 28, No.1 Natural Hallucinogens to Avoid

### Hot Topics::

- Cold-fx: "Trust the Science"
- Potassium Iodide for Nuclear Emergencies
- Articles in the Saskatchewan Pharmacists Association and Canadian Society of Hospital Pharmacists – Saskatchewan Branch newsletters.
- Lyme Disease and West Nile Virus Infection. Pharmacy Practice 2010: (K. Jensen).
- Presentations at healthcare professional conferences : Bisphosphonate Safety at Practical Management of Common Medical Problems (K. Jensen); Drug Shortages at Drug Therapy conference (K.Jensen).
- Working with the Continuing Professional Development for Pharmacists program to develop and deliver training to pharmacists on prescribing for minor ailments. This involved reviewing and revising the information in the minor ailment prescribing guidelines for the speakers , advice and editing for the training documents and videotaping scripts and assistance with two all-day training seminars.

## **c) Consumer Education**

SDIS developed and distributed medication information for healthcare consumers in the following forms:

- Question of the Week posted on the SDIS website. Examples include:

**Q.** How can I tell if a medication or vitamin product sold on the shelf has gluten in it? I have celiac disease (gluten intolerance ).

Q. I never got the flu shot this fall? Can I still get vaccinated?

Q. Is acetaminophen a safe medication to take?

Q. How much vitamin D should I take each day?

Q. Why can't my pharmacy supply me with the medication I need? They say it is shorted by the manufacturer.

Q. I heard on the news today that people on bisphosphonates for osteoporosis have been having long bone fractures and some researchers think it is related to the drug. Is this true?

Q. My child vomited 30 minutes after I gave him his medication. Should I give him another dose now or wait until the next scheduled dose?

- Presentations to consumer groups : Medication Safety to senior citizen homes (A. Berg); Pharma Products for Menopausal Symptoms to Women's Mid-Life Health seminar (K.Jensen)
- Handouts for Women's Mid-Life Health Centre seminars

d) **Summer Students**

- Donica Janzen, a third year pharmacy student, was hired for the summer of 2010. Her time was divided between SDIS and Dr. Shevchuk's research projects. She collated and analyzed the data from pharmacy student surveys on women's issues in pharmacy and wrote an article which has been submitted to the Canadian Pharmacists Journal. Her projects for Dr. Shevchuk involved identification of guiding principles for the Saskatoon Health Region Infectious Disease reserve list and collection of data from chart reviews for the purpose of updating the vancomycin dosage nomogram.
- This summer SDIS and the C-Patch study (Principle investigator – Dr. David Blackburn) will share a third year pharmacy student.

## 5. CONSULTATION / CONTRACTS

- Annual review and updates of the information in the drug therapy section of the Canadian Lung Association website funded by the Lung Association of Saskatchewan.
- Developed and updated the Pharmacist Prescribing for Minor Ailments guidelines posted on the SDIS website.
- SDIS has developed and maintains a database of shorted drugs on the SDIS website. The database includes information on availability and alternatives for drugs which are not available.
- The Saskatchewan College of Optometrists has contracted SDIS to prepare guidelines for their recently expanded authority to prescribe.

## 6. COLLABORATIONS

### a) HealthLine

The HealthLine, a 24 hour toll-free telephone health advice service staffed by registered nurses, was established by Saskatchewan Health in 2003. Callers with drug-related questions are referred by HealthLine nurses to their physicians, their pharmacies, or the SDIS consumer information line. Since December 2007, SDIS has been contracted by HealthLine to provide on-call service on the consumer drug information line between 5:00 PM and 12 midnight daily. For more information, see the 2010 – 2011 Annual Report on the Regina Qu'Appelle Health Region contract with SDIS posted on the SDIS website at [www.druginfo.usask.ca](http://www.druginfo.usask.ca).

### b) RxFiles Academic Detailing program

SDIS and the RxFiles continue to collaborate on drug information research and newsletter distribution. SDIS consultants investigate drug information questions for RxFiles academic detailers and review RxFiles charts and newsletters. In return, these charts and newsletters provide a valuable resource for SDIS consultants.

SDIS has submitted a proposal for detailing pharmacists to RxFiles and the Saskatoon Health Region. If approved, SDIS consultants would call pharmacies with the same key messages that RxFiles detailers are giving to physicians at that time.

### c) Committees

Karen Jensen is a member of the Saskatchewan College of Pharmacists Professional Practice Committee, the Interdisciplinary Advisory Committee on Prescriptive Authority and the Baby Friendly Initiative Coalition.

## 7. PROMOTION / FUNDRAISING

- The Pharmacists Association of Saskatchewan, Saskatchewan College of Pharmacists and SDIS developed a one-page phone directory for pharmacies with the heading prominently displaying SDIS's contact information. The directory was distributed to all Saskatchewan community and hospital pharmacies.
- SDIS brochures and stickers were mailed out to various healthcare organizations and seniors' centres in January, 2011.
- An advertisement for SDIS consumer line was placed in Grey Matters in March 2011. Grey Matters is a booklet produced by Saskatchewan Seniors Mechanism, a non-profit organization that supports the elderly population. The booklet is widely distributed in Saskatchewan.
- An advertisement for SDIS was included in the Pharmacists Association of Saskatchewan two page promotion for Pharmacy Awareness Week in the Saskatoon Star Phoenix and Regina Leader Post in February 2011.

- SDIS displayed poster presentations at several healthcare organization conferences: Pharmacists Association of Saskatchewan conference, April 2010, Canadian Society of Hospital Pharmacists – Saskatchewan Branch, October 2010, Practical Management of Common Medical Problems, November 2010, and Drug Therapy, March 2011.
- Ashala Jacobson, College of Pharmacy & Nutrition Development Officer, and Karen Jensen worked together on the annual fund-raising campaigns. Requests for contributions were sent (or online applications submitted) to pharmaceutical companies in July 2010 and to Saskatchewan pharmacies in February, 2011.

## 8. STRATEGIC PLANNING

As requested by the Advisory Board, SDIS has undertaken a strategic planning process. The first step was an environmental scan which included searching the literature for recent developments and trends in drug information services and contacting several Canadian and American drug information centres. This information provided background information for the first of two internal planning sessions held in April and May, 2011. The next steps are to prioritize goals and develop an action plan to take the next Advisory Board meeting. Wider stakeholder consultation for the Strategic Plan will be sought in the coming year.

## 9. ADVISORY BOARD

The purpose of our Advisory Board is to ensure that SDIS is meeting its goals and objectives. Advisory Board members for the year 2010 – 2011 were:

- Saskatchewan College of Pharmacists – Ray Joubert
- Saskatchewan Health – Kevin Wilson
- Canadian Society of Hospital Pharmacists (SK Branch) – Brenda Schuster
- Canada’s Research-Based Pharmaceutical Companies – Theo Pauls (Pfizer Canada Inc.)
- College of Pharmacy and Nutrition – Yvonne Shevchuk
- Community Pharmacy Representative – Grace Rieder

The annual meeting of the Advisory Board was held on August 12<sup>h</sup>, 2010. The priorities set at this meeting and the actions taken are as follows:

- Approach other healthcare organizations in regards to funding for SDIS beginning with the Saskatchewan Medical Association (SAM). *This initiative was delayed by the resignation of the CEO of SMA but will be given first priority (see below) once the new CEO is appointed.*
- Contact drug information services in the western provinces regarding reciprocal quality assurance auditing, other areas for potential collaboration. *Over the past year Karen Jensen has had two telephone conversations with the Director and the Education Coordinator of the Poison and Drug Information Service (PADIS) in Calgary. They are currently in the process of reorganization and are unwilling to commit to any shared activities until the fall of 2011 at the earliest.*
- Liaise with CSHP-SK branch to promote the value of SDIS to hospital pharmacists. *As previously mentioned, SDIS displayed a poster presentation at the CSHP-SK 2010 annual meeting and Carmen Bell has made regular contributions to the CSHP-SK branch newsletter over the past year*

- Investigate further the need for and logistics of extended hours for the professional line. (*See above - Section 2.1h*)
- Hold a strategic planning workshop in January or February 2011. (*See above - Section 8*)

We greatly appreciate the valuable advice and support the board members provide us, both at the annual meeting and throughout the year.

#### **10. PRIORITIES FOR 2011 - 2012**

- Maintain timely and quality on-request drug information service for healthcare professional and consumer callers.
- Set goals and develop an action plan for the future direction of the drug information service.
- Find new sources of funding for the service.
- Look for opportunities to partner with other healthcare initiatives.
- Expand quality assurance procedures to include healthcare professional calls.
- Additional priorities will be added as suggested by the Advisory Board at the annual meeting in August, 2010.

#### **11. FINANCIAL REPORT**

The 2010 – 2011 Financial Statements are attached (Appendix I & II).

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
- Canadian Society of hospital Pharmacists – Saskatchewan Branch
- College of Pharmacy and Nutrition, University of Saskatchewan
- Pharmacists Association of Saskatchewan
- RxFiles, Saskatoon Health Region
- All of the Saskatchewan pharmacies listed in Appendix II.

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

- Eli Lilly Canada Inc.
- Pfizer Canada Inc.

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David S. Hill, Ed.D., FCSHP  
Dean of Pharmacy and Nutrition

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Y. M. Shevchuk, Pharm D, FCSHP  
Director

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K. A. Jensen, MSc, BSP  
Manager

## APPENDIX I

### SDIS Financial Reports

	Budget 2010 – 11	Actual 2010 – 11	Budget 2011 - 12	Comments
<b>REVENUE</b>				
Sask Health - SPDP	180,000	180,000	182,700	
SCP	49,000	49,000	49,000	
Donations - Pharmacy	30,000	24,665	30,000	
Donations - Industry	20,000	8,000	8000	Anticipate Pfizer & Lilly will continue to support the service
Contracts	15,000	17,175	10,000	Existing contracts
New contracts, initiatives	1000	0	50,000	See below
<b>Subtotal</b>	<b>295,000</b>	<b>278,840</b>	<b>329,700</b>	
<b>EXPENDITURES</b>				
Salaries	263,000	288972	270,000	Includes 11,500 fees for service (honoria) Payment for external auditor (\$600) had not been processed at year end.
Quality Assurance	5000	0	2,500	
Office supplies	500	84	500	
Books	1000	574	1000	
Printing	2000	2835	2500	
Telephone and Fax	3500	2890	3000	
Postage	1500	1021	1000	
External services	50	12	50	
Website design and maintenance	250	0	200	
Advertising and Promotion	1000	431	1000	
Hospitality / working lunches	250	83	500	Includes meals for strategic planning sessions
Membership fees & dues	4000	3729	4000	
Registration - conferences/workshops	1000	1178	1000	
Software licenses	8500	8534	8500	
Travel	1000	417	1000	
Computers	1000	918	0	
Equipment	500	0	500	
<b>Subtotal</b>	<b>294,050</b>	<b>311,678</b>	<b>297,250</b>	
<b>TOTAL REVENUES LESS EXPENDITURES</b>	<b>950</b>	<b>-32,838</b>	<b>+ 32,500</b>	

**Discussion:**

SDIS expenses exceeded income in the 2010-2011 year by almost \$33,000. Income was lower than estimated due to a reduction in the amounts received from pharmacy and industry donations. Salary expenses were higher than budgeted for two major reasons: 1) fees for service paid out for work on contracts and 2) the limitations imposed by HealthLine on payment for on-call services in anticipation that another department of Saskatchewan Health would take over funding for SDIS services. Negotiations with Saskatchewan Health have been ongoing since the fall of 2010. In the interim SDIS has been absorbing the administration and resource costs involved in providing the on-call service.

We plan to eliminate the deficit over the coming year by actively pursuing grants from other healthcare organizations and by limiting the use of casual staff in the office. Long-term strategies to increase income and permit adequate staffing to pursue new initiatives include:

- 1) Requesting increases in grants from SPDP, Saskatchewan Health
- 2) Negotiating a contract for all-inclusive funding for the on-call service
- 3) Investigating new methods of generating income (e.g., medication reviews for compliance packaging)

APPENDIX II

SDIS – RQHR CONTRACT  
FINANCIAL REPORT  
April 1st, 2009 – March 31<sup>st</sup>, 2011

**REVENUE** **\$79,249**  
Regina Qu'Appelle Health Region

**EXPENDITURES**

Salaries	75332	
Books	412	
Telephone	3700	
Total		<b><u>79,445</u></b>

**BALANCE** **- \$196**

Cost per call = \$27.39

**IN-KIND SUPPORT CONTRIBUTED BY SDIS / COLLEGE OF PHARMACY & NUTRITION**

Administration 0.2 FTE	15,000	
Quality Assurance 3 hrs/wk	6,000	
Books/Software	5,000	
Office expenses	4,000	
Total		<b><u>30,000</u></b>

Cost per call including in-kind expenses = 37.74

**6.2 Budget**

**SDIS ON-CALL SERVICE**  
April 1st, 2011 – March 31<sup>st</sup>, 2012

**PROPOSED BUDGET for 2010 - 2011**

**REVENUE**

Saskatchewan Health	<b>\$ 100,000</b>
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**EXPENDITURES**

Salaries		
DI consultants	78,000	
Administrator	15,000	
Textbooks, software	2,500	
Advertising / Promotion	500	
Telephone	<u>4,000</u>	
Total		<b>\$ 100,000</b>

### APPENDIX III

#### Donations from Saskatchewan pharmacies / pharmacists 2010 – 2011

<b>Name</b>	<b>City / town</b>
Bernie Schwartz	Kindersley
Balfour Drugs	Kipling
Battleford Drug Mart	Battleford
Bick's Drugs	Kerrobert
Canora Pharmacy	Canora
Carlton Trail Pharmacy	Rosthern
Carnduff Drug Mart	Carnduff
Carrot River Pharmacy	Carrot River
Cheetham's Pharmacy	Saskatoon
Co-op Pharmacy Circle Dr W	Saskatoon
Coteau Hills Pharmacy	Beechy
Cozi Healthcare	Melville
Dewdney Drugs	Regina
Dragan Drugs	Indian Head
Earl's Pharmacy	Saskatoon
Edmunds Pharmacy	Tisdale
Foam Lake Pharmacy	Foam Lake
Galloway's Pharmacy	Central Butte
Granger Drugs	Bruno
Gravelbourg Drugs	Gravelbourg
Gray Chemists	Prince Albert
Henders Drugs	Estevan
Hill Ave Drugs	Regina
Kipling Pharmasave	Kipling
Lansdall Pharmacy	Maple Creek
Laurier Drive Pharmacy	Saskatoon
Lorne Drugs	Regina
Loucks Medi-health Pharmacy	Yorkton
McQuiod's Pharmacy	Wolseley
Medicine Shoppe 20th St W	Saskatoon
Medicine Shoppe 5th Ave	Saskatoon
Medicine Shoppe 8th St E	Saskatoon
Medicine Shoppe Broadway	Saskatoon
Midtown Medical Pharmacy	Saskatoon
My Pharmacy	Prince Albert
Prescription Works Pharmacy	Big River

R & C Drugs	Regina
Raymore Pharmacy	Raymore
Redberry Pharmacy	Hafford
River Heights Drugs	Regina
Rose Valley Pharmacy	Rose Valley
Rosthern Pharmacy	Rosthern
Royal Drug Mart	Melville
Rubicon Pharmacies	Saskatchewan
Rubicon Pharmacies	Weyburn
Rubicon Pharmacy	Weyburn
Sametz Pharmacy	Ituna
Shellbrook Pharmacy	Shellbrook
Stapleford Pharmacy	Regina
Saskatoon Co-op Circle Dr	Saskatoon
Stueck Pharmacy	Leader
Towers Pharmacy	Regina
Townsend's Drugs	Wynyard
Valley Drug Mart Ltd	Fort Qu'Appelle
Victoria Sq Pharmacy	Prince Albert
Wadena Drugs	Wadena
Wakaw Pharmacy	Wakaw
Watrous Pharmacy	Watrous
Weyburn Co-op Pharmacy	Weyburn
Winnipeg St Pharmacy	Regina
Wynyard Pharmacy	Wynyard