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Characteristics of People Seeking Help from Specialized Programs for the Treatment of Problem Gambling in Ontario

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Abstract

Objectives:

The objectives of this study are to estimate the number of people seeking treatment on an annual basis in Ontario at specialized problem gambling treatment programs and describe important characteristics of clients.

Method:

Agency staff prospectively collected four broad information categories from clients: demographics, gambling activities, problem severity and services received, and submitted the data to a central database.

Sample:

The report includes submissions (total caseload equals 2224) from 44 designated problem gambling programs between January 1, 1998 and April 30, 2000.

Results:

Of the 2224 clients in treatment, 1625 (73.5%) were seeking help for their own gambling problem, and 504 (22.8%) were seeking help in dealing with a family member/significant other's gambling problem. The overall gender ratio of cases in treatment was about 1.4:1 (58.3% to 41.7%) males to females. A wide range of gambling activities was reported as problematic.

Conclusion:

Only a small percentage of people experiencing problems related to gambling are seeking help from specialized treatment programs. Population survey data are needed in Ontario to assess the potential over- or under- representation of particular sub-groups in treatment compared to the epidemiology of problem gambling in the community.

Introduction

The past decade has seen a burgeoning interest in research and policy analysis with respect to problem gambling. Despite the community focus of much of this work, there is little evaluation research at present concerning the impact of problem gambling on health and social services in general or the specialized sector of services, now in many communities for treating problem gambling. Thus, there is a need to broaden the research frame for problem gambling to include health services research and policy analysis (Aday, Begley, Lairson & Slater, 1998). One of the key aspects of services research includes "performance monitoring" of publicly funded services that provide treatment to problem gamblers. Generally, this kind of monitoring and evaluation is a fundamental part of services research in the addiction field (Dennis, 1999). To date, there have been a small number of studies about the characteristics of problem gamblers in specialized treatment services (e.g., Crisp et al., 2000); however, only one study has been done in a Canadian context (Beaudoin & Cox, 1999). The results suggest that gambling to relieve dysphoria or escape from life problems characterize a large subset of problem gamblers in treatment. In addition, in contrast to other U.S. studies where older males predominate (Volberg, 1994), their treatment sample was approximately one-third female, and 43% were between the ages of 18 and 34. Other studies in some jurisdictions suggest that female problem gamblers increasingly participate in treatment (Moore, 1998; Stinchfield & Winters, 1996). Crisp et al. (2000) report on the gender differences in the types of gambling activities and related problems that were reported at initial assessment for entry into the program.

Specialized treatment services for problem gambling have rapidly expanded across Ontario in response to needs at the community level; provincial policy since 1996 directs a proportion of gambling revenue to treatment programs for problem gambling, community information services and prevention and research. Currently, 2% of slot machine gross revenue is committed to expand the problem gambling initiatives in the province. This funding totaled \$3.5 million in 1998/1999, \$10 million in 1999/2000, and \$17 million in fiscal 2000/2001. The share of funding that went to treatment was \$2.2 million (1998/1999), \$3.1 million (1999/2000) and about \$6 million in 2000/2001.

As part of this funding envelope, specialized treatment services for problem gambling have been developed largely through designated funding to existing addiction treatment services. As of this writing, 43 substance-abuse programs have received supplementary funding for a service component dedicated to problem gambling. Under the auspices of general health and social services that focused specifically on the Chinese-Canadian community, another

problem gambling program was funded by the Ontario Substance Abuse Bureau (OSAB). The Mnjikaning First Nation at Rama, Ontario, also funded a specialized gambling treatment program for the First Nations community. (Data from this treatment centre are not included in the present report.) Thus, there were 45 programs in operation, and 44 of them were funded by OSAB. OSAB's commitment to specialized problem gambling treatment programs increased from three agencies and \$1 million in funding in 1995/1996 to 44 agencies and just under \$6 million in funding in 2001. Included in this figure is funding for seven new programs targeted at special populations (ethno-cultural, older adults, women and youth).

It should be kept in mind that OSAB-funded treatment agencies are not the only sources available to Ontario citizens seeking help for gambling related problems. This report does not consider additional guidance or treatment received from existing non-OSAB funded sources, such as Gamblers Anonymous/GAMANON, Employee Assistance Programs or religious groups.

Drug and Alcohol Treatment Information System (DATIS)

All substance-abuse services funded by OSAB (approximately 200 programs) participate in an ongoing client-based information system, which monitors the number and characteristics of clients seeking help, and an assessment of the services they have received. Ogborne, Braun and Rush (1998) provide an overview of DATIS, and a report is currently being prepared that summarizes annualized data from this provincial monitoring system for the fiscal year 1999 and 2000. Since early 1998, the 44 OSAB-funded, designated treatment programs for problem gambling have been participating in DATIS and reporting on a special component developed specifically for problem gambling services.

Objectives

The objectives of this report are to

- estimate the number of people seeking specialized treatment on an annual basis at problem gambling programs in Ontario; and

- describe the characteristics of problem gamblers entering treatment, including demographic characteristics, type of gambling behaviour and problem severity.

Method

Data Elements

There are four broad categories of data submitted by the participating agencies: client demographics, gambling activities, problem severity and services received (see Table 1). The agencies also collect the required information for the larger DATIS information system, with links to the gambling data provided by a unique client identifier, which is based on birth date, initials at birth and gender (Dalrymple, Lahti, Hutchison & O'Doherty, 1994). A person becomes a "case" in the information system when he or she has been registered in the program as a client. For the majority of programs this will mean there has been face-to-face contact with clients. One treatment program has a well-established telephone counseling service and, as a general rule, callers are registered as clients if the call is about counseling and exceeds 20 minutes. It should be noted, however, that the data collection process and data definitions will underestimate the overall involvement of agency staff with problem gamblers and their families; telephone support for people who chose not to formally enter the program, and the staff's prevention work in the community are not captured in the information system.

Table 1. Data elements in the problem gambling treatment information system

<u>Demographic characteristics</u>	<u>Gambling activities</u>
<ul style="list-style-type: none"> • Problem gambler or family member/significant other • Age • Gender • Ethnic/cultural background • Reason for seeking help (gambling or other treatment) 	<ul style="list-style-type: none"> • Type and frequency of gambling activity • Type and frequency of gambling locations

<u>Problem severity</u>	<u>Services received</u>
<ul style="list-style-type: none"> • Length of time since last gambled • Years of negative consequences • South Oaks Gambling Screen (11) 	<ul style="list-style-type: none"> • Duration of different service activities (e.g., Assessment, counseling)

Data Collection, Transmission and Analysis

At the agency site, the data elements are captured on three forms. Form A is completed at intake and records the client's demographic characteristics, frequency of different gambling activities and location of gambling. Form B collects the South Oaks Gambling Screen (SOGS) data (Lesieur & Blume, 1987). A third form, the Individual Activity Timesheet, is then completed after each face-to-face or telephone contact with the client. The roll-up of the data from this third form summarizes the type and duration of services received. The forms were designed using Teleform software, so that, upon completion, they are faxed to a central 1-800 number and the data is read directly into Microsoft Access database. A research clerk scans the Teleform data and implements a standard cleaning protocol involving the identification of unreadable and out-of-range data. Following the data-cleaning process, the Access database is read into Statistical Package for the Social Sciences software for analysis and generation of statistical tables. All admission records date-stamped between January 1, 1998 and April 30, 2000 were selected for this paper.

Missing Cases

In this report, we summarize the information captured in the central database as reported by the participating agencies; the data used has undergone the cleaning process. While missing data ranged from 2% to 3% for the majority of items, there was an unexpected volume of missing data on a small number of items (e.g., about 20% of the SOGS were missing). There was also a considerable amount of out-of-range data (e.g., the unscored SOGS item concerning the largest amount of money ever gambled on any one day; and

items on the data collection form that captured duration and type of services provided on an ongoing basis). Some of the problems were due to a few agencies not completing the required forms or data fields. Most of the data quality problems that resulted in machine-readable errors, however, have been traced to problems using the Teleform system that resulted in machine-readable errors. Thus, extensive cleaning processes have been applied manually to the information used for this report. With training and ongoing communication between the agencies and the new DATIS field staff, these errors in data collection and transmission have been significantly reduced.

Because the problem gambling programs have not reported all of their clients to the information system, the total use of these services will be underestimated. All agencies were contacted prior to the preparation of this report. Their participation was verified, and any outstanding issues related to their involvement, case reporting and data quality were discussed. Four programs reported that they had not yet seen any clients. For those programs that did not send in each of the required forms (e.g., the SOGS), the count of their clients will still be an accurate reflection of their total caseload. Some programs reported not sending in any forms for a small number of clients, and we estimate this number to be less than 100 for the province as a whole. Thus, we believe the data system and this first report from the database reflect a reasonably accurate estimate of the provincial caseload of Ontario's problem gambling treatment programs.

Results

Caseload

Table 2 shows 44 OSAB-funded treatment programs in operation with a total caseload of 2224 over the study period. The table also places these provincial totals into a regional context by displaying the information separately for the seven Ministry of Health and Long-Term Care (MOHLTC) regions and adjusting the data for population size. It is important to note that the treatment caseload data are based on the geographic location of the treatment program, not the residence of the client. The agency location, however, will be a reasonably close proxy for the location of the clients' residence since the treatment programs are all non-residential programs and draw the large majority of their clients from a 50 to 100 kilometer radius. An exception to this group is the program with the telephone counseling service, which receives occasional calls from outside their district. On a per capita basis, the South West Region has the highest user rate of problem gambling

treatment programs in Ontario (2.98 per 10,000), a rate that is about 44% higher than the provincial average. Ontario's North Region has the second highest number of users at 2.82 per 10,000, followed by the South Central Region at 2.43 per 10,000. The West Central Region has the lowest user rate at 1.46 per 10,000.

Table 2. Regional context for specialized services for the treatment of problem gambling in Ontario

Region ¹ (Largest city/ municipality)	No. of programs funded	Problem gambling two-year caseload	
		N	Rate ²
Central East ³ (Oshawa)	4	251	1.50
Central South (Hamilton)	4	265	2.43
Central West (Kitchener- Waterloo)	4	265	1.46
East (Ottawa)	8	258	1.74
North (Sudbury)	15	240	2.82
South West (London)	7	429	2.98
Toronto	2	501	2.10
No region identified	-----	15	-----
Total	44	2224	2.07

¹Planning region for Ministry of Health and Long-Term Care.

²Rate per 10,000 population.

³Excludes Mnjikaning First Nation at Rama

Figure 1 examines the total caseload reported across the study period (28 months from January 1, 1998 to April 30, 2000), as it was reported during four-month segments. There are two reasons for reporting the data in this manner. Firstly, one can clearly see the rapid increase in use of the gambling treatment programs during 1998, and the stabilization in total utilization during 1999 to the end of the study period. This reflects the growth in provincial treatment capacity through 1998, since the number of programs grew dramatically during this period. Undoubtedly, it also reflects the increasing use of the individual programs as they became established in their community. Secondly, the four-month breakdown allows one to derive a projection of the current annual caseload by taking the average of the caseload of the last four, relatively stable periods (mean= 476), and multiplying by three to yield a total annual estimate of 1428 clients.

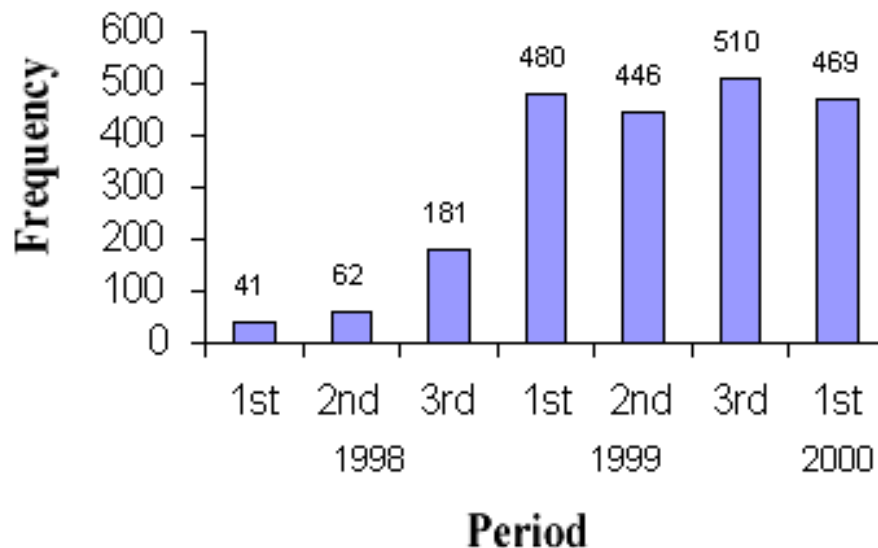


Figure 1. Frequency of use by four-month period between January 1/98 and April 30/00

These figures will still be an underestimate of total service use because four programs had not yet seen any clients during the study period. However, the estimation approach provides the necessary adjustment for the rapid increase in treatment capacity over the two-year period and the start-up phase for many of the agencies that are now fully operational.

Demographic Characteristics

Of the 2224 clients in treatment, 1625 (73.5%) were seeking help for their own gambling problem, and 504 (22.8%) were seeking help in dealing with a family member/significant other's gambling problem. The remaining 82 (3.7%) were seeking help for both their own gambling problems and dealing with a family member's. The overall gender ratio of cases in treatment was about 1.4:1 males to females (58.3% to 41.7%). A significantly higher percentage of women compared to men sought help for their difficulty with a family member/significant other (37.3% of women compared to 12.1% of men [$\chi^2=194.45$, $df=2$, $P<.001$]). Consequently, when only those clients who sought help for their own gambling problems (including a small proportion of clients seeking help for both their own and a family member/significant other's gambling problem) are considered, the gender ratio widens to 1.9:1 males to females (65.6% to 34.5%). (See Table 3.)

Table 3 shows the age distribution of male and female clients seeking help for their own problem gambling. The age distribution for both genders combined is bell-shaped, with the largest percentage (33.6%) falling within the age category of 35 to 44. The difference in the age distribution between males and females is statistically significant ($\chi^2=68.85$, $df=8$, $p<.001$); male clients tend to be younger.

Table 3. Age by gender of problem gamblers in treatment¹

Age category	Male		Female		Total	
	N	%	N	%	N	%

<16		.3	0	0	3	.2
16-17	3	1.0	2	.4	13	.8
18-24	11	7.4	16	2.8	97	5.8
25-34	81	26.7	102	17.6	397	23.6
35-44	295	34.2	188	32.5	566	33.6
45-54	378	20.8	156	26.9	386	22.9
55-64	230	7.7	94	16.2	179	10.6
65-69	85	1.3	11	1.9	25	1.5
70-100	14	.6	10	1.7	17	1.0
Total	7					
	1104	100.0	579	100.0	1683	100.0

¹ Includes those in treatment for their own gambling problem and those in treatment for both their own problem and a family member/significant other's.

Table 4 shows the ethnic and cultural background of clients seeking treatment for their gambling problem. The largest proportion of clients seeking treatment are people of white background (83.3%). People of Aboriginal/ First Nation's heritage accounted for 4.9% of clients, and people with Asian backgrounds accounted for 7% and small percentages were drawn from several other ethnic groups.

Table 4. Ethnic/cultural background of problem gamblers in treatment¹

Ethnic/cultural background	Total	
	N	%

Aboriginal/First Nations	74	4.9
Asian	106	7.0
White	1261	83.3
Other	72	4.8
Total	1513	100.0

¹ Includes those in treatment for their own gambling problem and those in treatment for both their own problem and a family member/significant other's.

The forms in the data-collection system record whether the client initially came for help with a gambling problem or whether the problem surfaced later in the course of providing support for substance abuse or some other issue. Almost 90% came to the agency for their gambling problem; these percentages were similar for both male and female clients.

Problem Severity

The number of years that gambling has negatively affected a client's life is also recorded. Of the clients in treatment for their own gambling problem, 27.8% have been negatively affected by their gambling for one year or less, 15.2% for two years, 25.2% for three to five years, 14.3% for six to 10 years, and 17.4% for 11 years or more.

The South Oaks Gambling Screen is a widely used instrument for assessing the severity of problem gambling based on DSM-III criteria (Lesieur & Blume, 1987). A cut-off score of five or more is typically used as evidence of pathological gambling. Some researchers and clinicians use a score greater than 10 as the criterion. As shown in Table 5, about 90% of the client population seeking help for their own problem gambling scored above the cut-off score of five; 48.5% were above the more conservative cut-off of 10.

Table 5 examines the relationship between the SOGS score (combining scores 1 to 4 for "problem gambling," and five and over for "pathological gambling") and years that gambling has had negative consequences. There

was no statistically significant relationship between duration of negative consequences and problem severity as measured by the SOGS.

Table 5. Number of years gambling has negatively affected clients' lives¹ (by SOGS score)

Years	SOGS categories			
	1-4 (some gambling-related problems)		5-20 (probable pathological gambling)	
	N	%	N	%
1	31	29.8	213	20.2
2	17	16.3	174	16.5
3-5	22	21.2	296	28.1
6-10	14	13.5	166	15.7
11+	20	19.2	205	19.5
Total	104	100.0	1054	100.0

¹ Includes those in treatment for their own gambling problem and those in treatment for both their own problem and a family member/significant other's.

Gambling Activities

Each client entering the gambling treatment program was asked to identify his or her major problem gambling activity and, if appropriate, up to two additional problem activities. Table 6 shows the diversity of gambling activities that were identified as problematic by these clients. The most frequently cited problem activities were slot machines (37.7%), cards (30.6%) as well as lottery and scratch tickets (34.5% and 29.5% respectively). Bingo was cited by 22.6% and sports betting by 20%.

Table 6. Type of gambling activity reported as a problem¹

Activity	Total (N=1197)	
	N	%
Slots	451	37.7
Lottery tickets	413	34.5
Cards	366	30.6
Scratch tickets	353	29.5
Bingo	271	22.6
Sports	239	20.0
Tear tickets	230	19.2
Horses, dogs	169	14.1
VLT ²	101	8.4
Roulette	83	6.9
Games of skill	58	4.8
Other	39	3.3
Dice games	37	3.1
Mahjong	25	2.1
Stock options	21	1.7
Keno	19	1.6

¹ Collapsed across clients' reports of major problem activity and first and second other problem activity.

² As VLTs are illegal in Ontario, clients reporting this type of activity as a problem are either using the machines illegally or are gambling in a province in which VLTs are legal.

Table 7 shows what locations clients in treatment for problem gambling frequent the most. Consistent with the above data concerning gambling activities, the most common locations were casinos (58.2%), kiosks (38.3%) and bingo halls (22.8%).

Table 7. Gambling locations frequented the most

Location	Total (N=1195)	
	N	%
Casino	695	58.2
Kiosk	458	38.3
Bingo hall	272	22.8
Track	143	12.0
Off-track	95	8.0
Telephone	95	8.0
Charity casino	91	7.6
Community	78	6.5
Family	62	5.2
Social club	53	4.4
Internet	16	1.4

Television	16	1.4
School	4	0.1

¹ Collapsed across clients' reports of top three locations for gambling.

Discussion

This paper presents highlights from a client-based information system that collects and collates data from the designated programs for the treatment of problem gambling in Ontario. The primary goals of the information system are to contribute basic accountability and planning information at the agency, regional and provincial levels. A series of standard statistical tables are being prepared that summarize the complete set of data elements as well as structured feedback reports to the participating agencies, so that they can compare their client population to the provincial averages. The primary aims of this paper are to estimate the annual caseload of these problem gambling programs and describe important characteristics of clients. The data also establish a baseline of key indicators to be monitored over time.

The results of the information-collection system showed that just over 2200 people have sought help at provincial problem gambling programs since early 1998. Of this total, about one-third were seeking help for difficulties related to a family member or a significant other's gambling problem. Thus, the provision of support to people affected by someone else's gambling behaviour is an important role played by the gambling treatment programs in their community. An annualized estimate of just over 1425 total cases was projected because of a relatively stable pattern of service use over the fiscal year 1999/2000. Of this total, we estimate that about 950 to 975 problem gamblers are seeking treatment each year; the remainder of cases are family members/significant others.

This number is quite small in comparison to estimates from Canadian prevalence studies of problem gambling. A review of studies conducted in eight of Canada's 10 provinces suggested that between 2.7% and 5.4% of Canadians were problem or pathological gamblers in 1996 (National Council of Welfare, 1996). Comparable data that is specific to Ontario is difficult to find because of the lack of consensus as to what constitutes a "problem gambler." In 1993, 7.7% of Ontario respondents scored between one and four on the SOGS, indicating some gambling problems, and an additional 0.9% met the criteria for probable pathological gambling (e.g., a score of five or higher) (National Council of Welfare, 1996; Ladouceur, 1996). More recently

in 2000, 2.6% of a representative sample of Ontario respondents scored two or greater on the SOGS (Adlaf & Ialomiteanu, 2001). It should be noted that the widespread use of the SOGS in community-based studies has received some recent criticism owing in part to the lack of validation work with the general population (Ferris, Wynne & Single, 1998). There is also evidence that it may considerably overestimate the prevalence of gambling-related problems in the community (Lesieur & Blume, 1993).

These limitations aside, however, the small number of people seeking treatment for gambling-related problems in Ontario compared to the estimates reported by these prevalence studies suggests a large unmet need for treatment in the community. It also reveals the need for wider promotion of the service delivery system that has been put in place for problem gambling treatment. There is also a need for further study of the help-seeking patterns of problem gamblers and the extent to which they are either reluctant to seek help, or are seeking assistance from other, more generic health and social services in the community (e.g., family physicians, community mental health programs, family counseling, credit counseling).

The second objective of this paper is to describe the clients presenting for treatment in a way that is relevant for program and policy development and evaluation. There are a number of interesting comparisons that can be made with the data. For example, how do these clients compare to clients seeking help from substance-abuse service providers? Unpublished information from DATIS and reports from previous surveys of the addiction treatment system in Ontario (Tyas & Rush, 1994) suggest that problem gamblers are older, and a larger percentage of them are women and people who seek help for someone else's problem. The fact that problem gamblers in treatment tend to be older than their counterparts in substance-abuse services is cause for some concern. While the prevalence of problem gambling is higher among adolescents, students and young adults (Shaffer, Hall & Vander Bilt, 1999; National Council of Welfare, 1996), older gamblers appear to be under-represented in the treatment population (Adlaf & Ialomiteanu, 2000). For instance, a study conducted in 1994 found that 33% of Ontario adolescents 12 to 19 had gambling-related problems, and 4% were probable pathological gamblers (Canadian Foundation on Compulsive Gambling, 1994), making them roughly four times more likely than adults to have considerable gambling-related problems. A survey conducted in 1999 found that 13.3% of a representative sample of Ontario high-school students scored two or greater on the SOGS, compared to 2.6% of the adult population at roughly the same time (Adlaf & Ialomiteanu, 2000). Both of these studies used the revised SOGS for adolescents (SOGS-RA), which is similar to the adult version but has not been validated with young people in the community (Adlaf & Ialomiteanu, 2000). This limitation notwithstanding, the data suggest a wide

discrepancy between the prevalence of problem gambling among youth and help-seeking from specialized treatment services. This, in turn, points to the need for early detection and intervention programs in addiction and other types of community services serving young people.

The SOGS data show the full spectrum of problem severity among people seeking treatment for their gambling problem. The data also show that the number of years of negative consequences related to gambling highlight the rapid onset of these problems for a substantial proportion of clients—43% in two years or less. That there is no relationship between problem severity, as measured by the SOGS, and years of negative consequences also underscores the rapid onset of serious problems. Future studies need to explore the relationship between problem onset and type of gambling activity.

The descriptive data on the types of gambling activities identified as problematic are also of interest since they point out the diversity of these activities among problem gamblers in treatment. The sheer variety of problematic gambling activities beyond casino and racetrack venues is important for the development of policy as well as public education and prevention programs. For example, a large percentage of problem gamblers in treatment report problems related to lotteries and tear tickets; these two forms of gambling have become part of the fabric of daily life for many Canadians.

The data presented here will also be valuable in monitoring changes in the size and nature of the clientele accessing these problem gambling treatment programs. Broader stakeholder consultation is required to narrow a list of "system performance indicators." However, the selection process might usefully begin by considering some of the following: total caseload per year; proportion of female clients; mean and median age; proportion of clients from different ethnic/cultural groups known to have particular needs; and the proportion of clients reporting certain problem activities (e.g., slots, bingo) and locations (e.g., casinos, racetrack, Internet). Other indicators will need to be developed for the duration and type of various treatment activities (e.g., hours of assessment and counseling; proportion of direct versus indirect care and support). This kind of data has not been reported here because it is still undergoing a cleaning and editing process. In this regard, efforts will need to continue with the participating programs to reinforce the importance of reporting high quality and complete data into the information system. Planned enhancements to the DATIS project will build the gambling component directly into the new software to be developed and disseminated to OSAB-funded agencies.

Finally, from the perspectives of both system/program accountability and

ongoing system/program quality improvement, there is a critical need to expand the gambling monitoring system to include modules related to service costs and client outcome. A cost-outcome monitoring system has been successfully piloted within Ontario's substance-abuse services (Rush, Hobden, Aiken Harris & Shaw Moxam, 2000; Rush, Wall & Shaw Moxam, 2000), and many of the lessons learned in that project will apply to this sector of problem gambling programs.

References

- Aday, L.A., Begley, C.E., Lairson, D.R. & Slater, C.H. (1998).**
Evaluating the Healthcare System: Effectiveness, Efficiency and Equity (2nd ed.). Chicago, IL: Academy for Health Services Research/Health Administration Press.
- Adlaf, E.M. & Ialomiteanu, A. (2001).**
2000 CAMH Monitor: Addiction and Mental Health Indicators Among Ontario Adults, 1977–2000. Toronto, ON: Centre for Addiction and Mental Health. Available: <http://www.camh.net/research/pdfs/cm2000-epirpt.pdf>
- Adlaf, E.M. & Ialomiteanu, A. (2000).**
 Prevalence of Problem Gambling in Adolescents: Findings from the 1999 Ontario Student Drug Use Survey. *Canadian Journal of Psychiatry, 44*, 752–755.
- Beaudoin, C. & Cox, B. (1999).**
 Characteristics of problem gambling in a Canadian context: A preliminary study using a DSM-IV-based questionnaire. *Canadian Journal of Psychiatry, 44*, 483–487.
- Canadian Foundation on Compulsive Gambling. (1994).**
An Exploration of the Prevalence of Pathological Gambling Behaviour Among Adolescents in Ontario. Toronto, ON: Canadian Foundation on Compulsive Gambling (Ontario).
- Crisp, B.R., Thomas, S.A., Jackson, A.C., Thomason, N., Smith, S., Borrell, J., Ho, W., & Holt, T.A. (2000).**
 Sex differences in the treatment needs and outcomes of problem gamblers. *Research on Social Work Practice, 10*(2), 229–242.

- Dalrymple, A.J., Lahti, L.S., Hutchison, L.J. & O'Doherty, J.J. (1994).**
Record linkage in a regional mental health planning study: Accuracy of unique identifiers, reliability of sociodemographics, and estimating identification error. *The Journal of Mental Health and Administration*, 21(2), 185–192.
- Dennis, M.L. (1998).**
Integrating Research and Clinical Assessment: Measuring Client and Program Needs and Outcomes in a Changing Service Environment. National Institute on Drug Abuse Resource Centre for Health Services Research. Available: <http://www.nida.nih.gov/HSR/datre/DennisIntegrating.htm>
- Ferris, J., Wynne, H., & Single, E. (1998).**
Measuring Problem Gambling in Canada: Draft Final Report for the Inter-provincial Task Force on Problem Gambling. Ottawa, ON: Canadian Centre on Substance Abuse.
- Ladouceur, R. (1996).**
The prevalence of pathological gambling in Canada. *Journal of Gambling Studies*, 12(2), 129–142.
- Lesieur, H. & Blume, S.B. (1993).**
Revising the South Oaks Gambling Screen in different settings. *Journal of Gambling Studies*, 9(3), 213–223.
- Lesieur, H.R. & Blume, S.B. (1987).**
The South Oaks Gambling Screen (SOGS): A New Instrument for the Identification of Pathological Gamblers. *American Journal of Psychiatry*, 144(9), 1184–1188.
- Moore, T. (1998, June).**
Evaluating a large systems treatment intervention: An update of the Oregon state-wide evaluation study. Paper presented at the 12th National Conference of Problem Gambling, Las Vegas, NV.
- National Council of Welfare. (1996).**
Gambling in Canada. Ottawa, ON: National Council of Welfare.
- Ogborne, A.C., Braun, K. & Rush, B.R. (1998).**
Developing an integrated information system for specialized addiction treatment agencies. *The Journal of Behavioral Health Services and Research*, 25(1), 100-107.

Rush, B.R., Hobden, K., Aiken Harris, J. & Shaw Moxam, R. (2000).
Client outcomes within the Ontario substance abuse treatment system: Results of a provincial pilot study. Toronto, ON: Centre for Addiction and Mental Health. Soon to be available from
<http://www.datis.ca/reports/index.html>

Rush, B.R., Wall, R. & Shaw Moxam, R. (2000).
Assessing the cost of substance abuse treatment services in Ontario: Results of a provincial pilot study. Toronto, ON: Centre for Addiction and Mental Health. Available from
<http://www.datis.ca/reports/index.html>

Shaffer, H.J., Hall, M.N. & Vander Bilt, J. (1999).
Estimating the prevalence of disordered gambling behavior in the United States and Canada: A research synthesis. *American Journal of Public Health, 89(9)*, 1369–1376.

Stinchfield, R.D. & Winters, K.C. (1996).
Treatment effectiveness of six state-supported compulsive gambling treatment programs in Minnesota. Minneapolis, MN: Department of Psychiatry, University of Minnesota.

Tyas, S. & Rush, B.R. (1994).
Trends in the characteristics of clients of alcohol/drug treatment services. *Canadian Journal of Public Health, 85 (1)*, 13–16.

Volberg, R.A. (1994).
The prevalence and demographics of pathological gamblers: Implications for public health. *American Journal of Public Health, 84*, 237–241.

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