

St. John's Teen Clinic Final Report

2005/2006



Healthy Child Manitoba
Putting children and families first

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EXECUTIVE SUMMARY

The delivery of health care services to clients at St. John's Teen Clinic (SJTC) presents a remarkable challenge. The community served is vibrant and diverse; at the same time, it is overburdened by income inequality and some of the highest rates of chronic and infectious illnesses in Winnipeg (1). Research has demonstrated that patterns of health-affecting behaviour can be established at a young age. These can persist and develop into long term health conditions (2). Comprehensive school-based health clinics (SBHC) have been proposed to engage youth in primary and preventive care (2-7). The need for services targeting this most susceptible segment of an especially vulnerable population is highly warranted.

This report provides a snapshot of neighbourhood, school and clinic client characteristics for the first year of service delivery at SJTC. It can serve as a baseline for future comparisons as the clinic continues to evolve. For example, data from a survey administered to students at St. John's High School confirmed diversity of the school population, and detected some of the prevailing issues about higher risk behaviours such as harmful substance use.

From September 2005 to June 2006, the clinic saw 147 individual clients, over 323 visits. Compared to information provided by Manitoba Health about the previous five years of physician use data at the neighbourhood level, diagnosis data collected from intake forms suggest the reasons for use of services were similar, when analysed by sex. Similar to secular use patterns of a comparable age group in the geographic area, females were most likely to use the clinic for reproductive health issues and acute illnesses. Males were more likely to present for acute illness and non-specific complaints. Of note was the high number of mental health services requested by both sexes.

Compared with youth who had participated in the cross-sectional baseline survey, SJTC clients were significantly older, and (consistent with other SBHCs), the majority of them were female. As well, SJTC clients were less likely to admit to alcohol use. After controlling for age, sex, and harmful substance use, clients were more likely to have stated they had engaged in sexual activity. However, among sexually active females, condom use was associated with clinic attendance. Overall, clinic clients admitted to more frequent condom use.

Interview Process

Qualitative interviews were conducted with representatives from Mount Carmel Clinic, St. John's High School and the Point Douglas Parent Child Coalition. Although most agreed that in terms of the development of the teen clinic, the challenges that arose were met with satisfactory solutions, some felt that a few development pieces could be improved. Suggested improvements included effective communication and more involved consultation with the community. However, all participants felt the involvement of a broad range of stakeholders, and the alignment of their philosophies on need and primary care delivery created effective partnerships. In particular, participants felt a strong working relationship was formed between Mount Carmel Clinic (the primary care provider) and St. John's High School (the site provider).

From a clinical perspective, some challenges included hours of operation, maintenance of health records, and stocking medical supplies. There was a strong sense that the team approach by clinical staff was effective in engaging youth to attend the clinic. This was reflected in the repeated use of the clinic by youth who presented with complex issues.

Due to the data collection strategies (as outlined by SJTC's evaluation framework), a robust picture emerges of clients within the context of the school and neighbourhood. However, some consideration should be given to streamlining the data collection process. Although accurate measurements (from a service delivery perspective) of the SJTC have been established, continued participation of clinic staff is vital as the clinic evolves. Other priorities include:

- formal strategies to identify high-risk youth, without stigmatising new and existing clients
- an accurate method of capturing information related to the division of labour between physicians, nurses and medical clerks
- a way to describe how integration is fundamental to effective delivery

The pilot study goal is to help implement a broader teen clinic strategy and this report offers important insights in the process evaluation part of that strategy. Quantitative indicators were developed, taking advantage of existing administrative data available in Manitoba. As more data become available, further refinement of outcomes should be done.

SECTION A: QUANTITATIVE ANALYSIS

1.1. Profile of Clinic Catchment Area

Information in this section is taken from the Winnipeg Regional Health Authority's 2004 **Community Health Assessment Report** (1, 8). The Point Douglas community area, where the St. John's Teen Clinic (SJTC) is situated, is home to a population of 41,378 (on June 1, 2003). Compared to other communities in the Winnipeg Health Region (WHR), the population in Point Douglas is much younger (29.7 per cent under the age of 20), as well as being quite ethnically diverse (ex: 16.3 per cent identified as Filipino, while 16.0 per cent identified as Aboriginal). In comparison, 25.1 per cent of the WHR population was under the age of 20, and only 13.2 per cent of the overall WHR population is comprised of visible minorities. The average household income in the 2001 census was \$33,381. This was much lower than the WHR average of \$53,752. At a population level, indicators designed to assess the health of a community suggest that this area is at significantly higher risk of morbidity than other areas in the WHR. Prevalence and incidence of chronic and communicable diseases were much higher in Point Douglas, compared to the WHR. For example, the diabetes prevalence rate was 1.3 times that of the WHR, while the rate of asthma was 1.2 times higher. Chlamydia (2.5 times), gonorrhoea (3.2 times), tuberculosis (2.5 times) and hepatitis C (3.0 times) rates were much higher than the WHR. Point Douglas teen pregnancy rates were the highest in the WHR (2.5 times), while rates of low birth weight (1.2 times) and pre-term birth (1.1 times) were also higher.

Health Behaviours

Data describing health behaviours of the Point Douglas community area is obtained from Health Information Management at Manitoba Health, which keeps track of the majority of physician and hospital visits using provincial administrative databases. Table 1.1 shows the age and gender-specific rates of the top five reasons for physician visits in the Point Douglas community area for those aged 12 to 19 between 2001 and 2006, by gender. The denominator is the gender-specific population aged 10-19 in the WHR of that year (nine to 14). As can be seen, the profile of physician use is differentiated by gender. Generally speaking, females were more likely to see a physician because of reproductive health reasons, while males tended to seek physicians for acute respiratory conditions. Of note are the proportionately high number of visits by both males and females for “Neurotic, Personality and Mental Disorders.”

Table 1.1a: Age and Sex Specific Rates per 10,000 - Top 5 Reasons for Physician Visits: Point Douglas Community Area, Females

	2001	2002	2003	2004	2005
Reproduction & development	574.02	647.49	614.26	596.67	612.76
Acute respiratory infections	396.42	336.42	350.61	339.73	398.42
Symptoms	284.02	262.27	273.50	279.90	343.22
Disorders of female genital tract	241.83	254.21	272.33	311.20	300.26
Mental disorders	197.01			276.65	
Exam only		219.62	228.03		260.53

Age and sex specific rates per 10,000.

Denominator is the female population aged 10 to 19 on June 1, 2003 in the WRHA for that year.

Table 1.1b: Age and Sex Specific Rates per 10,000 - Top 5 Reasons for Physician Visits: Point Douglas Community Area, Males

	2001	2002	2003	2004	2005
Acute respiratory infections	250.48	240.13	231.27	190.22	233.19
Symptoms	141.52	131.29	166.33	181.05	184.45
Exam only	120.88	120.18	131.93	137.02	177.07
Disorders of the eye & adnexa	109.87	121.31	114.05		
COPD	106.66	124.03			129.00
Fractures			146.41	125.40	
Mental disorders				116.68	149.80

Age and sex specific rates per 10,000. Denominator is the male population aged 10 to 19 on June 1, 2003 in the WRHA for that year.

1.2. Profile of Teen Clinic Clients

Table 1.2 shows some selected characteristics of SJTC clients. From the 83 per cent (122/147) of responders who answered this question, 97 per cent (118/122) stated they attended school regularly. The majority of SJTC clients lived with their parents (81 per cent; 115/142), 12 per cent (17/142) lived with relatives, while the remaining lived in an alternate setting (ex., CFS, friends, alone: 7 per cent; 10/142).

Harmful Substance Use: Approximately 90 per cent (132/147) of SJTC clients answered whether or not they had ever smoked cigarettes in the past, with 36 per cent (47/132) indicating that they had. The majority of those who indicated cigarette use (50 per cent; 23/47) stated that they smoked less than five cigarettes a day. A little under half (45 per cent; 58/130) of those who responded stated that they had used alcohol at some point. Of the 97 per cent (56/58) who responded to the frequency question, only 27 per cent (15/56) indicated they drank more than once a week. That means the majority of SJTC clients stated they were occasional (a few times a month or less) drinkers. Of the 88 per cent (130/147) of clients who responded to this question, 27 per cent (35/130) indicated some type of drug use in the past. Of the 89 per cent (31/35) who indicated frequency, over half (17/31) indicated that they used drugs once a week or more.

Sexual and Reproductive Health: Almost a quarter of females (24 per cent; 24/100) who gave a valid response (93 per cent; 100/108) indicated that they had received a prior pap exam. Of the 88 per cent (129/147) that provided a valid answer, 61 per cent (79/129) of SJTC clients indicated that they had had a sexual experience. Of some interest, (although not shown in Table 1.3) females were more likely to have had a pap exam if they also indicated they had sexual experience (36 per cent), compared to those who stated they did not have any prior sexual experience (4 per cent). Of the 72 females

(67 per cent; 72/108) who answered this question, 16.7 per cent (12/72) indicated that they had used oral contraceptives (BCP). Of the 68 per cent (73/147) that answered this question, 62 per cent (45/73) indicated that they had used condoms in the past. Males were more likely to have stated that they had used a condom (77 per cent; 10/13), compared to females (58 per cent; 35/60). Overall, there were very few Depo-Provera and contraceptive patch users (<5%). Of the 67 per cent (72/147) who answered this question, 19 per cent (14/72) stated that they did not use any type of protection.

Gender analysis: Simple bivariate comparisons between gender and living situation, harmful substance use, and applicable sexual and reproductive health behaviours did not show any significant differences between gender at the $p < .05$ level.

Table 1.2: Profile of SJTC Clients, Selected Characteristics (2005-2006)

		Yes (n)	No (n)	Response Percentage
Demographics	Attend school regularly?	97% (118)	3% (4)	83% (122/147)
	Living situation			97% (142/147)
	Lived with parents	81% (115)		
	Live with relatives	12% (17)		
	Alternate setting	7% (10)		
Harmful Substance Use	Smoked cigarettes	36% (47/132)	64% (85/132)	90% (132/147)
	Alcohol	45% (58/130)	55% (72/130)	88% (130/147)
	Drugs	27% (35/130)	83% (95/130)	88% (130/147)
Sexual and Reproductive Health	Pap exam (females only)	24% (24/100)	76% (76/100)	93% (100/108)
	Sex	61% (79/129)	39% (50/129)	88% (129/147)
	BCP (females only)	17% (12/72)	83% (60/72)	67% (72/108)
	Condoms	62% (45/73)	38% (28/73)	68% (73/108)
	Males	77% (10/13)	23% (3/13)	18% (13/73)
	Females	58% (35/60)	42% (25/60)	82% (60/73)
	No form of protection	19% (14/72)	81% (58/72)	67% (72/108)

1.3. Discussion

The majority of smokers and alcohol users were infrequent users, while those who admitted to using drugs, used drugs more often. This may be a reflection of a regulated market (cigarettes and alcohol) versus one that is not regulated (illegal drugs). The relatively few males who attended the clinic and had prior sexual experience were more likely to already be using condoms (OR:17.4; 95 per cent CI: 2.2,135.9). This could be reflective of health seeking behaviour already being established in this group; or could be a social desirability bias. The small number of males (n=13) answering this question affects confidence in this observation. Data from the intake form suggest that females who had prior sexual experience were more likely to have a pap exam. This is a positive finding, although it could be improved upon.

2.0 Profile of St. John's High School

A total of 708 students participated in the St. John's Student Baseline Survey. Of these, 99.7 per cent (706/708) had valid age information; their average age was 14.6 years (SD: 1.8). Information for gender was fairly complete, as approximately 99.6 per cent (705/708) of the data were complete. Of those who had a valid response, 50.2 per cent were male (354/705), while 49.8 per cent were female (351/705). Average age for males was 14.5 years (SD: 1.7), while for females it was 14.6 years (SD: 1.8); t-test analysis did not reveal a significant difference in age by gender at the $p < .05$ level. Figure 2.1 displays the distribution of age by gender.

Figure 2.1: Age Pyramid, by Gender

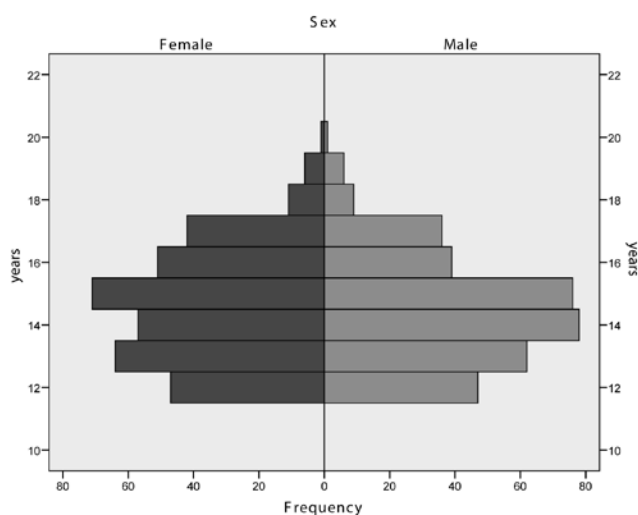


Table 3.1 shows the gender breakdown by grade level. Approximately 97 per cent (689/708) of respondents had complete information for this analysis. Grade distribution was fairly even, although there was a slight bias towards younger grade levels. Approximately 37 per cent of respondents were in Grades 7 and 8, 33 per cent in Grades 9 and 10, and 15 per cent in Grades 11 and 12. The rest of the respondents were from specialized classes (~15 per cent). There were slightly more males, up to and including Grade 9 (53 per cent; 200/377), while females were in the majority from Grades 10 to 12 (59 per cent; 123/208). Males were the predominant gender in the specialized classes (56 per cent; 58/104).

2.1. Ethnicity, By Gender & Age

Examination of the profile of St. John's students by ethnicity reveals a diverse student population. Of those who had given a response (98 per cent; 693/708), Aboriginal (39 per cent; 273/693), Caucasian (28 per cent; 195/693) and Filipino (17.6 per cent; 122/693) ethnicity were the most highly represented. There were no detectable differences in ethnicity by gender at the $p < .05$ level. Generally speaking, however, females outnumbered males slightly. Only in those who identified as Aboriginal or Asian were males predominant. Significant differences in age between the groups were discovered; ANOVA and post-hoc analyses confirmed that African-Canadian students were significantly older than students who identified as Caucasian, Aboriginal and other.

2.2. Sexual Behaviour and Harmful Substance Use Profiles

There seemed to be a significant relationship between sexual behaviour, harmful substance use and age. Admitted alcohol and marijuana use was directly associated with stated oral and vaginal sex. Age was also directly associated with stated sexual behaviour, although the odds of engaging in sexual behaviour seemed to peak in the middle years and drop off after the age of 16.

2.3. Use of Health Services

Places where youth obtained health services other than the SJTC were examined. A total of 643 youth had complete information for this section (90.8 per cent). Similar to the previous analyses, the 20 and over group were excluded. Locations included None, Family Doctor, Walk-in Clinic and Other. The latter group contained community health clinics and other teen clinics.

Univariate analysis did not detect any differences in health services use by gender, except for in the use of Other services. Males were less likely (OR:0.5; 95 per cent CI:0.3-0.9) than females to use these services. An analysis by ethnicity reveals that only First Nations ethnicity is associated with location of health services use (Table 2.1). Specifically, in our sample, those who identified as First Nations were less likely to see a family doctor (OR: 0.5; 95 per cent CI: 0.4-0.8), and were more likely to attend a walk-in clinic (OR: 1.7; 95 per cent CI: 1.1-2.7) or other types of clinics (OR: 2.3; 95 per cent CI: 1.2-4.3), compared to their Caucasian counterparts. The use of health services was looked at in a multivariable model, with age, ethnicity and gender as the variables of interest. From Table 2.1 we can see that none of the predictors were associated with not receiving care. For family doctors, controlled for other variables in the model, age (OR:0.9; 95 per cent CI: 0.8-1.0) and First Nations ethnicity (OR:0.5; 95 per cent CI: 0.3-0.8) were directly related to their use. Those of First Nations ethnicity remained 1.7 times more likely (95 per cent CI: 1.1-2.6) to use a walk-in clinic. Those of older age (OR:1.3; 95 per cent CI: 1.1-1.5) and First Nations status (OR:2.2; 95 per cent CI: 1.2-4.1) were more likely to use Other clinics, while males were less likely (OR:0.6; 95 per cent CI: 0.3-1.0).

Table 2.1: Logistic Regression, Location of Health Services Use – Adjusted Odds Ratios

	OR	95%CI	
None			Model $\chi^2(5)=6.58$, ns
Age	1.07	(0.9-1.2)	H&L GOF: 9.7, p=0.3
Ethnicity			
Caucasian	Ref	--	
First Nations	0.62	(0.3-1.2)	
Filipino	1.00	(0.5-2.1)	
Other	1.50	(0.7-3.1)	
Gender			
Male	0.93	(0.6-1.7)	
Family Doctor			Model $\chi^2(5)=22.7^{\dagger\dagger}$
Age	0.89 [†]	(0.8-1.0)	H&L GOF: 5.8, p=0.7
Ethnicity			
Caucasian	Ref	--	
First Nations	0.54 [‡]	(0.3-0.8)	
Filipino	1.58	(0.8-2.9)	
Other	0.79	(0.4-1.4)	
Gender			
Male	0.98	(0.7-1.4)	
Walk-in			Model $\chi^2(5)=23.2^{\dagger\dagger}$
Age	1.09	(1.0-1.2)	H&L GOF: 3.0, p=.9
Ethnicity			
Caucasian	Ref	--	
First Nations	1.68 [†]	(1.1-2.6)	
Filipino	0.60	(0.3-1.1)	
Other	0.70	(0.4-1.4)	
Gender			
Male	0.74	(0.5-1.1)	
Other/Community			Model $\chi^2(5)=34.3^{\dagger\dagger}$
Age	1.27 ^{††}	(1.1-1.5)	H&L GOF: 8.5, p=0.4
Ethnicity			
Caucasian	Ref	--	
First Nations	2.20 [†]	(1.2-4.1)	
Filipino	0.41	(0.1-1.3)	
Other	0.85	(0.3-2.2)	
Gender			
Male	0.56 [†]	(0.3-1.0)	

[†]p<.05, [‡]p<.01, ^{††}p<.001

2.4 Discussion

The diversity of the Point Douglas community area is reflected in the composition of those who answered the baseline survey. The most highly represented group were those who identified as being Aboriginal. Examining where youth use health services uncovered some interesting associations. The data suggest the existence of a transition from family doctor care to other forms of health care delivery (ex: community health clinics, walk-ins) as youth age. There is also a marked difference between where those who identified as being Aboriginal receive health care, compared to those who identified as Caucasian. The data suggest that engagement with primary care through a family doctor is lacking in the Aboriginal youth population. The drop off in risky behaviours observed may be due to a cohort effect. Perhaps the older age groups (through a mix of socio-cultural characteristics, as migration into this area is likely) engage in relatively fewer risk behaviours, compared to younger age groups. Alternatively, it could be that older students were more willing to complete the survey. It could also indicate decreased willingness of older youth to divulge personal information, or an increased willingness on the part of younger students to state risky behaviours. It is recommended that any future implementations of school surveys employ methodology used in other surveys for this population. The surveys should include variables designed to identify youth who may be prone to falsifying responses (ex: including a variable that captures “use” of a non-existent drug or product).

3.0. COMPARISON TO ST. JOHN’S TEEN CLINIC CLIENTS

3.1 Overview of results

The original survey intent was to compare those who stated they had attended the SJTC with those who did not. A substantial difference in clinic attendance profiles was discovered, when comparing the intake data to that of survey respondents who indicated they had attended the clinic. The definition of clinic users will be based only on intake form data. The first section of this overview will discuss results from bivariate analysis. It will look at differences between clinic users and baseline respondents without controlling for possible confounders such as age and sex. This overview concludes with a section on the effect of these variables, controlled for age and sex. As well, only the population under the age of 20 was used for comparison.

3.2 Bivariate Analysis

Age and Gender: Comparisons based on results of the St. John’s Baseline High School survey, and that of the intake forms revealed some significant differences in student profiles. Clinic users were significantly older (mean age 15.4 years, SD:1.7) than survey respondents (mean age 14.5, SD:1.7). Clinic users were also more likely to be female than survey respondents (73.4 per cent vs 49.8 per cent; OR: 2.8, 95 per cent CI: 1.9-4.2).

Table 3.1: Age and Grade Comparison, Clinic Users and Survey Respondents

	Clinic Users			Baseline Respondents			OR (Users vs. Respondents)
	Male	Female	Total	Male	Female	Total	
Age	15.8 (2.0)	15.3 (1.5)	15.4 (1.7)	14.6 (1.8)	14.5 (1.7)	14.6 (1.8)	
Grade							
7 & 8	7 (25.0)	21 (75.0)	28 (19.0)	134 (51.0)	129 (49.0)	263 (37.4)	Ref
S1	7 (22.6)	24 (77.4)	31 (21.1)	71 (57.7)	52 (42.3)	123 (17.5)	2.37[‡]
S2	6 (17.1)	29 (82.9)	35 (23.8)	48 (44.9)	59 (55.1)	107 (15.2)	3.07^{††}
S3	9 (37.5)	15 (62.5)	24 (16.3)	27 (38.0)	44 (62.0)	71 (10.1)	3.18^{††}
S4	7 (33.3)	14 (66.7)	21 (14.3)	12 (36.4)	21 (63.6)	33 (4.7)	5.98^{††}
Other	s	s	8 (5.4)	60 (56.6)	46 (43.4)	106 (15.1)	0.71
TOTAL	36 (s)	103 (s)	147 (ns)	352	351	703	

[†]p<.05, [‡]p<.01, ^{††}p<.001

Harmful Substance Use and Sexual Behaviours: Examining harmful substance use, only cigarette and alcohol use was compared between the two groups. This is because these variables had the most number of responses, and were thought to be more robust and reliable. Neither cigarette, nor alcohol use were significantly associated with clinic use, although survey respondents were more likely to have answered affirmatively to these questions. Approximately 35.9 per cent of clinic users and 40.3 per cent of survey respondents stated they had tried cigarettes, 45 per cent stated they had tried alcohol, compared to 53.8 per cent for survey respondents.

Clinic users were more likely to have stated that they had engaged in sexual behaviour (OR: 4.5; 95 per cent CI: 3.0-6.7); a little under two-thirds (61.4 per cent) of clinic users answered this question affirmatively. There was no significant association between contraceptive use and clinic use, although condom use was marginally insignificant ($p=.052$) at the $p<.05$ level. Approximately 37.3 per cent of clinic users had ever used a condom, compared to 27.9 per cent of survey respondents. The proportion of females who stated they had ever used birth control pills (13.3 per cent vs. 10.6 per cent) and Depo-Provera (3.3 per cent vs. 4.8 per cent) was similar for clinic users and baseline respondents, respectively. Frequency of use in those who did use condoms was associated with clinic use, with clinic users being at higher odds of occasionally (OR: 3.5; 95 per cent CI: 1.5-8.1) and frequently (OR: 2.0; 95 per cent CI: 1.0-3.8) using condoms.

3.3 Multivariable Analysis

Controlling for age and gender, clinic users were less likely to use alcohol (OR: 0.23, 95 per cent CI: 0.1-0.4), and were still more likely to have stated that they had engaged in sexual behaviours in the past (OR:6.96, 95 per cent CI: 4.1-11.9). Examining condom frequency by clinic use and controlling for age and gender, clinic users were still more likely to state that they used condoms, compared to other youth (Table 3.4); condom use was also associated with age and female gender. When using a multivariable model to examine contraceptive use (ex: oral contraceptives, Depo-Provera, condoms) by females, only condoms were associated with clinic use. Age was associated with contraceptives use, when controlled for harmful substance use and type of contraceptive.

On average, clinic users were older than the St. John's survey respondents and were more likely to be female. As well, they were less likely to admit to alcohol use than survey respondents. Controlled for age, sex, and harmful substance use, clinic users were more likely to have stated they had engaged in sexual activity. Among females, condom use was associated with clinic users, while overall, clinic users seemed to admit to more frequent condom use.

Table 3.2: Clinic Attendance, Adjusted Odds Ratios

	OR	95%CI	
Demographics			Model $\chi^2(5)=133.4^{\dagger\dagger}$
Age	1.30 ^{††}	(1.1-1.5)	H&L GOF: 5.62, p=0.69
Gender			
Female	3.79 ^{††}	(2.3-6.1)	
Harmful Substance Use			
Cigarettes	0.61	(0.4-1.1)	
Alcohol	0.23 ^{††}	(0.1-0.4)	
Sexual Behaviour			
Any sex	6.96 ^{††}	(4.1-11.9)	

[†]p<.05, [‡]p<.01, ^{††}p<.001

Table 3.3: Contraceptives Use, by Females

	OR	95%CI	
Demographics			Model $\chi^2(6)=32.0^{\dagger\dagger}$
Age	1.34 ^{††}	(1.2-1.6)	H&L GOF: 9.1, p=0.3
Harmful Substance Use			
Cigarettes	0.72	(0.4-1.3)	
Alcohol	0.41 ^{††}	(0.2-0.8)	
Sexual Behaviour			
BCP	0.93	(0.4-2.1)	
Depo-Provera	0.54	(0.1-2.0)	
Condom	2.31 [‡]	(1.3-4.3)	

[†]p<.05, [‡]p<.01, ^{††}p<.001

Table 3.4: Condom Frequency

	OR	95%CI	
Demographics			Model $\chi^2(6)=64.2^{\dagger\dagger}$
Age	1.47 [‡]	(1.2-1.8)	H&L GOF: 9.7, p=0.3
Females	7.52 ^{††}	(3.6-15.5)	
Harmful Substance Use			
Cigarettes	0.94	(0.5-1.8)	
Alcohol	0.39 ^{††}	(0.2-0.8)	
Condom Frequency			
Never	Ref	--	
Occasionally	4.46 [‡]	(1.6-12.1)	
Almost always/always	2.45 [†]	(1.28-5.2)	

[†]p<.05, [‡]p<.01, ^{††}p<.001

3.4 Discussion

There were some important limitations in this analysis; the most obvious being that the data are derived from two different sources, employing different methods of data collection. Results from these comparative analyses should be interpreted with caution. Part of the explanation of the different demographic profiles between the intake form and that of the survey responders may be due to the wording of the question on the baseline survey. The question was ambiguous and did not actually ask whether or not the respondent had received any services at the SJTC. Respondents may have visited the clinic, but did not receive (or want) any medical service. Any future comparisons should employ more precise wording in the survey question (ex: received treatment versus attended). As well, some consideration should be given to the self-reported nature of the data. The assumption in this analysis was that youth were more likely to disclose behaviours in the clinical setting using intake forms, compared to the survey setting. This limitation complicates conclusions drawn from the data. The negative association observed between clinic use and alcohol consumption is somewhat surprising. The literature on youth attending school-based health clinics (SBHC) suggests that the risk of engaging in risky behaviour (including harmful substance use) is at least equal, if not greater in those who attend SBHCs (15-19).

4.0 Increased Access To Primary Health Care

4.1 Use

This section provides a baseline for future comparisons in determining whether or not clients are accessing primary health care. A longitudinal examination will be required to adequately address this item in the future. Based on the data abstraction forms (which collected information on client visits between September 2005 and June 2006), there were 323 visits to SJTC. These visits represented the visits of 149 unique clients, giving each client an average of 2.2 visits each. Of these 149 unique clients, 25.5 per cent (38/149) were male, while 74.5 per cent (111/149) were female. Average visits per male were 1.6; for females, 2.4. The distribution of visits was different between genders. Males were far more likely to have only one visit, compared to females. Of the males 62.3 per cent (38/61) visited the clinic only once, compared to 42.4 per cent (111/262) of females. Out of the 323 visits, 28 (9 per cent) resulted in a referral to another agency. The agencies referred to were numerous, with counselling services (ex: Klinik), other health service providers (ex: MCC, HSC (children's)) being the most highly represented. Correspondingly, the most common reasons for referral were mental health related and diagnostic testing. Information from the intake forms showed (147/149), 97 per cent of clients were from St. John's High School.

Table 4.1: Tests Requested

Test	Number of Tests	Positive (%)
Chlamydia	22	3 (13.6)
Gonorrhoea	21	0 (0.0)
VDRL	6	0 (0.0)
HIV	8	0 (0.0)
Pregnancy	72	5 (6.9)

Tables 4.2 and 4.3 summarize the reasons males and females went to SJTC. Males were far more likely to use the clinic for acute illness (41 per cent) than females (21 per cent). The most common reasons for females tended to be reproductive health (ex: pregnancy tests, oral contraceptive starts and refills).

Table 4.2: Presenting Issues-Females

	Frequency	Percent
Other*	93	35.5
Pregnancy test	81	30.9
Acute illness**	55	21.0
BCP start	33	12.6
BCP refill	21	8.0
Injury**	20	7.6
Follow-up	20	7.6
STI test	19	7.3
PAP	15	5.7
Depression	12	4.6
MAP	11	4.2
Sex/relationships	10	3.8
Depo-Provera	9	3.4
Other medication	9	3.4
STI treatment	7	2.7
Anxiety	5	1.9
Family issues	5	1.9
Nutrition	< 5	n/a
Suicidal	< 5	n/a
Existing pregnancy	< 5	n/a
Chronic illness	< 5	n/a
Personal safety	< 5	n/a
HIV test	< 5	n/a
Lab services	< 5	n/a
Smoking	< 5	n/a
Drugs	< 5	n/a

*This category encompasses a wide variety of interventions, with the majority being information giving, counselling, and health education.

**Please see to Appendix 2 for a list of acute illnesses and injuries.

Table 4.3: Presenting Issues-Males

	Frequency	Percent
Acute illness	25	41.0
Other	16	26.2
Injury	14	23.0
Other medication	6	9.8
Follow-up	6	9.8
Depression	3	4.9
Chronic illness	2	3.3
Suicidal	2	3.3
Anxiety	2	3.3
Family issues	2	3.3
HIV test	1	1.6
STI test	1	1.6
Nutrition	1	1.6
Alcohol	1	1.6
Sex/relationships	1	1.6

4.2 Discussion

The presenting issues detailed in this report will serve as a baseline comparison for future reports. Since the diagnoses from physician practice at SJTC will be captured by Manitoba Health beginning with the fiscal year 2006/07 data, it is hoped that direct comparisons to administrative data from the population of this community area will be accomplished. Even with this snapshot of clinic use, reasons given seem to mirror that of the community at large, even to the extent of the need for mental health services. The SJTC policy of linking youth (through referrals) with other service agencies seems to be successful, as a number of different agencies were used. However, as discussed in the qualitative section, some impediments were discovered in this process.

SECTION B: QUALITATIVE ANALYSIS

St. John's Teen Clinic Process Evaluation

Method

Five interviews were conducted with individuals who were involved in the development and/or operations of SJTC in the 2005/2006 fiscal year. These included representatives of Mount Carmel Clinic (MCC), St. John's High school, and the Point Douglas Parent Child Coalition (PDPCC). Questions were developed based on the role(s) of the individuals and the organization they were representing. The interviews occurred over a one month period and were tape recorded and transcribed. Analysis included a review of each transcript and the categorization of themes extracted from the data, based on the process evaluation questions found in the SJTC framework document. Where possible, quotes relevant to the themes discussed in specific subsections will be used for illustrative purposes.

5.0 DEVELOPMENT OF ST. JOHN'S TEEN CLINIC

As groups move through the developmental process, they discover what works well in terms of accomplishing their goals, and what presents a challenge to getting certain objectives accomplished. Following is a summary of the discussion on this issue from the interviews.

5.1 Challenges

5.1.1 Communication

Because of the many people involved in the clinic development, communication was felt to be crucial. Several of those interviewed felt that although communication was good, it could have been improved upon. Some of the partners did feel out of the loop at times, particularly about the construction of the clinic. As one key informant said:

"I think that would happen anywhere [not communicating] but we just have to recognize the importance of being informed each step of the way...we did communicate, it is just that we need to communicate a little bit differently."

Although all partners agreed that they eventually were informed about what was occurring, some felt they needed to find ways to communicate as quickly as possible on certain issues. Strategies around effective communication should be discussed at the outset of clinic implementation.

5.1.2 Community Consultation

From the perspective of the PDPCC, a longer process of community consultation may have been beneficial. Coalition members felt that the idea and the funding for the clinic were presented to them before they had an opportunity to fully explore the idea in their community. As one coalition representative said:

“One of the difficulties was a lot of the community members had to buy in after (the fact) and they felt they had kind of been hoodwinked, you know, their backs up against the wall. Not to take away how good the clinic was, but that could have been done a little differently, the consultation with the community.... (instead it was) here’s your money and this is how you are going to do with it.”

5.1.3 Clinic Construction

The construction of the clinic took longer than had been anticipated, and presented certain challenges, because it was a learning process for those involved. Working on school property, and negotiating with unions, construction companies and the school division all created expected delays, but still created some difficulties. As one of the interviewees who was involved in the construction piece said:

“For the most part, I think it went as well as expected. There wasn’t a design manual, like number one, you do this and number two, do this... It all takes time...No you can’t have that kind of toilet you have to have a handicap... Oh, we didn’t know that. So it was a learning experience for us all and of course the price kept going up and up and up. I guess in projects, they do.”

5.2 What Worked Well

5.2.1 Community Consultation

Community consultation for SJTC was hosted through the PDPCC. The coalition ensured there was a representative group of people in attendance. People who were active in the community could ask questions and motivate discussion. The consultation piece proved to be successful because community members did show a vested interest in the project, and generally supported the clinic development.

5.2.2 Philosophy

From the initial planning stages, the concept for SJTC melded well with the philosophy of all the partners. All felt that students at St. John's High School were at-risk (ex: low socio-economic status, high rates of communicable diseases and pregnancies). They agreed that the overall general health of the students was a priority. There was also agreement about who the clients would be, and what the service priorities were.

5.2.3 Partners

Having partners who could demonstrably contribute, in various ways, to the development of SJTC was crucial. For example, the coalition was essential in the initial stages because of its community consultation. St. John's High School was a major partner, in terms of providing space for the clinic and leading the construction of the clinic. MCC provided the personnel to run the clinic and the expertise on the required purchases and supplies. Healthy Child Manitoba provided funding and evaluation support for the clinic. Instead of one group taking on all the responsibilities of the clinic development, each partner was responsible for a piece of the overall clinic development. When asked about the partnerships that were formed, one interviewee said:

"...very responsive, very responsive. We didn't know each other before the project started and I think I (got to) know them well over this two-year period. There was not ego involved, which was something I appreciate. It was a co-operative group. No one was doing something that they shouldn't be doing."

The partnerships that were formed subsequently provided opportunities for other joint initiatives between some of the partners, outside of the teen clinic. One representative from the Winnipeg Regional Health Authority (WRHA) said about MCC:

"I think the teen clinic has actually (enhanced our relationship with others) because now we've had discussions about sharing [documents] and public health nurses. We are doing a lot of joint initiatives. We are including both centres now."

5.2.4 Steering Committee

The steering committee was made up of representatives of each of the partnering agencies, as well as student representatives. In the initial stages of SJTC development and implementation, the steering committee was very active, meeting regularly to keep each other updated on their various responsibilities. Once the clinic was up and running, the involvement of the steering committee decreased. There was agreement among those interviewed that the steering committee should continue to meet a few times a year to stay updated.

5.2.5 Relationship with High School

A very good relationship was developed among all the partners, in particular, the relationship between MCC and St. John's High School flourished with this initiative. As one committee member said:

"I think what makes the clinic so successful is the relationship between the clinic and the school. If you had none, it would probably be very hard."

In the initial stages of development, there was ongoing conversation with the school administration, the school guidance counsellors and the students. This contributed to building positive relationships, as well as ensuring that the school was provided with the kind of clinic it envisioned. In particular, the role of the contact person at St. John's High School was crucial. A good relationship was required for the project to move forward. This person was able to monitor and be kept abreast of the construction of the clinic, as well as any substantive issues that involved the school and the clinic.

Since the opening of the clinic, the principal and the guidance counsellor (who were both avid supporters of the clinic) have retired. There has not been a demonstrable loss of support for the teen clinic (by the school), although the relationships have changed somewhat. For example, the guidance counsellor was very hands-on about being kept informed about construction, and in promoting the clinic to staff and students. Because this role is no longer as necessary, the new guidance counsellor's role has changed.

5.2.6 Clinic Staff

The clinic staff had tremendous experience with delivery of services to youth, as well as clinic development and setup. In particular, the nurses were aware of clinic operations, what was needed in the physical environment of the clinic, as well as what supplies and purchases were required.

6.0 Operations And Service Delivery

The provision of services to students in the school environment had its own unique challenges. Below is a summary of what was discussed in the interviews.

6.1 Challenges

6.1.1 Hours of Operation

When the clinic first opened, the hours of operation were from 3:30 p.m. to 6:15 p.m. It was soon discovered that the clinic was not being used after the last school bell. Students had other commitments after school (ex: jobs, childcare, sports). The committee knew from the outset that the hours of operation would be a challenge. The clinic successfully petitioned to have its hours changed, to open at lunch time and run all afternoon. As a result, student usage increased. One of the clinic staff commented on the time change:

“I think it’s brilliant. The staff (who) were involved last year, said that between the last school bell and when the clinic ended at 6:15, it was dead. This has been a really important change. The numbers are up and we’re busy at the front end of the clinic, rather than later in the day.”

Even with the change in hours, some of those interviewed still felt that clinic hours were too short, and that it should be open more than one day a week. As one nurse said:

“I think that the fact we are only open one half-day a week is an issue. A lot of kids I spend time following up on only come to school now and then and there’s a lot of them, every age you can imagine. Even Grade 8 and 9 students, who you think would be coming to school regularly, they aren’t. So they’re hard to find after the fact (for follow-up).”

6.1.2 Attracting Certain Clients

One of the challenges presented to teen clinic operators at SJTC (and other organizations) is the question of how to encourage attendance from young males. A slowly increasing trend in attendance by males at SJTC was observed in the first year of operations. The clinic is working on outreach strategies, such as education, to encourage male use.

Another group, whose attendance was lower than anticipated, were students enrolled in Grades 11 and 12. The physical location of the clinic may have been a contributing factor, as the clinic is located on the main floor of the school, by the main entrance. High school students (Grades 11 and 12) attend classes on the third floor of the school, and have a separate entrance, so they do not regularly pass by the clinic. To address this, the clinic has been putting up posters on the third floor and is working on getting a poster board to put up on clinic days, so these students are aware the clinic is operating.

6.1.3 Availability of Health Information

Clinic staff mentioned that having more information available to students on a regular basis (ex: through pamphlets, brochures, hallway displays, classroom presentations) would be ideal. However, finding enough time to organize the materials is a challenge. Nursing staff are allotted only a certain number of hours at the clinic which are used up during clinic time and follow up. Little or no time is left over for general education. Clinic staff suggested having additional time allotted for this task or having a volunteer who could take the lead.

6.1.4 Working Offsite

Record Keeping: Record keeping initially presented itself as a challenge in the operation of a satellite clinic. However, an effective procedure was worked out by clinic staff. Each visit to SJTC is recorded on a carbon-backed note sheet. The copies are attached to another sheet, where all demographic information and pertinent data on the client has been documented. These sheets stay at the clinic site in a locked filing cabinet. The originals are taken back to Mount Carmel Clinic and stored in a permanent client file. Due to confidentiality and security reasons, results of laboratory tests are sent to Mount Carmel Clinic, rather than SJTC. This necessitated the recording of laboratory results in a binder, which is taken to the clinic on the days it's open. The binder is stored at Mount Carmel Clinic when not in use. Through this system, staff are able to maintain current and complete information on SJTC clients at both sites.

Keeping the clinic stocked: A related challenge for nurses was keeping the clinic stocked with supplies, while having to take supplies back and forth between clinics. As one nurse said:

“It is a challenge for me to remember whether we have enough bandages...We have to constantly keep lists and keep track of what we are missing. The constant stocking and taking things back and forth is challenging when you work off site. Everything has to either stay there or be taken back and forth.”

6.1.5 Teacher Involvement

The issue of teacher involvement was brought up during interviews with clinic staff. Well meaning and concerned teachers were compelled to bring students to SJTC when they felt that students were at risk, or otherwise required the clinic's services. Notwithstanding the confidentiality aspect of this referral process, practitioners often felt that the students did not understand or feel that anything was wrong with them and the treatment was disregarded. An example was the number of these students who didn't follow up on prescriptions that were issued at the clinic. Practitioners felt pressure from teachers who wanted them to do something for a student, while disregarding students' level of participation in their own care.

6.1.6 Screening Process for STIs

Part of the teen clinic mandate is to screen every client who comes in to find out if they are sexually active and at risk for sexually transmitted infections (STIs). This screening provides an excellent opportunity for information sharing and prevention education. Although clinic staff view this as an important piece of their work, it is sometimes difficult to bring up the topic of sexual activity when the client wants to discuss unrelated issues. Despite this difficulty, staff felt they ultimately found ways to ask additional health questions, with good results. One nurse explained her tactics for exploring sexual activity with her clients:

"...Again I go on, we're going to see you about your toe today, but you know we're also available if (you need to talk about birth control or STI testing) or if your friends don't know where to go for (this information). Sometimes, it's "Yeah, ok." and it leads into something. Sometimes, it blows you away, because if they're 12 or 13, you say what am I doing this (for)? But you find out they're sexually active already. It has actually worked ok."

6.2 Strengths

6.2.1 Support of School

Several of the individuals interviewed commented on how well the school supported SJTC. For example, the school helped promote the clinic to the student body with announcements and referrals. At the time of the interviews, the school was also interested in furthering the relationship with SJTC, by having nursing staff visit classrooms to discuss different health issues with students.

6.2.2 Clinic Staff

A primary strength of SJTC was clinic staff, all of whom had prior experience working with youth. Because of this, staff had developed their own methods of connecting and building trust that were integral when working with youth. As well, the same staff are at the clinic regularly, which provided consistency in client care. As one staff said:

"I think it really fits the bill as far as being accessible (and) really quick. I've seen kids come in and we've had pregnancy tests, pap, STI screen, birth control change, treatment for an STI and out the door in half an hour. That's brilliant, it just fits the way...it fits their 'Quick, give it to me now.' lifestyle."

6.2.3 Clinic Site

The clinic is located in a very high traffic area of the school, between the guidance counsellor's office and the main principal's office. Some interviewees suggested that being next to the guidance counsellor's office was beneficial, because this office drew students. In a sense, a one-stop shop was created to provide students with counselling and health services in one place.

Being in such a high traffic area provided more safety and security for students and staff in the event of an incident. A community constable visits the school regularly and his/her services can be used if necessary. However, the active location of the clinic may have also acted as a deterrent for some students. Interviewees said that some students mentioned their discomfort that their peers make more assumptions about why they are at the clinic. Others said that medical treatment (ex: fear of needles) may humiliate them in front of their friends.

Aside from the location, those interviewed felt the clinic itself provided adequate and comfortable work space. The examining room size was seen as adequate, and there was enough storage space (much of it locked), to house supplies as well as staff's personal belongings.

6.2.4 Team Approach

The clinic was very responsive to working with the school, particularly the guidance office, when issues arose that required collaboration and planning (ex: mental health referrals, pregnancy options). Those interviewed felt that, when concerns arose, both groups were able to sit down and discuss solutions.

7.0 Gaps In Services

The clinic was equipped to handle many issues during clinic hours. However, some gaps in service were discovered during the implementation phase. It was felt that addressing these gaps would enable the clinic to run more efficiently and effectively.

7.1 Mental Health Services

The need for mental health services was initially raised by the school during clinic development. The school itself employs social workers and counsellors who are available to address some, but not all, of the issues students were dealing with. Currently, there is not enough funding available for the clinic to provide mental health services. Those who were interviewed felt strongly that this was necessary to complement the services the school provided.

7.2 Volunteer Program

It was felt that a volunteer program (to help clinic staff) would be very popular with clinic staff and students. Currently, there are plans to put a volunteer service in place, and volunteer manuals have been developed for training. Some of the volunteer duties may include: driving clients to their referred appointments, peer counselling, and help with forms and collecting accurate information from clients. Several interviewees said volunteers should be from the community and not students' peers.

7.3 Referrals

Operationally speaking, it was impossible for the SJTC to provide a full range of services (ex., laboratory work) to the students in the school. Often, staff would make referrals to other services or specialists. Examples of common referrals included appointments for x-rays, optometrists, dentists, and mental health professionals. One of the challenges with referrals was transportation to appointments. Perhaps because of distance and comfort, students are reluctant to go to referral appointments. To address this issue, SJTC staff have provided bus tickets, booked appointments and drawn maps for students. In rare instances, and with consent by the student, teachers drove them to appointments. It was felt that having volunteers for this would be useful.

8.0 Impact Of St. John's Teen Clinic

8.1 On Students

The clinic numbers have increased since it first opened. More importantly, the level of repeat uses has also increased. This indicates that students are finding the service accessible and convenient.

Interviews indicated the clinic's having a positive impact on students. It was felt that not only are clinic staff helping students increase their capacity to care for themselves, they are also helping students access services that will have a positive impact on their lives. One interviewee said:

“There are several young women who we’ve seen since September who have been pregnant, who have had pregnancy tests right at the clinic. I am thinking...these kids are (younger), we can work with them...I think we have established something with them...We can work with them is my hope, on a better option. They can come back and get birth control, we’re right in the school, it doesn’t need to be difficult, and hopefully, those kids have better progress. They can get further in school, graduate and their whole life story gets written differently if they have high school, college, university...some better life path than being pregnant (at a young age) and dropping out and not knowing who can help you. Putting the service there, where the kids can get it, ultimately affects them academically and their whole life trajectory is different.”

8.2 The Community

Generally speaking, feedback about the clinic from the community has been minimal. Some interviewees suggested that since the clinic is not open to the general public, people outside of the school are unaware of its existence. Parents whose children attend St. John’s High School have provided informal feedback to some of those interviewed, and overall, it has been positive. Although the parents often expressed some discomfort with their children attending the clinic for sexual/reproductive issues, they appreciate of the fact that there was support available, if these issues arose. According to clinic staff, parents are suggesting to their children that they should go to the clinic “...to get checked out.”

9.0 DISCUSSION

Based on the interviews, the collaboration between the various stakeholders involved with SJTC was a successful one. The implementation of the clinic benefited from the philosophical alignment between the primary care provider, the site provider and the community. The importance of the experience of the primary care provider, in terms of staff training and administration of youth friendly clinics, cannot be overemphasized.

10.0 CONCLUSION AND NEXT STEPS

There are a few recommendations to be made about future direction and next steps.

Transition into Developmentally Appropriate Care: First, our data suggest age differentiation in the location where health services were provided. Younger students were more likely to have a family physician (likely a pediatrician), while older students were more likely to use other forms of service delivery (ex: walk-in clinics, community health clinics). Even after controlling for age, youth who identified as being Aboriginal were less likely to have a family physician. Given the positive effect of having a regular source of care (20-24) on preventive care (25-27), which, in turn, has also been shown to improve overall health (28), examination of this seeming transition as youth age is warranted. Other studies have discovered that use of health services by youth is associated with age (29), while the issue of transition (and that of developmentally appropriate care) may be particularly complicated in youth with chronic illnesses, such as diabetes (30-33) .

Data analysed were cross-sectional, so the transition observed in our sample is artificial, or may be due to a variety of confounding reasons (ex: a cohort effect). However, a large body of literature exists which shows that, at the very least, school-based health clinics are effective at increasing access to primary health care, including preventive services (2-7, 24, 34, 35). In light of evidence illustrating that detrimental behavioural patterns prevalent at young ages may predict future behaviour (2, 36, 37), engagement into primary care with youth in some of the higher risk groups may be an imperative. As Kleinart (38) suggests:

“Adolescent health care services should be perceived as the most important opportunity to treat emerging problems early and prevent ill health by educating about, and firmly establishing, a healthy lifestyle.”

SJTC may be well placed to deliver developmentally appropriate services to youth as they enter late adolescence, and young adulthood. It may be beneficial that the clinic is open weekly, and staffing has been consistent (33). **A future evaluation direction may be to verify that this transition exists, and that the services delivered by SJTC are accessible to this population.** Further along, it may be important to compare **health behaviours (ex: preventive care, treatment maintenance, etc.) in youth who move from pediatric care and end up as SJTC clients, with youth who are not SJTC clients.**

Data Collection Systems: Although information gathered from the baseline survey was useful, this model may not work when clinics are not school based. Operationally speaking, it was difficult to get a good response rate; verify that surveys were filled out appropriately; and ensure that teachers were trained in administering the surveys in the SJTC setting. The importance of support given by the school in this cannot be overemphasized. Future sites may not have this level of support. As well, the complexity, and resource cost, of a community wide survey of youth would be much greater. In this case, the benefits of having information gathered from this method may need to be revisited. For clinics that are school-based, **some simple survey validation questions are recommended to help filter out surveys that may not have been filled out appropriately.**

Comparing clinic clients to the general school population was useful, and verified other research (ex: the higher female to male ratio in clinic clients, relative to the school population; riskier practices of clinic clients). However, conclusions are hampered somewhat by the cross-sectional nature of survey administration, as well as validity of questions. As discussed, there were assumptions inherent in the comparison (ex: answers on the intake form were used as the gold standard). Again, more resources would most likely be needed to obtain a representative sample (of the comparison group) and ensure accuracy in answering questions.

From the outset, the SJTC evaluation committee thought existing data collection systems would be more effective in gathering some of the required evaluation data. In particular, it was thought that using administrative databases could be a way to work around some of the issues of data validity, and resource commitment from SJTC staff. To that end, staff at Manitoba Health (including Health Information Management, the Information Systems Branch, Cadham Provincial Laboratory and the Communicable Disease Unit) have worked out various processes so that utilization could be attributed to SJTC (at the administrative database end). They also ensured that data from these utilizations could be readily analysed. Information from this methodology will be presented in the 2006/2007 SJTC report.

Linking administrative data in this report provides a longitudinal look at clients of SJTC, and other teen clinics. Age and sex matched comparison groups may be easily created. Questions on the transition of care, engagement with preventive care, reduction of risky behaviours and adherence to treatment regimens can be efficiently, and cost-effectively answered through administrative databases. However, exclusive use of administrative databases may limit knowledge on subjective motivations to seek care. A restricted focus on morbidity (as opposed to a holistic examination that includes health promotion activities, etc.) may not be the most appropriate manner to evaluate services delivered (39). Not all aspects of service delivery (ex: nursing functions) are captured in administrative databases but the SJTC evaluation committee has a process to capture this information. The 2006/2007 SJTC report will also present the pros and cons on the use of these data.

Measured Outputs

We had more confidence in our output data. As discussed, a differentiation by age in reasons for use was apparent from the data. A differentiation by sex was also observed. Generally speaking, males tended to present for acute reasons, while females presented for reproductive health services. This observation is consistent with what has been documented in other research (19, 29). The presence of mental disorders in both sexes, (quite prevalent in other studies) (29, 40) highlights the complex needs of adolescents, and verifies the importance of having a strong clinical team to address them. Indeed, although reproductive health issues are common reasons for presentation, they are neither exclusive, nor, as in the case for males, dominant. That appropriate referrals were made, according to the data abstraction forms, is encouraging. In keeping with the multiple needs of the SJTC clients, future evaluation directions may include: **monitoring the use of the clinic by males (ex: if acute presentations eventually evolve into primary care); monitoring the use of preventive/screening care in females; and development of indictors to examine service delivery for mental health needs (ex: treatment adherence).**

The presence of positive tests for chlamydia and pregnancy highlights the need for the services provided by SJTC. Given the asymptomatic nature of some cases of chlamydia (41) the difficulty in diagnosis and treatment (42, 43), and the efficient transmission networks of adolescents (44, 45), treatment of all positive cases is a high priority. Concerns about access to treatment (particularly stigmatization and lack of treatment support) have been identified by Manitoba Health as a possible barrier to tertiary prevention (43); SJTC may again be well placed to deliver treatment in a manner that is appropriate to youth. An obvious, and current evaluation direction, is to **monitor the proportion of positive STI tests that receive treatment**. Because of the small number of students who received positive pregnancy or STI tests, **a complementary evaluation direction to take (which may provide better insight and contextual information) would be a qualitative assessment of the delivery of care.**

The literature on adolescent reproductive health services suggests that knowledge of preventive behaviours, by itself, is not effective as prevention. While knowledge is necessary, it is hardly sufficient (24, 46, 47). The reasons behind risky behaviour are many and complex, and suggests that no one solution exists.

Wellings et al. (47) advise “...no general approach to sexual health promotion will work everywhere, and no single-component intervention will work anywhere.”

To this end, individual factors such as negotiation skills, and external factors such as type of partner (ex: casual versus regular), and perceived peer use of barrier methods have been proposed as influences on decision making (46, 48, 49). At a minimum, activities designed to promote effective preventive behaviours should concentrate on these factors, in addition to education. Although one American study has reported on a placebo effect of positive results (in HIV risk behaviours) in both control and intervention groups (50), most studies indicate that theory driven, targeted (for specific risk behaviours) and involved programs that are gender, age and ethnically appropriate may be most effective in reducing risky behaviours (45, 51, 52). Bell et al. suggest that in programming, these design elements are at least as important as curricula content (52). By virtue of the number of unique clients and repeat visits in its first year of operation, SJTC seems to have successfully established itself as an attractive option for some youth. As accessibility has now been bridged, **we recommend that targeted program interventions be explored for clients who are prone to higher risk behaviour.** It is unfair to expect that staff at SJTC be solely responsible for providing health care services, while at the same time creating major behavioural changes. However, **because youth are attracted to SJTC, it offers an opportunity for program implementation that should not be missed.** If programs are found that are a good fit for the clinic, careful consideration of the potential to stigmatize users of SJTC is recommended.

Because of its importance in reducing STIs, condom use has traditionally been used as an indicator of the effectiveness of reproductive health programs (45, 50, 51, 53). However, there are substantial issues about the most valid and reliable means to accurately assess this indicator. Many biases and methodological issues (ex: social desirability, imprecise wording, mode of question delivery, cross sectional observational designs) abound (49, 54). For example, Jeannin et al. in a study of Swiss survey respondents, report gender differentiation in the definition of sexual intercourse (ex: penetrative versus non-penetrative), as well as inconsistency in reporting condom use, with the direction of the bias being towards overestimating use (54). We used two methods to track condom use: the intake form, and the baseline survey. Both methods had limitations, although both provided useful information. **More work needs to be done to demonstrate the effectiveness of SJTC in this area. A recommended next step would be to examine different methods that validly and reliably address this indicator** (i.e., methodologically, and operationally).

Because health needs of the SJTC clients are complex, and there is no focussed program specific to condom usage (beyond clinical guidelines) the importance of this single indicator needs to be debated. **If condom use is deemed an appropriate indicator (that is, coupled with a programmatic intervention designed specifically for this behaviour), we recommend that a sustained (i.e., longitudinal) look at this indicator be implemented in the evaluation design,** similar to some randomized controlled trials in the United States (45, 51). The availability of administrative data to provide a longitudinal examination of patterns of health care, and the willingness of staff at SJTC and MCC to look at longer term outcomes (as shown by their involved participation in the evaluation), offer a potential means to better evaluate this indicator.

In conclusion, the most important recommended next step is to continue collaboration with SJTC staff to refine indicators that:

- are relevant to their service needs
- are amenable to ongoing monitoring
- use available health data

In terms of what can be reasonably expected when developing these indicators, it may be wise to consider the words of Santelli et al. "...it is naïve to expect large changes in fundamental health behaviors from (school based health clinic) activities alone." (24) Realistically, although important (as evidenced by the complexity of needs), SJTC and other SBHCs may only be able to affect one part of the puzzle, if at all. However, collaboration – specifically, a multidisciplinary and multisectoral approach, from the service perspective, and in the case of HCM, inter-departmentally, is the most likely key to success: both in the delivery of service, and in assessing its impact.

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Appendix 1: List of acute illnesses and injuries presented at SJTC

List of Acute Illnesses and Injuries		
abcess	excema	pain
abdominal cramps	forearm Lesion	paresthesia
abdominal pain	gastritis	paronychia
abrasion	headaches	pharyngitis
allergic conjunctivitis	hearing loss	post-concussion
allergic rash	hematuria	rash
allergies	hip pain	rhinitis
anemia	hyperhidrosis	ringworm
anxiety	infections - unspecified	scabies
arthritis in knee	ingrown toenail	sebaceous cyst
assault	injury - unspecified	soft tissue injury
asthma	insect bite	sore throat
back pain	insomnia	sprain
bilat conjunctivitis	jaw pain	stress
bowel incontinence	knee pain	thumb injury
bronchitis	laceration	tinea Pedis
cellulitis	laryngitis	twisted ankle
depression	leg pain	upper Respiratory Tract Infection
dermatitis	migraine	urinary Tract Infection
dysmenorrhea	muscle strain	vomitting
eczema	onychomycosis	wart
eustachian tube dysfunction	otitis media	

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