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# JOURNAL OF GAMBLING ISSUES

contents

intro

research

brief report

clinical  
corner

opinion

reviews

letter

letters to  
the editor

submissions

links

archive

subscribe

## research

### Characteristics of people seeking treatment for problem gambling in Ontario: Trends from 1998 to 2002

Karen A. Urbanoski & Brian R. Rush, Centre for Addiction and Mental Health, Toronto, Ontario, Canada.  
E-mail: [Karen\\_Urbanoski@camh.net](mailto:Karen_Urbanoski@camh.net)

#### Abstract

This report summarizes the characteristics of individuals who sought help within Ontario's specialized problem gambling treatment system during its first four years of operation. All clients recorded in the provincial information system database as having entered a gambling treatment program between April 1, 1998, and March 31, 2002, are included. Broad trends and gender differences in demographic characteristics, gambling behaviours, and problem severity are considered and compared by fiscal year. Compared to population-based estimates of problem gambling, the number of clients served by this specialized treatment system is low but steadily increasing. Women have consistently made up approximately one third of clients entering treatment in each fiscal year, and their sociodemographic profile, their gaming preferences, and the duration of their problem gambling careers differ from those of male clients. The growing proportion of clients of both genders seeking help for problems related to slot machines is of primary concern and warrants further study. **Key words:** problem gambling, treatment system, help seeking, gender comparisons, trends analysis

#### Introduction

The past two decades have witnessed extensive growth in the legalized gambling industry in most Western nations. A recent study of the expansion of Canada's gambling industry revealed that the gross revenue generated by legalized gambling in 1999–2000 for all provincial governments combined was over \$9 billion, representing a threefold increase since 1992. The Ontario gambling industry, which employs over 17,000 individuals, drew in the largest portion at over \$3.3 billion in fiscal 1999–2000 (Azmier, 2001).

Lotteries have been available in Ontario since 1975. In 1985, legislative responsibility for gambling was transferred from the federal government to the provincial governments (Thompson, 2001). Until the mid-1990s, Ontario only permitted charities to sell raffle and tear-off tickets and conduct bingos. Since that time, the gambling industry has expanded significantly. Throughout the 1990s, a number of charity and commercial casinos were opened in communities across the province, and in late 1998, slot machines began to be installed at racetracks. There are now 12 lottery games available at over 10,600 licensed retailers, and 4 commercial casinos, 6 charity casinos, and 16 slot machine facilities at racetracks currently in operation in Ontario. In addition, bingos currently enjoy wide availability, with hundreds of bingo halls located throughout the province (see <http://www.bingohalls.ca/ontario.htm>). While slot machines are available at racetracks, they are not, however, currently permitted in bingo halls.

The gambling industry in Ontario is regulated primarily by two government bodies: the Ontario Lottery and Gaming Corporation (OLGC; <http://corporate.olgc.ca>) is responsible for operating these gambling venues, while the Alcohol and Gaming Commission of Ontario (AGCO; <http://www.agco.on.ca>) regulates casino gaming and administers gaming licenses to charitable and religious organizations for bingos and raffles. Charity casinos are owned and operated by the OLGC, while commercial casinos are owned by the OLGC but are privately operated. The distribution of revenue also differs, with charity casinos required to distribute \$100 million per year to Ontario charities through the Ontario Trillium Foundation.

Since 1999, the Ontario government has dedicated 2% of gross slot machine revenues from charity casinos and racetracks to fund treatment, prevention, and research initiatives for problem gambling. This figure represented \$3.5 million in fiscal 1998–1999, increasing to \$21.7 million in fiscal 2001–2002. A portion of these funds is dedicated to 47 specialized problem gambling treatment programs that are currently providing community counselling and information services to problem gamblers and their family members and significant others across the province. Other government-funded projects include the Ontario Problem Gambling Helpline (OPGH), a province-wide information and referral service that directs those in need into the specialized problem gambling treatment system, and a comprehensive training program for counsellors and allied professionals operating out of the Centre for Addiction and Mental Health (CAMH) in Toronto. In addition, research is funded through the Ontario Problem Gambling Research Centre (OPGRC), established in 2000. The operating budget of the OPGRC is currently approximately \$4 million (OPGRC, 2003–04).

Recent population-based research in Ontario suggests that between 3% and 4% of Ontario adults are problem gamblers (Adlaf & Ialomiteanu, 2001; Wiebe, Single, & Falkowski-Ham, 2001). Studies of treatment populations, and especially system-wide monitoring and analyses, are important adjuncts to this type of population research. In this way, existing gaps in treatment for problem gamblers, whether across the province or within certain regions, can be identified. In addition, gaps in treatment for specific types of problem gamblers for whom treatment may not be appealing or available (e.g., women, specific ethnocultural groups, youth) can be located and the information used to guide health policy and treatment delivery.

Recent system-wide analyses of problem gamblers entering treatment have been conducted in the United States (Moore, 2003; Shaffer, LaBrie, LaPlante, & Kidman, 2002), Australia (Crisp et al., 2004; Jackson, Thomas, Holt, & Thomason, 2005; South Australian Department of Human Services, 2003), and New Zealand (Paton-Simpson, Gruys, & Hannifin, 2004); however, there is a distinct lack of such research in Canada, the exception being previous studies by the present authors (Rush & Shaw Moxam, 2001; Rush, Shaw Moxam, & Urbanoski, 2002; Rush & Urbanoski, 2005). The purpose of the present report is to describe trends in the sociodemographic and gaming profiles of individuals receiving treatment from publicly funded problem gambling programs over the period of four fiscal years between April 1, 1998, and March 31, 2002. Explicit attention is paid to gender differences because of established differences in the ways that men and women both gamble and access health services. Gender differences and especially gender-specific changes and trends in gambling problems and treatment-seeking behaviours are of high relevance to treatment providers and those involved in system planning and management.

All data are summarized by fiscal year (i.e., April 1 to March 31), as this corresponds to the data-reporting periods of the treatment programs to the Ontario Ministry of Health. The present report builds upon a previous paper, which described clients entering the system between January 1, 1998, and April 30, 2000 (Rush et al., 2002; see also Rush & Shaw Moxam, 2001, and Rush & Urbanoski, 2005, for more detailed accounts of this treatment system).

## **Methods**

### **Study participants**

This study includes all clients admitted to Ontario's publicly funded gambling treatment system between April 1, 1998, and March 31,

2002 ( $n = 6966$ ). Approximately 150 addiction treatment programs are currently funded by the province's Ministry of Health and are required to participate in an ongoing client-based information system, the Drug and Alcohol Treatment Information System (DATIS; <http://www.datis.ca/>), which monitors the number and types of clients treated (see Ogborne, Braun, & Rush, 1998, for an overview of the early development of DATIS, and Rush, 2002, for a more recent description of the system). There are currently 47 specialized problem gambling programs operating within the organizational context of selected alcohol and drug treatment agencies in Ontario.

An individual is entered into DATIS when he or she is registered in a treatment program. For the majority of programs, this will mean there has been a face-to-face contact with the client. One treatment program has a well-established telephone counselling service and, as a general rule, callers will be registered if the call is for counselling and exceeds 20 minutes. With the exception of this specialized telephone counselling service, clients who receive telephone support but choose not to formally enter a treatment program are excluded from DATIS. In addition, individuals who present in crisis, seeking immediate assistance, but who are unwilling to pursue longer-term treatment, are similarly excluded from DATIS.

### **Instruments and procedures**

The data are routinely captured on a series of forms at the individual program sites. At intake, program staff (e.g., counsellors and intake coordinators) collect information on client demographic characteristics, the frequency of different gambling activities, the location of gambling, and problem severity using the South Oaks Gambling Screen (SOGS; Lesieur & Blume, 1987). A complete set of the forms can be found in Rush and Urbanoski (2005, Appendix B) or are available from the authors upon request. The information is collected on Teleforms, faxed to a central number, and managed electronically in a computerized system by DATIS staff located in Toronto.

### **Client and item nonresponse**

During the period covered by these data, various contacts with programs were made to assess the completeness of data reported to DATIS. Reasons for nonreporting included program-specific issues such as service interruptions due to staffing limitations. Although efforts were made to ensure the completeness of reporting, some programs did not provide the required forms for all clients. It is difficult to estimate the extent and impact of this underreporting. An improved on-line information system began operation in 2003, holding considerable promise for increased data

quality and ease of reporting.

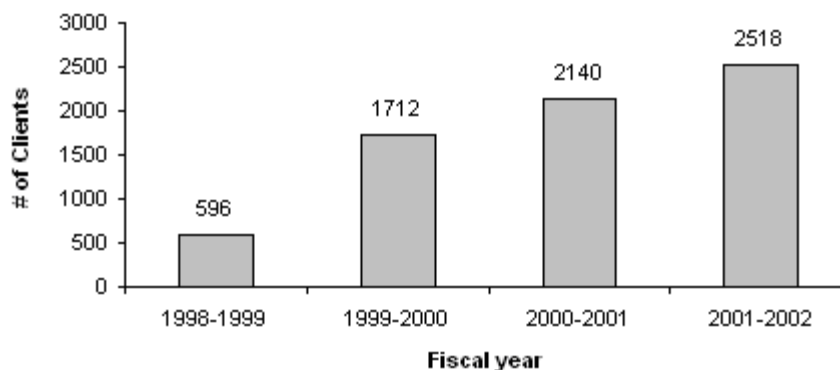
In addition to client nonreporting, there is a variable amount of specific item nonresponse among clients contained in the database. The amount of missing data was substantial for four of the variables considered in the present study: ethnicity (23.8%), years of negative consequences related to gambling (18.0%), problem gambling activities (30.6%), and problem gambling settings (30.9%). To examine potential nonresponse bias, those who provided data were compared to nonresponders for each of these four variables in terms of gender, age, and fiscal year. Nonresponders were significantly more likely to be male and younger on all four variables ( $p < .001$ ). Further, the amount of nonresponse increased steadily over the four-year period for each variable ( $p < .001$ ). Thus, the findings presented in this paper must be interpreted keeping this caveat in mind. However, it should also be noted that these missing data were determined to be almost exclusively from one large treatment centre. All trends analyses presented in this paper were rerun excluding these data, and no differences were found in the magnitude, direction, or interpretation of the results.

### **Analysis**

ANOVA and chi-square tests ( $\alpha = 0.05$ ) were conducted to evaluate statistical trends in the sociodemographic characteristics and gambling behaviours of clients within the system over the four-year study period. Significant findings are highlighted in the text and tables where appropriate.

### **Results**

Figure 1 displays the distribution of individuals entering Ontario's specialized gambling treatment system between 1998 and 2002 by fiscal year. These figures include all those who accessed the system (i.e., those seeking help for their own or another person's gambling problem). Since the beginning of fiscal 1998–1999, a total of 6966 clients were reported to DATIS as having been registered with a problem gambling treatment program in Ontario. The total provincial caseload increased steadily over the four-year period, with the largest increase seen between fiscal 1998–1999 and 1999–2000.



**Figure 1**  
**Annual caseload, fiscal years 1998–1999 through 2001–2002**

The gender distribution of clients in the system remained constant over the four years of study: the proportion of men in treatment was 58.6% in 1998–1999, 58.3% in 1999–2000, 56.7% in 2000–2001, and 56.4% in 2001–2002.

Table 1 summarizes the trend in the reason for seeking help among clients admitted since fiscal 1998–1999. The majority of clients in each fiscal year sought help for their own gambling problems. More women than men were among those seeking help for another person's gambling problem. This category includes spouses, family members, and friends of individuals exhibiting problematic gambling behaviours who are concerned and are seeking help and information.

The proportion of women seeking help for another person's gambling problem increased between fiscal 1998–1999 and 1999–2000 from 26% to 38%, with a concomitant decrease in the proportion seeking help for their own gambling problem. These differences over time were significant ( $\chi^2_6 = 26.78, p < .001$ ). While the proportion of men who sought help for another's gambling problem also increased slightly over the four-year period, from approximately 6% to 9%, the vast majority of men in treatment in the later fiscal years continued to seek help for their own gambling problems. There was a significant association between year and reason for seeking help; however, this is likely due to the different distribution found in 1999–2000 and is probably not a clinically meaningful finding ( $\chi^2_6 = 35.44, p < .001$ ).

**Table 1**  
**Reason for seeking help by gender**

Reason for seeking help	1998–1999	1999–2000	2000–2001	2001–2002
<b>Men*</b>	(n = 346)	(n = 976)	(n = 1198)	(n = 1410)
Another's gambling	5.8%	6.5%	8.8%	8.7%
Own gambling	89.3%	85.6%	86.8%	88.1%
Both	4.9%	8.0%	4.4%	3.2%
<b>Women*</b>	(n = 241)	(n = 703)	(n = 914)	(n = 1086)
Another's gambling	25.7%	37.7%	36.7%	37.6%
Own gambling	63.1%	58.2%	58.3%	57.1%
Both	11.2%	4.1%	5.0%	5.3%

*Note.* Excludes  $n = 29$  (0.4%) missing on gender and  $n = 63$  (0.9%) missing on reason for seeking help. \* $p < .001$ .

The remainder of this report describes the distributions and trends in the characteristics of those with gambling problems, types of gambling behaviours, and problem severity. As such, the data represent those clients who sought help for their own gambling problems or for *both* their own and a significant other's gambling problems (i.e., those who were seeking help *only* for another person's gambling problem are excluded). These individuals are referred to as *principal clients* ( $n = 5512$ ).

Because women make up a relatively greater proportion of those seeking help for another person's gambling problem, the gender composition changes when only principal gambling clients are considered. Among principal clients, the proportion of men in treatment was 64.6% in 1998–1999, 67.6% in 1999–2000, 65.4% in 2000–2001, and 65.6% in 2001–2002.

Table 2 describes the mean age at admission of principal clients over the four-year study period. Women were older than their male counterparts in treatment and their mean age at admission increased significantly over the four-year study period ( $F_{3,1857} = 4.62$ ,  $p = .003$ ). Post-hoc Tukey tests revealed that this was due to significant differences between the first two and the last two years of the study. There was no significant trend in the mean age at admission of men across the four-year study period ( $F_{3,3576} = 0.73$ ,  $p = .537$ ).

**Table 2**  
**Age at admission by gender**

Age	1998– 1999	1999– 2000	2000– 2001	2001–2002
<u>Men</u>	( <i>n</i> = 325)	( <i>n</i> = 902)	( <i>n</i> = 1083)	( <i>n</i> = 1270)
Mean age (yrs)	38.8	39.3	39.8	39.7
<u>Women</u>	( <i>n</i> = 178)	( <i>n</i> = 434)	( <i>n</i> = 575)	( <i>n</i> = 674)
Mean age (yrs)*	42.7	43.3	44.7	45.4

*Note.* Includes principal clients only; excludes *n* = 19 (0.3%) missing on gender and *n* = 52 (0.9%) missing on age. \**p* < .01.

The vast majority of clients of both genders were Caucasian (Table 3). There were proportionately more Caucasian women than men and more Asian men than women in treatment during the study period. The proportion of Caucasian men in treatment remained fairly constant over the four-year period, with a steady increase in the proportion of Asian men and a concomitant decrease in those of other ethnic backgrounds; however, these differences were not significant ( $\chi^2_9 = 15.71, p = .073$ ). The proportion of Caucasian women increased from 81% to 86%, offsetting a decrease in the proportion of Aboriginal or First Nations women entering treatment. These trends in ethnicity among the female clients were statistically significant ( $\chi^2_9 = 17.169, p = .046$ ).

**Table 3**  
**Ethnicity by gender**

Ethnicity	1998–1999	1999–2000	2000–2001	2001–2002
<u>Men</u>	( <i>n</i> = 302)	( <i>n</i> = 691)	( <i>n</i> = 766)	( <i>n</i> = 797)
Caucasian	79.8%	76.1%	77.4%	77.5%
Asian	9.6%	11.3%	12.3%	13.7%
Aboriginal	2.3%	5.6%	3.4%	3.1%
Other	8.3%	6.9%	6.9%	5.6%
<u>Women*</u>	( <i>n</i> = 164)	( <i>n</i> = 383)	( <i>n</i> = 499)	( <i>n</i> = 578)
Caucasian	80.5%	83.0%	83.2%	85.8%
Asian	7.9%	3.9%	5.8%	6.7%
Aboriginal	8.5%	8.4%	7.4%	3.6%
Other	3.0%	4.7%	3.6%	3.8%

*Note.* Includes principal clients only; excludes *n* = 19 (0.3%) missing on gender and *n* = 1313 (23.8%) missing on ethnicity. \**p* < .05.

Clients were asked to indicate if they were seeking help specifically for a gambling problem or if their gambling problem was identified over the course of treatment for another problem (e.g., for problems related to their alcohol and/or drug use) (Table 4).



Approximately 90% of clients in each fiscal year reported seeking help specifically for a gambling problem, with little difference by gender. There was a slight increase in the proportion of clients of both genders who sought help specifically for a gambling problem over the four-year period, which was statistically significant (men:  $\chi^2_3 = 22.33, p < .001$ ; women:  $\chi^2_3 = 16.91, p = .001$ ).

**Table 4**  
**Problem identification by gender**

Problem identification	1998–1999	1999–2000	2000–2001	2001–2002
<b>Men*</b>	(n = 318)	(n = 896)	(n = 1073)	(n = 1267)
Sought help because of gambling	88.7%	89.5%	92.3%	94.4%
Gambling problem identified in treatment	11.3%	10.5%	7.7%	5.6%
<b>Women*</b>	(n = 168)	(n = 431)	(n = 566)	(n = 667)
Sought help because of gambling	88.7%	86.8%	91.2%	93.9%
Gambling problem identified in treatment	11.3%	13.2%	8.8%	6.1%

*Note.* Includes principal clients only; excludes  $n = 19$  (0.3%) missing on gender and  $n = 107$  (2.0%) missing on problem identification. \* $p < .001$ .

Table 5 presents the gender distributions of the five most frequently cited problem gambling activities reported by clients. As clients were given the opportunity to provide up to three problem activities, the categories are not mutually exclusive and column percentages do not sum to 100. Among men, the top five problem activities were card games, lottery tickets, scratch and tear-off tickets, slots, and sports events. The most common problem activities were similar among women, with the exception that bingo was identified, where sports events were not. A greater proportion of men than women reported card games over the four years of study, while a greater proportion of women reported slots and scratch and tear-off tickets as problem activities. In each fiscal year, similar proportions of men and women reported lotteries as problem activities; however, this decreased over time. The decrease in problematic lottery play reached statistical significance among men ( $\chi^2_3 = 8.13, p = .043$ ) but not women ( $\chi^2_3 = 1.07, p = .784$ ). The proportion of men reporting sports games also decreased significantly over the four years ( $\chi^2_3 = 38.69, p < .001$ ), as did the proportion of women

reporting bingo as a problem activity ( $\chi^2_3 = 28.38, p < .001$ ).

Offsetting these declines was the growing proportion of clients of both genders reporting problematic slot machine play, which increased by approximately 27 percentage points in men ( $\chi^2_3 = 97.52, p < .001$ ) and 13 percentage points in women ( $\chi^2_3 = 41.81, p < .001$ ) between 1998 and 2002. Notably, fully half of men and three quarters of women who entered treatment in 2001–2002 reported slots as a problem activity.

**Table 5**  
**Trends in problem gambling activities by gender**

Problem activities	1998–1999 ( <i>n</i> = 277)	1999–2000 ( <i>n</i> = 621)	2000–2001 ( <i>n</i> = 677)	2001–2002 ( <i>n</i> = 729)
<u>Men</u>				
Cards	41.9%	39.3%	37.1%	38.5%
Lottery tickets*	37.9%	34.3%	29.1%	32.6%
Scratch/tear tickets	26.7%	29.5%	24.7%	25.7%
Slots**	22.4%	31.1%	47.7%	49.1%
Sports**	34.7%	26.4%	20.5%	17.8%
<u>Women</u>	( <i>n</i> = 144)	( <i>n</i> = 347)	( <i>n</i> = 464)	( <i>n</i> = 550)
Bingo**	42.4%	49.6%	38.4%	32.0%
Cards	13.9%	12.1%	13.1%	12.5%
Lottery tickets	36.1%	32.6%	32.1%	31.6%
Scratch/tear tickets**	49.3%	53.0%	43.5%	37.5%
Slots**	59.7%	51.9%	65.1%	72.7%

*Note.* Includes principal clients only; column %s will not sum to 100 because clients were allowed to report multiple problem activities; excludes *n* = 19 (0.3%) missing on gender and *n* = 1684 (30.6%) missing on problem gambling activity. \**p* < .05. \*\**p* < .001.

Table 6 provides the gender distributions of the five most frequently reported gambling settings. As with gambling activities, clients were allowed to name up to three preferred gambling settings, so column percentages do not sum to 100. Among men, the most commonly reported problem gambling settings were commercial casinos, charity casinos, racetracks, lottery outlets, and off-track betting parlours. Similar problem settings were reported by women, with the exception that bingo halls were reported in place of off-track betting parlours. Significant increases were found in the proportions of clients reporting charity casinos (men:  $\chi^2_3 = 21.24, p < .001$ ; women:  $\chi^2_3 = 28.83, p < .001$ ) and racetracks (men:  $\chi^2_3 = 17.92, p < .001$ ; women:  $\chi^2_3 = 34.83, p < .001$ ). The increase in problematic play at racetracks among women is especially noticeable, as this

figure grew from less than 5% to over 20% during the four years of study. These increases were offset by significant decreases in problem gambling at off-track betting parlours among men ( $\chi^2_3 = 18.42, p < .001$ ) and bingo halls among women ( $\chi^2_3 = 39.58, p < .001$ ).

**Table 6**  
**Trends in problem gambling settings by gender**

Problem settings	1998–1999	1999–2000	2000–2001	2001–2002
<b>Men</b>	(n = 277)	(n = 610)	(n = 671)	(n = 738)
Commercial casinos	60.3%	62.5%	67.4%	65.6%
Charity casinos*	11.2%	10.8%	16.1%	19.0%
Racetracks*	18.1%	17.7%	24.4%	26.0%
Lottery outlets	49.5%	51.8%	46.2%	46.1%
Off-track betting*	18.4%	15.2%	12.2%	9.5%
<b>Women</b>	(n = 147)	(n = 343)	(n = 465)	(n = 539)
Commercial casinos	71.4%	59.8%	64.5%	64.7%
Charity casinos*	6.8%	7.6%	18.3%	17.1%
Bingo halls*	49.0%	55.7%	40.6%	35.1%
Racetracks*	4.8%	10.2%	15.1%	21.3%
Lottery outlets	45.6%	56.0%	49.5%	47.3%

*Note.* Includes principal clients only; column percentages will not sum to 100 because clients were allowed to report multiple problem settings; excludes  $n = 19$  (0.3%) missing on gender and  $n = 1703$  (30.9%) missing on problem gambling settings. \* $p < .001$ .

Gambling problem severity was assessed at intake using the SOGS. The SOGS is a widely used screening tool for assessing the severity of problem gambling based on the diagnostic criteria for problem and pathological gambling contained in the *Diagnostic and statistical manual of mental disorders* (3rd. ed.) (APA, 1980). Scores of one through four indicate the presence of problems associated with gambling, with higher scores indicating greater degrees of problematic behaviour. A score of five or greater is typically considered as indicative of pathological gambling (Lesieur & Blume, 1987). In all study years, over 90% of clients scored above five on the SOGS, with very little gender difference between scores at any level. There was no notable overall or gender difference in the average SOGS scores across the four fiscal years in this treatment system (data not shown).

Table 7 shows the duration of gambling problems within this treatment population in terms of the mean number of years during

which gambling had had a negative impact on the client's life prior to this treatment episode. Across all years of study, women reported relatively fewer years of negative consequences than did men. There was no significant difference in the mean number of years of negative consequences across the four years of the study period (men:  $F_{3,2773} = 1.48$ ,  $p = .218$ ; women:  $F_{3,1719} = 2.38$ ,  $p = .068$ ).

**Table 7**  
**Number of years of negative consequences of gambling by gender**

Years of negative consequences	1998–1999	1999–2000	2000–2001	2001–2002
Men	( $n = 293$ )	( $n = 741$ )	( $n = 842$ )	( $n = 901$ )
Mean # years	7.20	7.84	7.10	7.07
Women	( $n = 154$ )	( $n = 399$ )	( $n = 534$ )	( $n = 636$ )
Mean # years	4.09	4.84	4.54	4.08

*Note.* Includes principal clients only; excludes  $n = 19$  (0.3%) missing on gender and  $n = 993$  (18.0%) missing on years of negative consequences.

## Discussion

This report summarizes the number and characteristics of clients seeking treatment in Ontario's publicly funded problem gambling treatment system between April 1, 1998, and March 31, 2002. The data presented are reported on an ongoing basis to DATIS, the mandatory provincial client-based information system for specialized addiction services. In total, 6966 clients were reported to have sought help within this treatment system over the four-year study period. The steady increase in the system caseload since April 1998 may suggest an increasing acceptance of the need for treatment for problem gambling and/or an increase in the awareness of the availability of help through this specialized problem gambling treatment system. This is supported by the increasing proportion of clients entering treatment specifically for their gambling problems, rather than having their gambling problems identified over the course of treatment for other addiction-related problems.

In June 2000, the CAMH Monitor, an ongoing telephone survey of the adult population of Ontario (18 years and older), began including questions on gambling behaviour and problems (Adlaf & Ialomiteanu, 2001). For calendar year 2000, the weighted estimate of problem gambling, obtained using a shortened version of the SOGS, was 2.6% of the adult Ontario population (3.2% of men and 1.9% of women). This estimate remained steady through 2001,

with 2.8% classified as problem gamblers in that calendar year (3.3% of men and 2.4% of women). A second study conducted jointly by the Canadian Centre on Substance Abuse and the Responsible Gambling Council of Ontario provides a snapshot of gambling activities and related problems among Ontario adults (18 years and older) in the spring of 2001 (Wiebe et al., 2001). In this study, the weighted estimate of problem gambling, obtained using the Canadian Problem Gambling Index (CPGI; Ferris & Wynne, 2001), was somewhat higher than that obtained by the CAMH Monitor at 3.8% (4.5% of men and 3.1% of women).

It is not surprising that these estimates differ, as the surveys used different problem gambling measures and different sampling and weighting strategies. Nonetheless, assuming an adult population of approximately 8.9 million in Ontario in 2001 (Wiebe et al., 2001), these prevalence estimates suggest a rough total of 240,000 to 340,000 adult problem gamblers in Ontario in 2000–2001. This indicates a potentially large treatment gap when compared to the treatment system data collected by DATIS. Statistics Canada recently conducted a nationwide health survey, the Canadian Community Health Survey (Cycle 1.2), which assessed gambling behaviours and related problems also using the CPGI. With its large sample size and high response rate, this survey is expected to provide more robust provincial and regional estimates of the extent of problem gambling in the community.

In considering this treatment gap, it is important to recognize that DATIS captures only publicly funded specialized problem gambling treatment programs and does not cover the many other treatment and support services available from Gamblers Anonymous/GAMANON, family physicians, community mental health services, employee assistance programs, credit counsellors, and religious and spiritual leaders. The OPGH also plays an important role in providing crisis support, information, referral, and brief intervention. The number of calls to the OPGH for information and/or treatment was 4611 in fiscal year 2000–2001 and 4741 in 2001–2002 (Drug and Alcohol Registry of Treatment, 2004).

### **Client characteristics**

A more detailed examination of the sociodemographic profiles and gambling activities of clients within this treatment system reveals a number of notable findings and trends and provides suggestions for further studies of problem gamblers both in treatment and living in communities within Ontario.

Importantly, the data suggest little change in the gender ratio of clients within this treatment system over the four-year period considered. Including all clients within the system (i.e., those seeking help for their own or another person's gambling problem),

the ratio of men to women in treatment in fiscal years 1998–1999 and 1999–2000 was 1.4, decreasing to 1.3 in 2000–2001 and 2001–2002.

The majority of clients accessing the system for treatment between 1998 and 2002 did so for their own gambling problems. Similar to research in other jurisdictions, women were more likely to be seeking help for the gambling problems of family members and significant others (Jackson et al., 2005; Moore, 2003; Paton-Simpson et al., 2004; Shaffer et al., 2002; South Australian Department of Human Services, 2003). As a result, when those who are seeking help for the problems of others are excluded from the analysis, the gender ratio of clients in treatment widens. In fiscal 1998–1999, the ratio of male to female clients in treatment for their own gambling problems (i.e., excluding family members and significant others) was 1.8. This increased slightly to 2.1 in fiscal 1999–2000, and remained steady at 1.9 in both fiscal 2000–2001 and 2001–2002. Thus, across all four years of the study, men made up approximately two thirds of clients within the specialized gambling treatment system in Ontario.

These figures are in contrast to those presented in recent system-wide research reports from Australia, New Zealand, and the United States, in which women represent 40% to 50% of new gamblers admitted to treatment (excluding those who are seeking help for another person's gambling problem) (Jackson et al., 2005; Moore, 2003; Paton-Simpson et al., 2004; Shaffer et al., 2002; South Australian Department of Human Services, 2003). The community surveys conducted in Ontario, however, provide the optimal comparison point for determining the appropriateness of the gender distribution found in treatment. For instance, in the 2001 community study of gambling in Ontario, the ratio of male to female problem gamblers was approximately 1.4 (Wiebe et al., 2001). This would suggest that men were overrepresented in specialized gambling treatment in Ontario at that time, as our data indicate that the ratio of men to women in treatment was 1.9 in 2001–2002. However, it should be noted again that many potential sources of help, including family physicians and community mental health services, were not considered in this study. To the extent that these sources of help are preferred among female problem gamblers, their representation in gambling treatment as a whole may be underestimated by our figures.

While the proportion of men who sought help for another person's gambling problem increased slightly over the four-year period, from approximately 6% to 9%, the vast majority of men in treatment in the later fiscal years were seeking help for their own gambling problems. Future studies should address the extent to which men experiencing problems related to the gambling behaviours of significant others constitute an underserved subgroup of the

population.

Recent work conducted in the United States highlights the importance of examining the joint effects of gender and cultural background on gambling behaviours and related problems (Volberg, 2003). Specific to the situation in Ontario, further studies should examine the ethnocultural background of problem gamblers in the community to explore factors associated with the trend toward an increasing proportion of Asian men and the significantly decreasing proportion of Aboriginal/First Nations women seeking treatment. Specifically, an examination of the prevalence of problem gambling among Asian people living in Ontario should be conducted to identify whether Asian men in the community are more likely to suffer from problems related to gambling, or if they are simply more likely to seek and/or receive treatment. Such research should also explore these issues within potentially important subgroups of the Asian population. The decrease in the proportion of Aboriginal or First Nations women seeking treatment for problem gambling should also be addressed to identify any existing unmet need for treatment within this subpopulation of Ontario.

### **Gambling activities and problem severity**

Gender differences in gaming preferences also mirror those found by previous studies (Adlaf & Ialomiteanu, 2001; Crisp et al., 2004; Hraba & Lee, 1996; Ibanez, Blanco, Moreryra, & Saiz-Ruiz, 2003; Jackson et al., 2005; Ladd & Petry, 2002; Moore, 2003; Paton-Simpson et al., 2004; Potenza et al., 2001; Rush et al., 2002). Over time, the proportion of men reporting problems with lotteries and sports events and the proportion of women reporting problems with bingo declined significantly. These were offset primarily by increases in the proportions of both men and women reporting problems with slot machines over the four-year period. This may be a result of the overall increase in availability of slot machines after their installation at racetracks, which began in late 1998. In support of this finding, the proportion of clients of both genders reporting racetracks as problem gambling settings also showed a highly significant increase over the four-year period since fiscal 1998–1999.

The level of problematic slot machine play in this treatment sample deserves attention. Electronic gaming machines (EGMs), which include slot machines, present an important opportunity for provincial government revenue generation. Net revenues from noncasino EGMs (e.g., lounges, racetracks) rose by 1369% between 1992–1993 and 1999–2000, over twice the rate of increase in revenue generated from casino gambling (Azmier, 2001). Research has suggested that EGMs may be more problematic than other forms of gambling because of their wide

availability and accessibility, technological advances directed at attracting and retaining players, the low skill level required to play, and a hypothesized higher addictive potential resulting from a fast rate of play and short payout intervals (Azmier, 2001; Breen & Zimmerman, 2002; Cote, Caron, Aubert, Desrochers, & Ladouceur, 2003; Griffiths, 1999; Potenza et al., 2001).

The increase in EGM play and related problems specifically among women coinciding with their wider availability in venues that are acceptable to women has also been discussed (Crisp et al., 2004; Hing & Breen, 2001; Ohtsuka, Bruton, DeLuca, & Borg, 1997; Volberg, 2003). It is notable that in the time period considered in the present study, which corresponds to the four years following the placement of slot machines at racetracks, the prevalence of problems with slot machines among women in gambling treatment increased by 22%, while the prevalence of racetracks as a problem gambling setting among women increased by over fourfold. Considering the sheer prevalence of problem slot machine gambling among female treatment seekers in Ontario (i.e., almost three quarters of women entering treatment in 2001–2002 reported slot machines as a problem activity), further research is warranted to examine the impact of social and ethnocultural factors guiding slot machine play and the experience of related problems among women in this province.

Across all four study years, over 90% of clients received a score of five or higher on the SOGS, indicating probable pathological gambling. The consistency of the high severity of gambling problems suggests that individuals are not seeking help at an earlier stage, despite the increased availability of treatment in Ontario. As with other addictions, the feasibility and effectiveness of early interventions for those experiencing lower levels of gambling problems should be explored.

Consistent with previous studies, no gender difference was evident in the severity of problem gambling (Crisp et al., 2004; Hraba & Lee, 1996; Ibanez et al., 2003; Ladd & Petry, 2002; Tavares et al., 2003). However, women did report experiencing fewer years of negative consequences of gambling prior to seeking treatment than did men. This finding is also consistent with previous literature, which describes a telescoping effect of gambling disorders among women, whereby they experience a faster progression of pathological gambling (Ibanez et al., 2003; Ladd & Petry, 2002; Potenza et al., 2001; Shaffer et al., 2002; Tavares, Zilberman, Beites, & Gentil, 2001; Tavares et al., 2003; Westphal & Johnson, 2000). Tavares et al. (2003) suggest the later introduction to gambling among women and a preference for more addictive gaming types as potential reasons for this telescoping effect, although more research is needed to understand its specific causes.



The provincial government's problem gambling strategy continues to evolve as problem gambling treatment, prevention, and research are all still in relatively early stages of development in Ontario. To build on the currently available treatment opportunities for problem gamblers across the province, the government began funding pilot projects in fiscal year 2003–2004 testing the efficacy of direct telephone counselling and residential problem gambling treatment. Depending on the results, these pilot projects may add significant new program components to the overall continuum of care for the treatment of problem gambling in Ontario. The addition of new treatment options to the existing modalities may attract a greater and more varied proportion of individuals experiencing problems related to their gambling.

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Manuscript history: submitted November 24, 2004; accepted: October 13, 2005. All URLs cited were available at the time of submission. This article was peer reviewed.

For correspondence: Karen Urbanoski, MSc, Health Systems Research and Consulting Unit, Centre for Addiction and Mental Health, T306, 33 Russell Street, Toronto, Ontario, Canada M5S 2S1. Phone: (416) 535-8501, ext. 6121, fax: (416) 979-4703, e-mail: [Karen\\_Urbanoski@camh.net](mailto:Karen_Urbanoski@camh.net), URL:

<http://www.camh.net/hsrcu/>.

Contributors: BR conceived the study. Both authors contributed to the study design. KU conducted the data cleaning and analysis and wrote the first draft. Both authors were involved in writing the final draft of the paper.

Competing interests: None declared.

Ethical approval: Not required; these data are routinely collected at admission to any Ontario-based specialized addiction treatment agencies.

Funding: Both authors are employed by the Centre for Addiction and Mental Health, Toronto, Ontario.

Karen Urbanoski, MSc, is a research coordinator with the Health Systems Research and Consulting Unit at the Centre for Addiction and Mental Health in Toronto. She is currently also working on her PhD in health and behavioural sciences in the Department of Public Health Sciences, University of Toronto. She has an MSc in epidemiology and biostatistics from the University of Western Ontario. Her research interests broadly include the study of substance- and gambling-related problems in both treatment settings and the community. E-mail: [Karen\\_Urbanoski@camh.net](mailto:Karen_Urbanoski@camh.net)

Brian Rush, PhD, is a senior scientist with the Centre for Addiction and Mental Health in Toronto. He is currently the associate director of the Health Systems Research and Consulting Unit and an associate professor in the Department of Psychiatry at the University of Toronto. In addition, he serves as scientific advisor to DATIS. He holds an MA in psychology and a PhD in epidemiology and biostatistics and has worked for 24 years in a research and evaluation capacity in the addiction and mental health fields. His career has involved a rewarding balance of scientific work and program and policy development. One of his major research interests is the longitudinal study of the addiction treatment system in Ontario, including treatment for problem gambling. E-mail: [Brian\\_Rush@camh.net](mailto:Brian_Rush@camh.net)

issue 16 — april 2006



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