NATIONAL PRIORITIES FOR PROBLEM GAMBLING RESEARCH: FUTURE DIRECTIONS

Report to the
National Council on Problem Gambling

June 2009

Submitted by

Lia Nower, JD., Ph.D.

Center for Gambling Studies
Rutgers University

TABLE OF CONTENTS

LIST OF EXHIBITS

Tables

Figures

ABOUT THE AUTHOR

Dr. Lia Nower is Associate Professor and Director of the Center for Gambling Studies at Rutgers University School of Social Work. Her research focuses on the etiology and treatment of problem gambling and co-morbid addictive disorders and gambling-related policy issues. Dr. Nower has served as a National Institute of Mental Health pre-doctoral fellow, a Fulbright fellow, and a research intern at the National Research Council at the National Academies. She is currently a co-editor of *International Gambling Studies*, consulting editor for *Social Work Research*, and a member of the editorial board of the *Journal of Gambling Issues* and the international advisory board of *Gaming Research and Review Journal*. A former criminal prosecutor, she serves as a forensic consultant in state and federal court cases involving gambling-related crimes. She has co-authored several policy initiatives, including a model for self-exclusion programs and an industry framework promoting informed-choice in gambling venues.

EXECUTIVE SUMMARY

Basis of Findings

The field of problem gambling has long been hampered by an absence of dedicated funding for research. For that reason, empirical findings have been limited largely to small-scale studies of individual interest to researchers or private funding bodies or to large scale, prevalence surveys without comprehensive, longitudinal follow-up. As a result, the field lacks a cohesive framework for identifying and answering scientific questions through rigorous methodology that builds on findings from prior studies of related questions.

In 2008, the NCPG commissioned this report as a first-step toward identifying and, subsequently, funding a body of research that will finally provide comprehensive evidence to inform policymakers, legislators, treatment providers, program administrators, and gaming officials in future decision-making.

The purpose of this project, reflective of a similar undertaking in the 1980s in the area of domestic violence, was to identify key topic areas for study, and, within those areas, to posit important research questions that must be answered to better serve the population of problem gamblers and their families and communities in the future. A further aim of the study was to prioritize those general and specific research topic areas to assist the NCPG in advancing a strategic research plan on the corporate, state, and federal levels.

Internet Survey

- Based on independent review of scholarly literature and other sources in the field of problem gambling, the researchers compiled a comprehensive list of research issues and distilled them into eight (8) topic and 40 sub-topic areas.
- An internet survey was subsequently administered to 58 international experts (Group 1) and 141 attendees at the NCPG annual conference in 2008 (Group 2).
- All eight topic areas were endorsed as at least "Somewhat Important" by participants in both groups. However, *Classification and Measurement*, *Personal and Familial Impacts of Problem Gambling*, and *Treatment Issues* received the highest scaled scores from both groups.
- Respondents were then asked to rank-order topic and sub-topic areas and to suggest important research questions in need of study.
- Overall, Group 1 experts ranked *Treatment Issues*, *Responsible Gambling*, and *Classification and Measurement* as their top three research priority areas. Group 2 conference participants also ranked *Treatment Issues* first, however second and third priorities were *Personal and Familial Impacts* and *Special Populations*, respectively.
- Scores were then totaled and weighted to determine the priority topic and sub-topic areas for the total sample.

Overall, research priorities in rank-order are:

1. Treatment Issues
> *Priority One*: Improving Treatment Attendance and Service Utilization
> *Priority Two*: Developing Manualized Treatments
> *Priority Three*: Addressing Comorbidity

2. Responsible Gambling
> *Priority One*: Promotion of Informed Choice
> *Priority Two*: Influences of the Gambling Environment
> *Priority Three*: Industry Marketing and Promotion

3. Special Populations
> *Priority One*: Youth
> *Priority Two*: Racial and Ethnic Minorities
> *Priority Three*: Individuals with Comorbid Psychiatric Disorders

4. Classification and Measurement
> *Priority One*: Sub-groups and Sub-Types of Problem Gamblers
> *Priority Two*: Prevalence
> *Priority Three*: Defining and Measuring Problem Gambling

5. Personal and Familial Impacts
> *Priority One*: Depression, Suicidality and Other Mental Health Consequences
> *Priority Two*: Children of Problem Gamblers
> *Priority Three*: Gambling-Related Family Violence

6. Etiology
> *Priority One*: Risk and Resiliency Factors
> *Priority Two*: Family and Social Influences
> *Priority Three (tie)*: Bio-Behavioral Aspects of Impaired Control
> *Priority Three (tie)*: Brain Reward Systems

7. Internet
> *Priority One*: Internet Gambling*

8. Legal and Financial Issues
> *Priority One*: Gambling Courts and Court-Sponsored Programs
> *Priority Two*: Gambling-Related Crime
> *Priority Three (tie)*: Economic Impacts of Gambling on Communities
> *Priority Three (tie)*: Debt and Debt Management

*Note: "Internet" was the only sub-topic within the *Internet* topic area to receive substantial endorsement, therefore, it is the only priority.

Focus Groups

- To supplement quantitative data from the internet survey, we conducted five focus groups with 66 total participants at the NCPG conference in June 2008.
- Participants were asked to identify topic areas in need of research and to suggest strategies for motivating legislators to make gambling research a priority.
- Participants suggested that research should:
  - Clarify commonalities between pathological gambling and other addictive disorders to combat stigma and persistent misconceptions that problem gambling is a vice rather than an addictive disorder.
  - Identify the prevalence of gambling-related crimes, develop education for court personnel, and establish a framework for gambling-related referral services within the court system.
  - Identify strategies for involving family members in gambling treatment through education and community initiatives.
  - Develop evidenced-based educational programs for students, teachers, parents and school administrators regarding the dangers of problem gambling, particularly underage gambling.
  - Develop manualized, multi-modal treatments to standardize gambling treatment, evaluate its effectiveness, and tailor it to the individual needs of sub-groups of problem gamblers.
  - Identify strategies for motivating gamblers to access services and remain in treatment and develop community-based educational programs and campaigns to increase service utilization.
  - Identify factors in the gambling environment that significantly contribute to gambling problems and work with legislators to regulate those factors.
  - Enumerate the social costs of problem gambling to families and the community.

- Participants indicated that successfully attracting legislative support will depend on advocacy and on obtaining reliable economic estimates of the social costs of problem gambling to families, communities, and society. Participants highlighted the need for a cooperative effort between federal and state governments to establish a comprehensive framework to guide consideration of future gambling-related issues. That framework should include provisions for dedicated funding for gambling research, prevention, and treatment with each proposed expansion of gambling opportunities.

INTRODUCTION

Unlike several other countries with legalized gambling, the United States has largely left gambling regulation to the states and, in turn, a majority of states have expanded gambling opportunities without providing designated funding to address the serious adverse consequences of problem gambling. The current project is an attempt to provide a comprehensive and informed framework to guide future efforts in securing research funding and developing evidenced based-prevention, education, intervention, and treatment services for problem gamblers and their families.

As a first step in this process, we conducted a comprehensive review of the scholarly literature and existing research programs worldwide to develop an inclusive list of potential research topics. The literature review, consisting of more than 1,500 research articles, reports, commentaries, and conference proceedings, is beyond the scope of this report. However, several recent texts, particularly helpful in this process, are cited below (see Cosgrave, 2006; Derevensky & Gupta, 2004; Gerstein et al., 1999; Grant & Potenza, 2004; Marotta, Cornelius, & Eadington, 2002; National Research Council, 1999; Petry, 2005; Smith, Hodgins, & Williams, 2007; Zangeneh, Blaszczynski, & Turner, 2007).

The project was also greatly informed by resources from the NCPG (U.S.), Gemini Research (U.S.), National Center for Responsible Gambling (U.S.), American Gaming Association (U.S.), Ontario Problem Gambling Research Centre (Canada), Responsible Gambling Council (Canada), Gambling Research Australia (Australia), Australian Gaming Council (Australia), and GamCare (U.K).

REFERENCES

Cosgrave, J.F. (2006). *The sociology of risk and gambling reader*. NY: Routledge.

Derevensky, J.L. & Gupta, R. (2004). *Gambling problems in youth: Theoretical and applied perspectives.* NY: Springer.

Gerstein, D. R., Volberg, R. A., Harwood, H., Christiansen, E. M. et al. (1999). *Gambling impact and behavior study: Report to the National Gambling Impact Study Commission.* Chicago, IL: National Opinion Research Center at the University of Chicago.

Grant, J.E. & Potenza, M.N. (2004). *Pathological gambling: A clinical guide to treatment.* Arlington, VA.: American Psychiatric Publishing.

Marotta, J.J., Cornelius, J.A., & Eadington, W.R. (2002). *The downside: Problem and pathological gambling.* Reno: University of Nevada-Reno.

National Research Council (1999). *Pathological gambling: A critical review.* Washington D.C.: National Academy Press.

Petry, N.M. (2005). *Pathological gambling: Etiology, comorbidity, and treatment.* Washington D.C.: American Psychological Association.

Smith, G., Hodgins, D., & Williams, R. (2007). *Research and measurement issues in gambling studies.* NY: Academic Press.

Zangeneh, M., Blaszczynski, A., & Turner, N.E. (2007). In the pursuit of winning: Problem gambling theory, research and treatment. NY: Springer.

CHAPTER 1: INTERNET SURVEY

METHODS

Participant Selection

As outlined in the Introduction, a survey of the scholarly literature and research priorities worldwide yielded a total of eight (8) topic areas as the focus of this project. Within those eight areas, we further identified 40 sub-topics for specific investigation. The internet survey, based on those topic and sub-topic areas, was administered to two separate groups of participants: the "expert group" (Group 1) and the "conference group" (Group 2). Utilizing two groups allowed for cross-validation regarding the importance of the topic and sub-topic areas. Since the areas were derived, in large part, from the existing research literature, it was hypothesized that experts in Group 1 would be best suited to further define unanswered research questions in these areas and to suggest research studies that would address gaps in current knowledge. However, a majority of the expert group were academic researchers, who may not actually administer interventions and other programs based on their research findings. In contrast, attendees at the NCPG conference were largely comprised of treatment providers and program administrators who focus on implementing prevention, education, and treatment services. They would, therefore, lend an alternative perspective by prioritizing research that is most needed to better serve their clients but currently lacking adequate empirical information. It was theorized that comparing and synthesizing findings from these two groups would provide an optimal combination of perspectives from primary stakeholders in the area of problem gambling research.

Experts for Group 1 were selected through a two-step process. First, the principal investigator, a gambling researcher and counselor, conducted a preliminary review of books, journal articles, research reports, training materials, PowerPoint presentations, conference programs, web-sites, and other gambling-related materials to generate names of researchers, treatment providers, policymakers, and state and non-governmental program administrators worldwide with demonstrated expertise in problem gambling issues. Next, the principal investigator and a master's student conducted independent web-based literature reviews of recent (past five years) books and journal articles catalogued in the PsychInfo and Medline databases. The student had an educational background that included courses in research methodology, statistical analysis, and substance use disorders but no training in problem gambling. She was instructed: (a) to run each of the topic and sub-topic areas and read abstracts from the past five years; (b) to identify abstracts with findings that appear to make a contribution to the research literature; (c) to run the journal names in abstracts through Web of Science to note the impact factors; and (d) to compile abstracts and a suggested list of experts for submission to principal investigator. The student then conducted a web-search to identify policymakers and others who also contributed substantively to the field, though not necessarily through scholarly journal writing. The principal investigator followed a similar procedure and compiled a second set of abstracts and expert list. A comparison of the results of both searches identified 66 experts who received an e-mail invitation to

complete the internet survey as part of Group 1. Two weeks later, these individuals received a follow-up email with the survey link.

Group 2 was comprised of individuals who registered on-line for the 2008 NCPG annual conference in Long Beach, California. Following registration, employees of the NCPG sent a mass email, inviting all registrants who supplied a valid email address to take the same internet survey that was administered to the expert group. This group also received a follow-up email, two weeks following the initial invitation.

Participant Demographics

Of the 66 experts invited to participate in Group 1, a total of 58 (88%) completed the survey. A majority (62%, n=36) were academic researchers, followed by eight (8) treatment providers, seven (7) program administrators, six (6) policymakers and one "Other," a consultant (see Figure 1). Of the conference respondents in Group 2, 141 individuals participated in the survey. It was not possible to calculate a response rate, because invitations were sent automatically through the NCPG website, which did not record the exact numbers of emails sent or returned due to email address failure. Overall, a higher proportion of respondents in Group 2 were treatment providers, program administrators and "Other." About 34% (n=48) indicated they were treatment providers; 19% (n=27), program administrators; 11% (n=16), academic researchers; and 4% (n=6), regulators (Figure 1). In addition, 37 respondents (26%) endorsed "other" professions, including gaming executive or employee, marketing representative, non-university educator, prevention coordinator, and state council executive or employee.

FIGURE 1. RESPONDENTS BY SPECIALTY

National Research Priorities for Problem Gambling
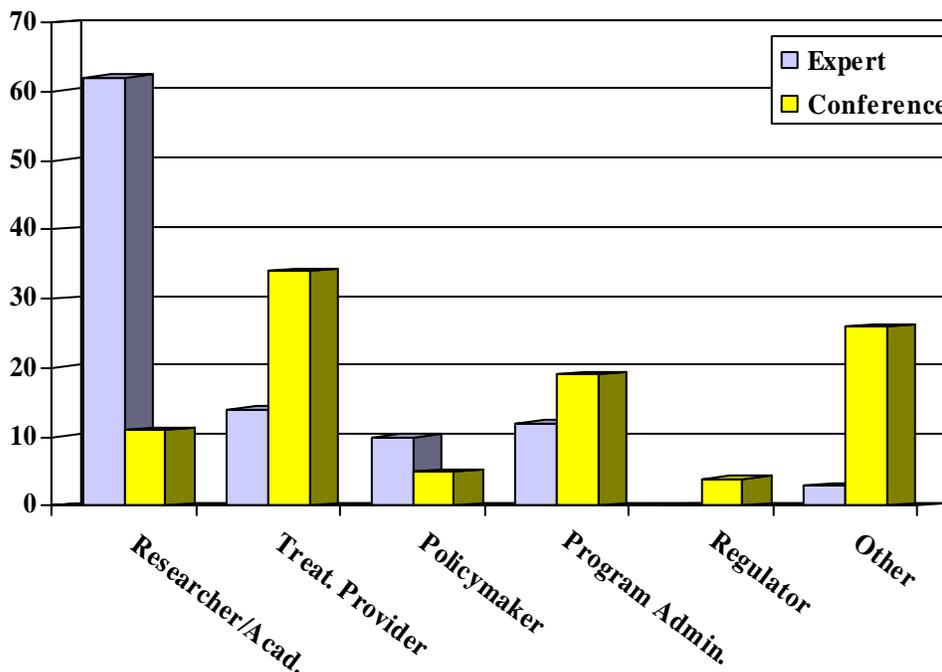
A majority of the experts in Group 1 (64%, n=37) lived in the United States, followed by 19% (n=11) in Canada, and 17% (n=10) in other jurisdictions including Australia, Sweden, Netherlands, U.K, Germany, and "multiple" locations (Figure 2). A larger percentage of Group 2 conference participants (89%, n=125) resided in the U.S.; 6% (n=8) indicated they lived Canada and 6% (n=8), in "other" jurisdictions, including New Zealand, Japan, and South Korea (Figure 2).

FIGURE 2. RESPONDENTS BY COUNTRY OF RESIDENCE
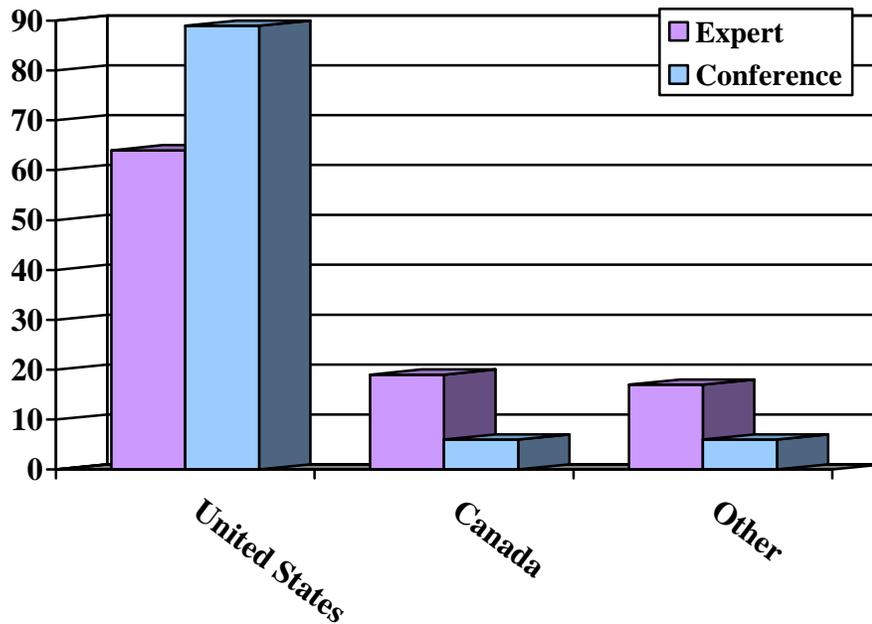
Survey Procedure

The internet survey was conducted with a mixed-methods design, utilizing Likert-scaled responses, forced-choice items, and open-ended questions that allowed for qualitative responses. The response format was designed to evaluate several factors. First, we sought to identify the importance of each of the eight general topic areas. Though all eight areas were identified based on prior research and policy initiatives, it is possible that one or more areas would be of little actual interest to participants in one or more of the groups. Therefore, participants in the study were first asked to rate each general topic area on an 8-point Likert scale, ranging from "Not Important" to "Very Important."

Second, we sought to rank-order the individual topic areas and, within those areas, the sub-topics of most importance. Participants were asked to indicate which of the eight topic areas they would rank as their highest priority. They were then presented with a list of sub-topics and were asked to select one as the highest priority within the topic area. Following that selection, participants were asked to detail a research question or study that would best address needed research in that sub-topic area. Participants repeated their

choices for their second and third priorities. These responses provided a basis for comparing the findings of the Likert-scale responses with their actual priorities when forced to choose among categories and rank those choices. In addition, this procedure generated a clear hierarchical priority among the eight topic and 40 sub-topic areas and provided a catalogue of research questions that could serve as the basis for future research initiatives (see Appendix A).

FINDINGS

Overall Findings by Topic Area

As indicated in Figure 3, both Group 1 and Group 2 respondents indicated all research areas were at least "Somewhat Important" (>4 on Likert scale), however, *Classification and Measurement*, *Personal and Familial Impacts of Problem Gambling*, and *Treatment Issues* earned the highest scores for both groups. There were, however, only small variations in scaled scores among the most popular research areas.

FIGURE 3. SCALED SCORES: OVERALL IMPORTANCE OF RESEARCH TOPIC AREAS
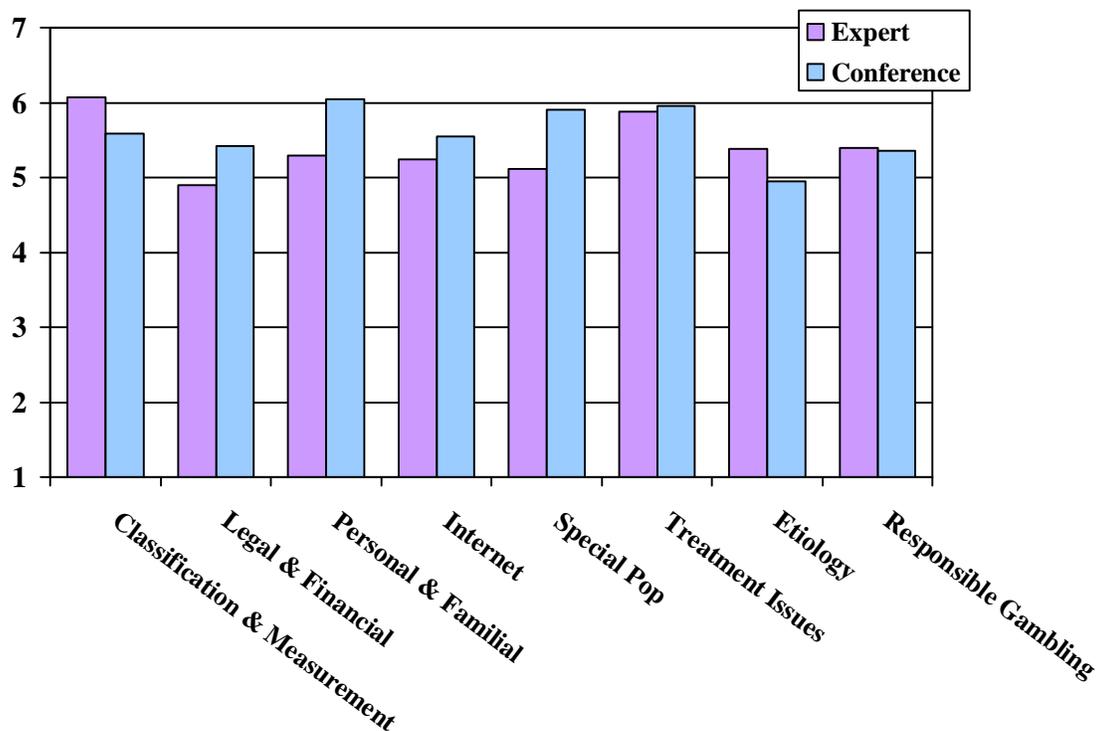
Participants were then asked to rank-order the first, second, and third most important priority areas for research. About 24% (n=14) of participants in Group 1, ranked *Treatment Issues* as the highest research priority among all categories, followed by *Etiology* (21%, n=12), *Responsible Gambling* (17%, n=10) then other categories, each of which garnered endorsement from only 7% of participants (Figure 4). Among Group 2 participants, *Treatment Issues* (30%, n=42) also emerged as the most endorsed category,

followed by *Responsible Gambling* (21%, n=29), and *Personal and Familial Impacts* (14%, n=20). As indicated by Figure 4, both *Etiology* and *Personal and Familial Impacts* were rated highly by one group but not the other.

FIGURE 4. TOPIC AREAS RANKED AS HIGHEST PRIORITY
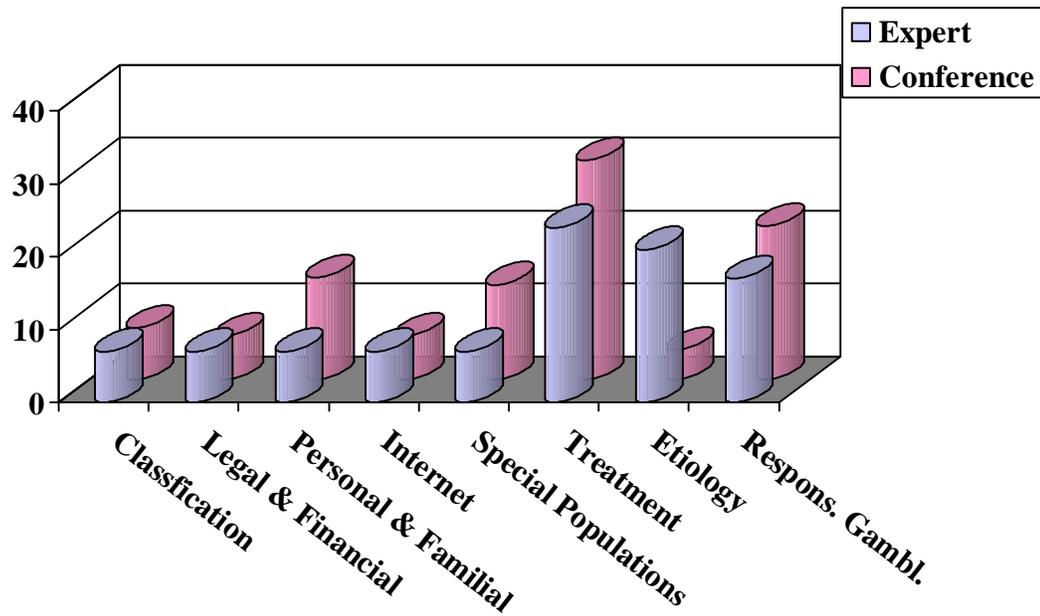
Overall priorities shifted somewhat when aggregating the endorsement of topic areas across all three opportunities for selection, (i.e. summing the total number of endorsements for each category irrespective of priority ranking). Though *Etiology* was endorsed second among highest priorities for Group 1, it dropped to fourth when totaling all endorsements; *Treatment Issues* remained first, followed by *Responsible Gambling* and *Classification and Measurement* (see Table 1).

TABLE 1. PRIORITY AREAS – HIGHEST VERSUS AGGREGATE (TOTAL) RANKINGS

Topic Area	Group			
	Expert		**Conference**	
	Highest	**Total**	**Highest**	**Total**
Classification & Measurement	4	3	5	5
Legal & Financial Issues	4	7	6	7
Personal & Familial Impacts	4	7	3	2
Internet and Other New Technologies	4	6	6	6
Special Populations	4	5	4	3
Treatment Issues	1	1	1	1
Etiology	2	4	7	8
Responsible Gambling	3	2	2	4

Similarly, among Group 2 conference participants, *Treatment Issues* remained the most endorsed category when priority scores were totaled; however, *Responsible Gambling* dropped in rank from second to fourth, while *Personal and Familial Impacts* rose one place to second priority, and *Special Populations* received the third highest total endorsements, up from fourth priority (Table 1). These findings suggest that, although a proportion of expert and conference respondents consider Etiology and Responsible Gambling, respectively, to be very important areas of research, those areas were not as significant to the groups as a whole. The number and percentage of total respondents by group who endorsed each topic area as one of the three priorities are detailed in Table 2.

TABLE 2. OVERALL RESPONDENT ENDORSEMENT BY TOPIC AREA

Topic Area	Group			
	Expert		Conference	
	n	*%*	*n*	*%*
Classification & Measurement	24	41%	42	29%
Legal & Financial Issues	13	22%	40	28%
Personal & Familial Impacts	13	22%	68	47%
Internet and Other New Technologies	18	31%	37	26%
Special Populations	20	34%	64	44%
Treatment Issues	36	62%	91	63%
Etiology	22	38%	28	19%
Responsible Gambling	28	48%	54	38%

Specific Findings by Topic and Sub-Topic Areas

In addition to rank-ordering overall topic areas, participants were also asked to indicate which sub-topics within the selected topic area should be the first, second, and third research priorities. The following sections summarize total endorsements by sub-topic (i.e. the proportion of respondents endorsing each sub-topic overall in the survey) for each of the three priority areas.

Topic 1: Classification and Measurement

About 41% (n=24) of Group 1 and 29% (n=42) of Group 2 participants indicated that *Classification and Measurement* should be a primary research priority. Within that topic area, the highest proportion of expert respondents (Group 1) identified Sub-Groups and Sub-Types of Problem Gamblers (hereafter "Sub-Groups") as the highest priority (63%, n=15), followed distantly by Incidence (21%, n=5) then other sub-topics (see Figure 5). In contrast, conference participants (Group 2) endorsed Prevalence (45%, n=19) as the highest priority, followed by Sub-Groups (24%, n=10) then other sub-topics (Figure 5).

FIGURE 5. SUB-TOPICS: CLASSIFICATION AND MEASUREMENT
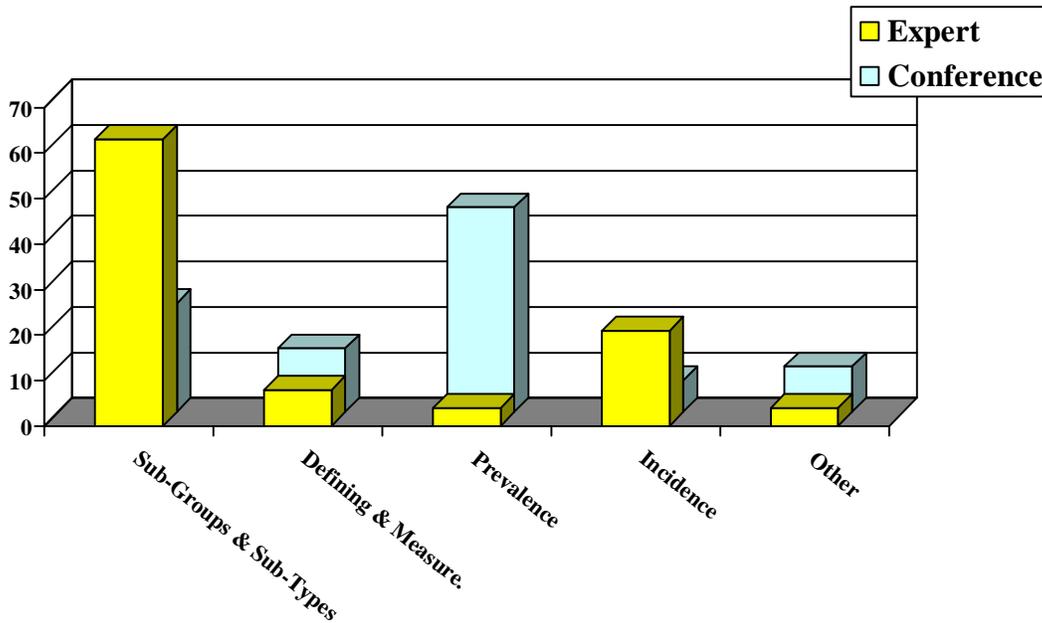
Overall, the total sample ranked Sub-Groups (44%) as the first, Prevalence (25%) as the second, and Incidence (15%), as the third most important sub-topics for research within *Classification and Measurement* (Table 3). Sub-topic suggestions under "Other," where provided, appear in Appendix A.

For each sub-topic selected in the survey, participants were also asked: "What research question(s) most needs to be answered and/or (b) What research study should be done to best address research needs in this area?" Answers to these questions for the total sample of participants are listed in Appendix A by topic and sub-topic area.

TABLE 3. OVERALL RANK BY SUB-TOPIC: CLASSIFICATION AND MEASUREMENT

Topic Area: Classification and Measurement	Overall Ranking
Sub-Groups and Sub-Types of Problem Gamblers	1
Defining & Measuring Problem Gambling	4
Prevalence	2
Incidence	3
Other	5

Topic 2: Legal and Financial Issues

Legal and Financial Issues was the lowest overall ranked research priority area in the survey (Group 1: 22%, n=13; Group 2: 28%, n=40). Among Group 1 experts, the sub-topic area Gambling Courts and Court-Sponsored Programs (hereafter "Courts") garnered the largest proportion of endorsements (38%, n=5) (see Figure 6). Group 2 conference participants ranked Gambling-Related Crime (hereafter "Crime") (28%, n=11) first, followed by Courts (25%, n=10) then other sub-topics (Figure 6).

FIGURE 6. SUB-TOPICS: LEGAL AND FINANCIAL ISSUES
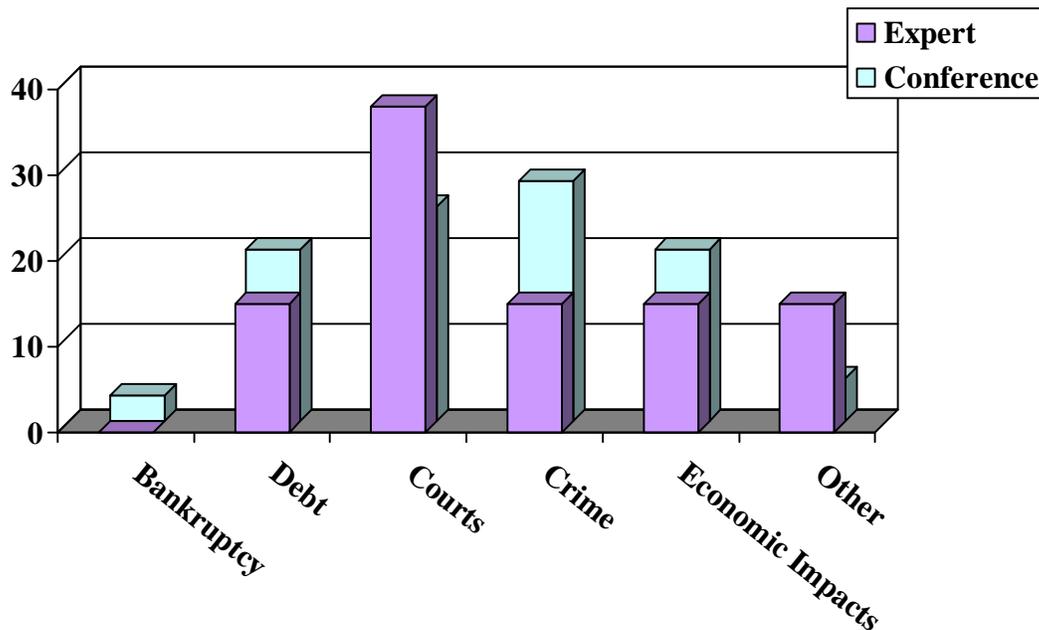
The total sample ranked Courts (32%) as the first, Crime (22%) as the second, and both Debt and Debt Management (hereafter, "Debt")(18%) and Economic Impacts of Gambling on Communities (hereafter, "Economic Impacts")(18%), as the third most important sub-topics for research within *Legal and Financial Issues* (Table 4).

Suggested research questions are detailed in Appendix A.

TABLE 4. OVERALL RANK BY SUB-TOPIC: LEGAL AND FINANCIAL ISSUES

Topic Area: Legal and Financial Issues	Overall Ranking
Bankruptcy	5
Debt and Debt Management	3 (tie)
Gambling Courts and Court-Sponsored Programs	1
Gambling-Related Crime	2
Economic Impacts of Gambling on Communities	3 (tie)
Other	4

Topic 3: Personal and Familial Impacts of Problem Gambling

About 22% (n=13) of Group 1 and 47% (n=68) of Group 2 survey respondents identified *Personal and Familial Impacts of Problem Gambling* (hereafter, "Personal and Familial Impacts") as a primary research priority. Within that topic area, more than a third of expert respondents (38%, n=5) endorsed "Other" sub-topics as the highest priority (see Appendix A for research questions), followed by Children of Problem Gamblers (31%, n=4) and Depression, Suicide, and Other Mental Health Consequences (hereafter, "Depression") (23%, n=3) (see Figure 7). In contrast, nearly half of conference participants (Group 2) identified Depression (43%, n=29) as the highest priority, followed by Children of Problem Gamblers (32%, n=22) and Gambling-Related Family Violence (hereafter, "Family Violence") third (13%, n=9). (see Figure 7).

FIGURE 7. SUB-TOPICS: PERSONAL AND FAMILIAL IMPACTS OF PROBLEM GAMBLING
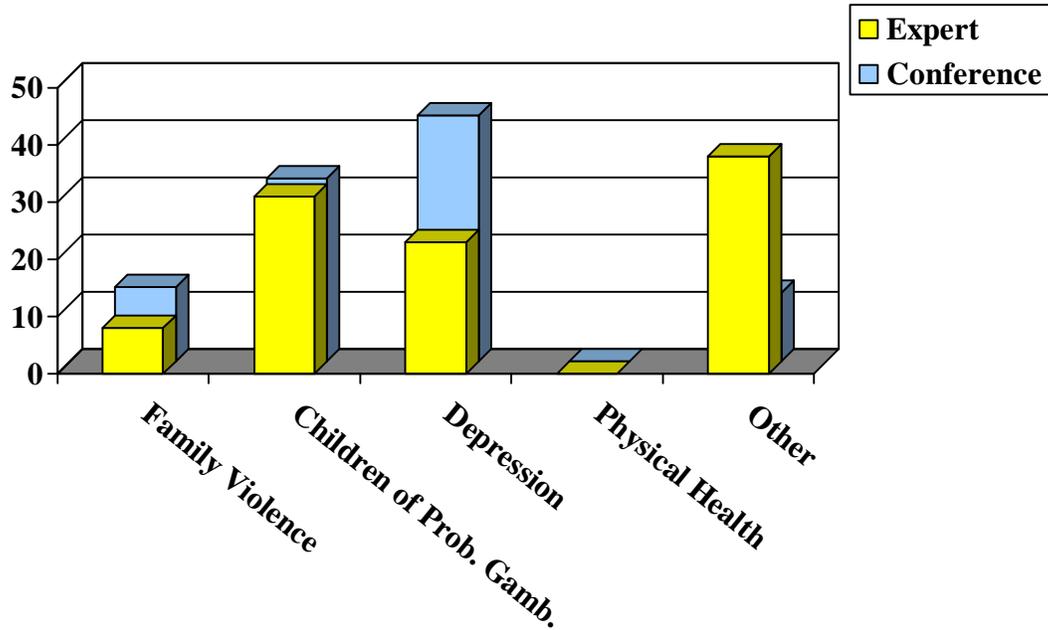
Among the total sample, the largest weighted percentage of respondents endorsed Depression (33%) as the first priority; Children of Problem Gamblers (32%) ranked second within the *Personal and Familial Impacts* topic area (see Table 5).

Suggested research questions, including those for "Other" which ranked third, are detailed in Appendix A.

TABLE 5. OVERALL RANK BY SUB-TOPIC: PERSONAL AND FAMILIAL IMPACTS

Topic Area: Personal and Familial Impacts	Overall Ranking
Gambling-Related Family Violence	4
Children of Problem Gamblers	2
Depression, Suicide, and Other Mental Health Consequences	1
Physical Health Consequences	5
Other	3

Topic 4: Internet and Other New Technologies

About 31% (n=18) of the experts (Group 1) and 26% (n=37) of conference participants (Group 2) endorsed *Internet and Other New Technologies* (hereafter, "Internet") as a primary research priority. Within that topic area, an overwhelming majority of both Group 1 (61%, n=11) and Group 2 (78%, n=29) participants identified Internet Gambling as the highest priority. See Figure 8 for all sub-topic areas.

FIGURE 8. SUB-TOPICS: INTERNET AND OTHER NEW TECHNOLOGIES
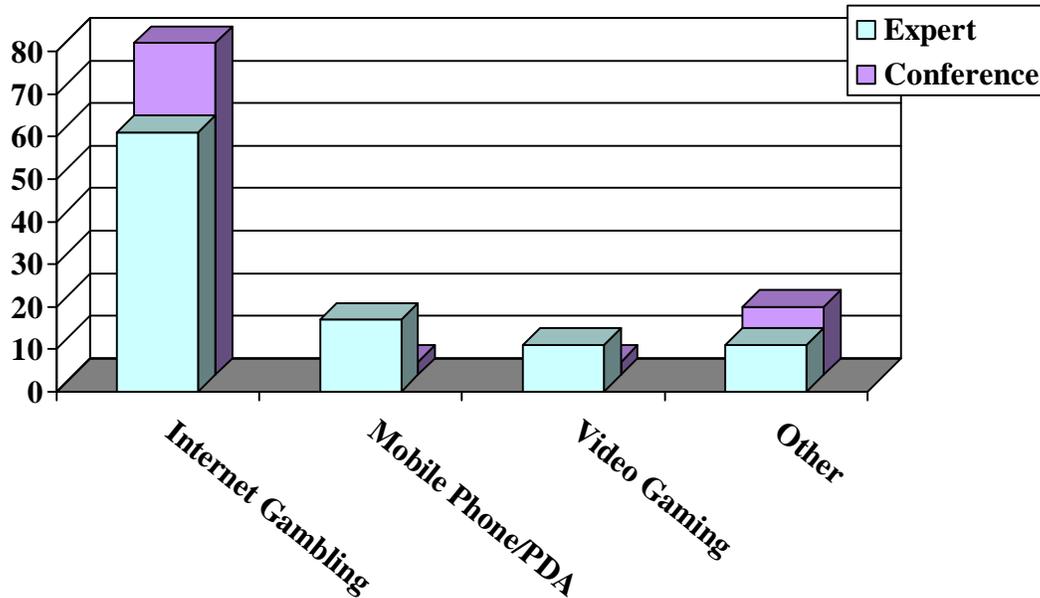
Overall, about 70% of the weighted total sample endorsed Internet Gambling as the highest priority sub-topic; other sub-topics garnered only very minor support (see Table 6). Research questions are provided in Appendix A.

TABLE 6. OVERALL RANK BY SUB-TOPIC: INTERNET AND OTHER NEW TECHNOLOGIES

Topic Area: Internet and Other New Technologies	Overall Ranking
Internet Gambling	1
Mobile Phone/PDA Gambling	3
Gambling and Video Gaming	4
Other	2

Topic 5: Special Populations

Special Populations proved to be the third-ranked overall priority area for the total sample in the study (Group 1: 34%, n=20; Group 2: 44%, n=64). Among Group 1 experts, the sub-topic area Racial and Ethnic Minorities (hereafter, "Minorities") received the most endorsements (30%, n=6), followed by Individuals with Comorbid Psychiatric Disorders (hereafter, "Comorbid Disorders") (20%, n=4) (see Figure 6). Group 2 conference participants ranked Youth (31%, n=20) of primary interest, followed by Minorities and Comorbid Disorders (both 20%, n=13) (Figure 9).

FIGURE 9. SUB-TOPICS: SPECIAL POPULATIONS
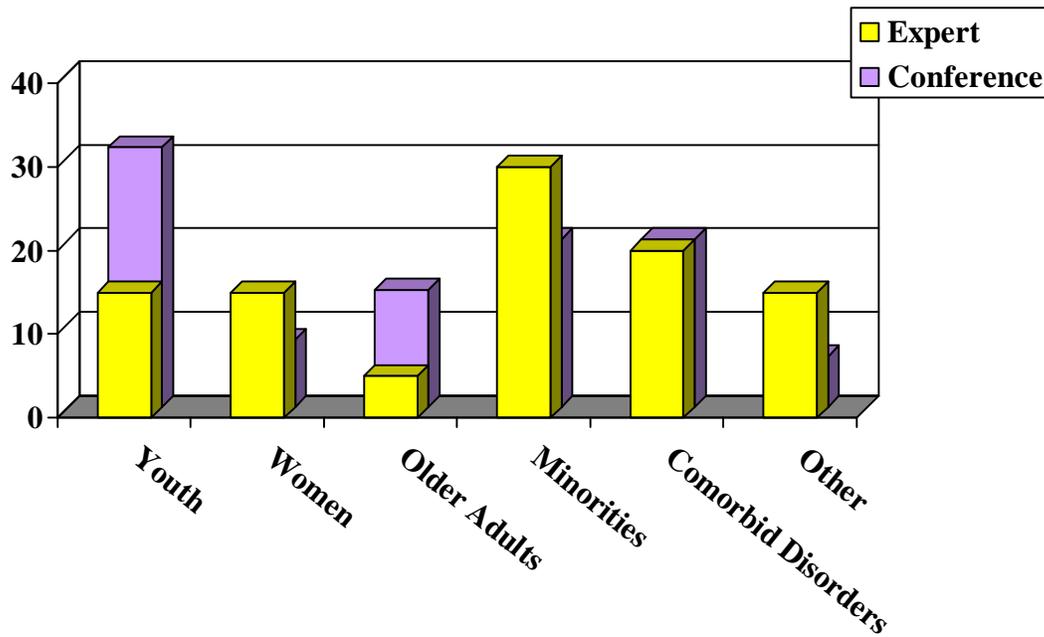
Minorities (25%) ranked first, Youth (23%), second, and Comorbid Disorders (20%), third, among sub-topic areas for research within *Special Populations* (Table 7).

See Appendix A for suggested research questions.

TABLE 7. OVERALL RANK BY SUB-TOPIC: SPECIAL POPULATIONS

Topic Area: Special Populations	Overall Ranking
Youth	2
Women	4
Older Adults	5
Racial and Ethnic Minorities	1
Individuals with Comorbid Psychiatric Disorders	3
Other	6

Topic 6: Treatment Issues

Treatment Issues was identified as the highest overall priority topic area in the study, endorsed by 62% (n=36) of Group 1 experts and 63% (n=91) of Group 2 conference participants. Within that topic area, nearly a third of both groups indicated that Improving Treatment Attendance and Service Utilization (hereafter, "Treatment Attendance") should be the first priority (Group 1: 28%, n=10; Group 2: 29%, n=26)(see Figure 10). The "Other" category (19%, n=7) ranked second with experts; and Developing Manualized Treatments (20%, n=18) was second with conference participants. Addressing Comorbidity ranked third with both groups (Group 1:17%, n=6; Group 2: 14%, n=13). (Figure 10). All sub-topics garnered some support from participants, except for Telephone Counseling and Helpline Services (hereafter, "Helpline") and Natural Recovery, which received no endorsements from experts and Self-Help Groups, which garnered no endorsements from conference participants (Figure 10)

FIGURE 10. TREATMENT ISSUES
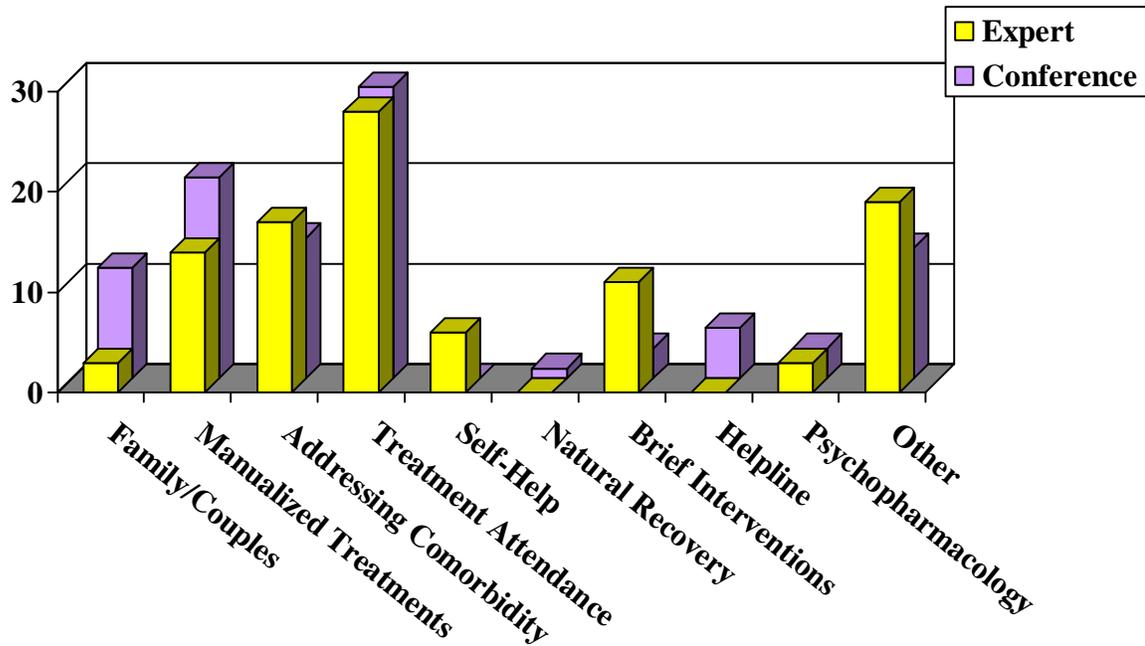
The largest weighted proportion of the total sample endorsed Treatment Attendance (29%) as the highest priority sub-topic within *Treatment Issues*, followed by both Addressing Comorbidity (16%) and Other (16%), and Developing Manualized Treatments (12%) (see Table 8).

Suggested research under "Other" as well as other sub-topic areas are listed in Appendix A.

TABLE 8. OVERALL RANK BY SUB-TOPIC: TREATMENT ISSUES

Topic Area: Treatment Issues	Overall Ranking
Family and Couples Counseling	**4 (tie)**
Developing Manualized Treatments	**3**
Addressing Comorbidity	**2 (tie)**
Improving Treatment Attendance and Service Utilization	**1**
Self-Help Groups	**5 (tie)**
Natural Recovery	**6**
Brief Interventions	**4 (tie)**
Telephone Counseling and Helpline Services	**5 (tie)**
Psychopharmacology	**5 (tie)**
Other	**2 (tie)**

Topic 7: Etiology (Origins of Problem Gambling)

Overall, twice the proportion of expert (38%, n=22) versus conference (19%, n=28) participants identified *Etiology* as an important research priority area, though two sub-topics were clear priorities with both groups. Among Group 1 experts, the sub-topic area Risk and Resiliency Factors received the most endorsements (36%, n=8), followed by Family and Social Influences (23%, n=5); other categories received the same number of endorsements except for Genetic Determinants which received none (see Figure 11). Among Group 2 conference participants, both Risk and Resiliency Factors and Family and Social Influences tied for the highest priority (both 25%, n=7), followed by Brain Reward Systems and Bio-Behavioral Aspects of Impaired Control (hereafter "Bio-Behavioral"), each selected by four (14%)(Figure 11).

FIGURE 11. SUB-TOPICS: ETIOLOGY
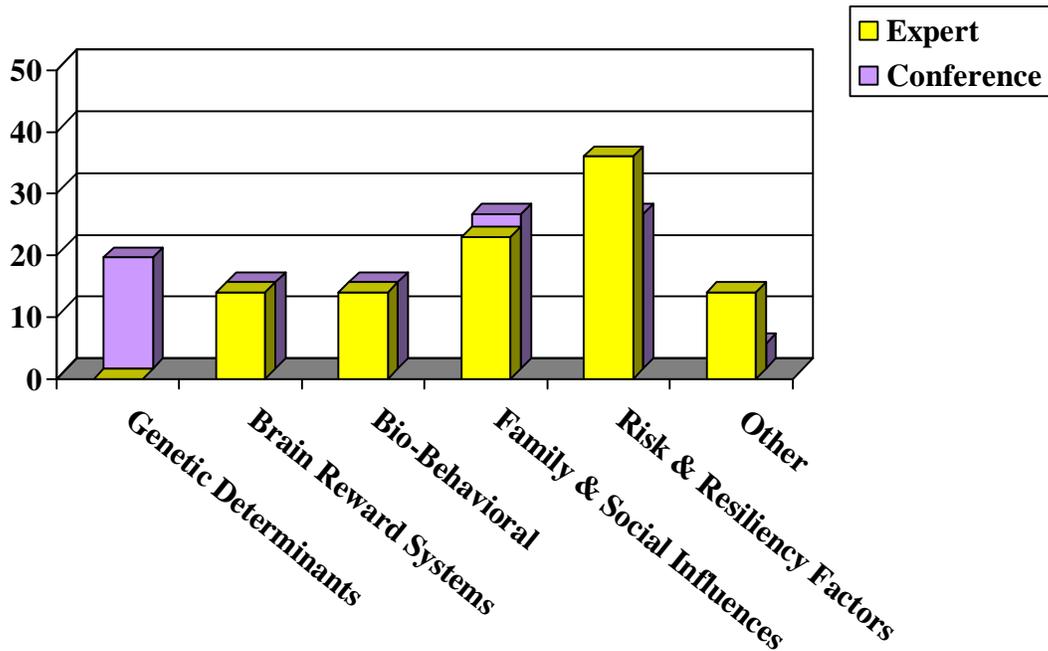
In the total weighted sample, Risk and Resiliency Factors (31%) ranked first, followed by Family and Social Influences (24%); three sub-topics tied for third with the *Etiology* topic area (Table 9).

See Appendix A for detailed research questions.

TABLE 9. OVERALL RANK BY SUB-TOPIC: ETIOLOGY

Topic Area: Etiology	Overall Ranking
Genetic Determinants	4
Brain Reward Systems	3
Bio-Behavioral Aspects of Impaired Control	3
Family and Social Influences	2
Risk and Resiliency Factors	1
Other	3

Topic 8: Responsible Gambling and Harm Reduction Strategies

Responsible Gambling and Harm Reduction Strategies (hereafter, "Responsible Gambling") ranked second overall as a topical priority area for the total sample, with endorsements from about 48% (n=28) of Group 1 and 38% (n=54) of Group 2 participants. Within that topic area, the highest proportion of expert respondents (Group 1) identified Promotion of Informed Choice (hereafter "Informed Choice") as the highest priority (29%, n=8), followed by "Other" (18%, n=5) then other sub-topics (see Figure 12). In contrast, conference participants (Group 2) ranked Influences of the Gambling Environment (hereafter, "Gambling Environment") (24%, n=13) as the highest priority, followed closely by Industry Marketing and Promotion (hereafter, "Marketing") (24%, n=10) (Figure 12).

FIGURE 12. SUB-TOPICS: RESPONSIBLE GAMBLING
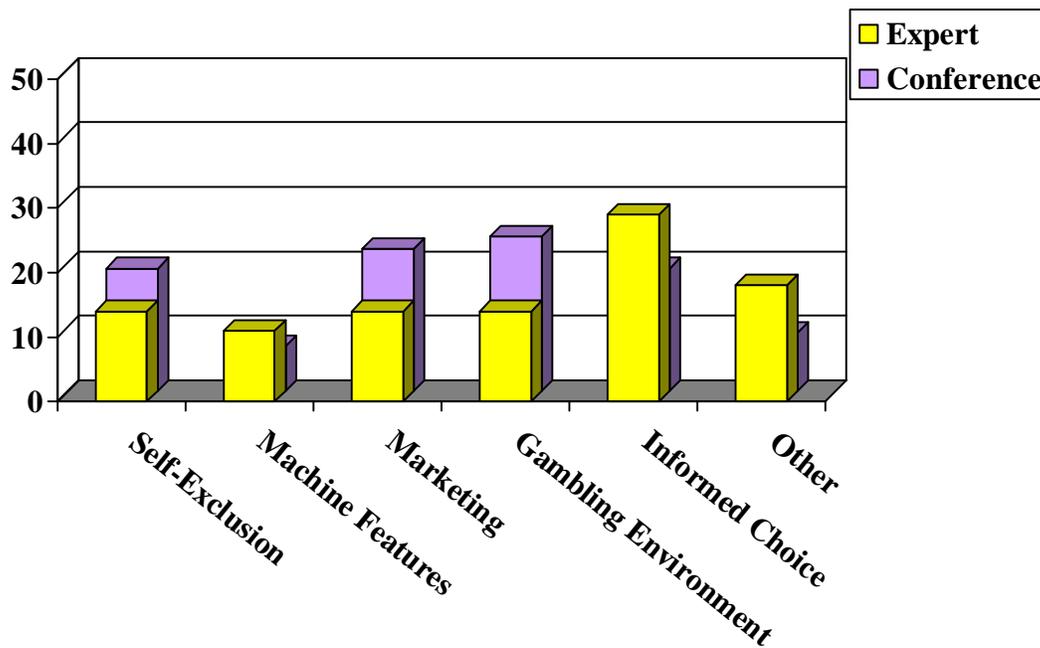
Within the topic area *Responsible Gambling,* Informed Choice (24%), Gambling Environment (19%), and Marketing (18%) were the three priority sub-topic, ranked in order by the total weighted sample (see Table 12).

Proposed research questions are detailed in Appendix A

TABLE 10. WEIGHTED PRIORITIES BY SUB-TOPIC: RESPONSIBLE GAMBLING

Topic Area: Responsible Gambling	Overall Ranking
Self-Exclusion	4
Machine Features	6
Industry Marketing and Promotion	3
Influences of the Gambling Environment	2
Promotion of Informed Choice	1
Other	5

CHAPTER 2: FOCUS GROUPS

METHODS

To supplement the empirical data on topical priority areas provided by the internet survey, we posed the following questions to a series of focus group participants:

- *Question 1: If you could identify one topic area in problem gambling where you want more information and/or research, what would it be?*
- *Question 2: What questions, relevant to your work, are you unable to answer given the current state of research knowledge?*
- *Question 3: What information do you think will be most important for motivating legislators to make gambling research a priority?*

Participant Recruitment and Demographics

On-line registrants for 2008 NCPG annual conference who provided a valid email address received an invitation by email to participate in focus groups to be conducted at the conference. Registrants also received a reminder email and announcement two weeks prior to the conference.

At the conference, we recruited focus group participants using a variety of methods, including: (a) announcement at a plenary session; (b) printed flyers placed on tables in the dining hall, and (c) personal invitation by two assistants in the hallway between sessions.

A total of 66 participants attended one of five focus groups, conducted over a two-day period. Demographic information on participants is provided in Tables 11 and 12.

TABLE 11. FOCUS GROUP PARTICIPANTS BY GENDER

Group	Gender	
	Male	Female
Group 1 (n=9)	4	4
Group 2 (n=15)	6	9
Group 3 (n=9)	6	3
Group 4 (n=9)	5	4
Group 5 (n=24)	16	8

TABLE 12. FOCUS GROUP PARTICIPANTS BY OCCUPATION

Occupation	Number
State or Other Program Administrator	15
Treatment provider	22
Student	14
Peer counselor	4
Psychiatrist	3
State council director	2
Academic researcher	2
Judge	1
Gaming executive	1
High school teacher	1

Each focus group consisted of a 1-hour, 15 minute session of guided discussion, with each participant afforded an opportunity to address each of the three questions serving as prompts. Sessions were audio-recorded and transcribed without identifiers. Transcripts of the focus groups were subsequently coded by theme and compared by two independent raters.

FINDINGS

In general, participants in the focus groups identified issues that fit within the prescribed topic areas in the internet survey. However, group members often provided qualitative information that tapped previously unidentified aspects of the topic and sub-topic areas in need of further study. Research questions generated by the focus groups, along with those from the internet survey, are detailed in Appendix A.

Legitimacy Through Classification

Several focus group participants suggested that pathological gambling is currently misclassified by the American Psychiatric Association in the DSM-IV-TR with a variety of seemingly unrelated disorders of impulse control rather than with other addictive disorders (i.e. substance abuse). One participant commented:

> *Problem gambling needs to be legitimized as a disease and classified as a co-occurring disorder. There needs to be a way of tying the biological and genetic components together with disorders like gambling and substance abuse that tend to be highly comorbid. Right now it's not seen that way.*

The participant also noted that the failure to classify pathological gambling with other addictive disorders makes it more likely that gambling will continue to be viewed as a "vice" with its attendant stigma rather than as a legitimate disease that requires a combination of pharmacotherapy and tailored treatment to address. Research should address these disparities and further clarify commonalities between pathological gambling and other addictive disorders.

Another participant noted that problems with classification have led to limited services to gamblers in the legal system. Unlike with substance abuse, court personnel and judges are largely uneducated regarding gambling-related crime. As a result, individuals who commit crimes as a result of gambling losses go relatively undetected in the court system, because police reports, probation and public defender intake forms and other court documents fail to inquire about gambling behavior and its potential relation to the offense. Said one participant:

> *What will it take to get judges to understand that the disease-based model applies to gambling? Judges can't get to that level. A switch needs to take place. We need to focus on treatment research with the parolees and the prison population. People with gambling problems are being prosecuted in standard fashion with a punitive focus. The criminal justice system just doesn't understand – they continue to focus on character defects or view gamblers as "rogue criminals" and they don't get to the disease.*

Participants cited the need for research focused on: (a) identifying gambling-related crimes at arrest and intake as well as gambling among the prison population; (b) initiating early intervention programs in the court systems, possibly in connection with drug-court services or as part of therapeutic justice initiatives that shift the focus from punishment to prevention and rehabilitation; and (c) establishing a network of gambling-related referral services that are outcome evaluated. Group members added that such initiatives would also require the development of educational programs for judges, probation officers, attorneys, police officers to ensure the issues are addressed nationwide rather than in select regions.

Family Involvement

Several participants raised issues surrounding the impacts of problem gambling on the families of problem gamblers. One participant told the story of his struggle with a gambling parent and his search for information that was not readily accessible:

> *When our family broke apart, no one knew anything about pathological gambling. We didn't have anyone to go to to find out what was going on. My mother embezzled $25,000. Once we got involved with her problems, we started finding all these people with the issue. The reason people don't see it as a big issue is they don't see the consequences to health. There's mainly the mental effect. But there is also child neglect, health problems*

from worrying if you're going to be homeless, comorbid smoking, and other addictive behaviors. The children suffer the most.

Group members suggested research should focus on the effect of problem gambling on family members, particularly children, and ways of engaging the family in treatment. One participant noted:

From a treatment perspective, the interaction between family members and the identified patient is key. There is usually a degree of codependence going on. If that doesn't change, the gambler will relapse. How do we get the family members on the bus? They need to get on board and stay on board. The only way to keep them engaged and participating is to figure out ways to minimize the associated stigma so they get on with their lives and no longer allow manipulation or anger to drive their interactions.

Another participant highlighted the need to focus on public service campaigns to dispel the myth that gambling is always a harmless behavior.

Adults don't understand the effect on children. Parents hold poker parties in their basements and let the kids play. They think that's perfectly OK. The law doesn't hold parents accountable. Law enforcement would never arrest a parent for hosting a poker party for teens like they would if there were drugs and alcohol.

Participants suggested that the social acceptance of gambling as harmless entertainment makes it more difficult for families to seek help, because gamblers are viewed as "weak" rather than suffering from a disorder. Such attitudes also serve as a barrier to enlisting family support in counseling situations. This is particularly troublesome, said a few participants, in ethnic groups where gambling is a part of the culture and problem gambling is viewed as a shameful and self-indulgent excess rather than a legitimate mental health issue.

Group members indicated that more research is needed regarding attitudes toward gambling, techniques for enlisting family involvement in treatment, strategies for minimizing stigma, and education for communities on the dangers of excessive gambling and the place of pathological gambling among addictive disorders. In addition, participants emphasized the need to identify roles within the gambling family, analogous to those in the field of substance abuse, in order to develop profiles to guide family-centered treatment based on system dynamics that commonly occur in families of problem gamblers.

Considerations for Youth
Across focus groups, participants expressed concern for the future generation of youth who are growing up in a gambling culture. In one group, a participant suggested that there is a "lax" attitude toward gambling in schools, particularly among teachers, who

walk by students gambling for money in the cafeteria without mention and school administrators who sponsor poker and casino nights, bingo, and other gambling-related activities as a way to raise funds. Unfortunately, noted participants, these activities are not accompanied by education for parents, students, teachers, and administrators regarding the signs and symptoms of problem gambling, the principles of informed choice for gambling responsibly, and the dangers and penalties for underage gambling. Though school counselors routinely screen for substance abuse problems, one participant noted, few counselors screen for gambling problems. Therefore, it is unknown what percentage of school-age youth actually struggle with problem gambling concerns or live with parents who are problem gamblers.

Participants across groups recommended that research is needed to develop evidence-based prevention and education programs for youth. One member commented that there currently exist several gambling-related curricula, designed for middle and high schools worldwide; however, there is little empirical support demonstrating that these programs are effective in decreasing the prevalence or incidence of problem gambling among youth. In addition, few schools routinely offer problem-gambling related programs or content within the standard curriculum.

Group members offered several suggestions for projects to address gambling education in schools including:
- Highlighting problem gambling as a public health concern in health class;
- Promoting educational materials and programs for parents and teachers to raise awareness regarding gambling problems;
- Initiating youth prevention clubs on college campuses to sponsor activities like youth forums where students give speeches on problem gambling;
- Creating well-publicized peer-support networks for high school and college students who may have or know of someone who has a gambling problem;
- Sponsoring public service announcements and other media campaigns, aimed at educating families about gambling-related issues;
- Developing school-sponsored intervention teams to assist families with problem gamblers.

Treatment Effectiveness and Uniformity

The need for standardized, evidenced-based treatments emerged as a significant discussion topic in the focus groups. Participants generally agreed that, while most states with legalized gambling offer some subsidized counseling, there is currently no "gold-standard" treatment protocol. Several studies have supported the relative effectiveness of cognitive behavioral therapy (CBT), however, participants noted that CBT is a modality that can differ widely in its administration depending on the education and sophistication of the treatment provider. In addition, few states with subsidized treatment conduct routine outcome evaluation of services to determine whether or not treatment is effective over time (i.e. at 6 months, 1 year). One participant asked: *"How do we know what we're getting for our dollar?"* Group members highlighted the importance of developing scientifically-validated, manualized treatments for use in state-sponsored treatment

programs. Such programs could be evaluated routinely for effectiveness and modified based on client feed-back.

Focus group participants also suggested that research is needed to expand treatment options beyond individual CBT to multi-modal approaches; for example, brief, motivational interventions could be offered through the gambling helpline or internet in order to reach a wider population of gamblers who would not ordinarily access treatment services because of geographical or other limitations. Said one group member:

> *How do we move someone from a call to the helpline into treatment? We either have no place to send them or the clients don't show up. We should have follow-up studies to the helpline – Why didn't the person go? How many calls does it take before they take the first step? Could we treat people by phone? We also need to develop web-based services. Often the first line of defense is the internet. What means of information and service delivery are most effective in reaching people?*

In addition, two participants indicated it is important to develop pharmacotherapy protocols for psychiatrists and other medical professionals to use in practice. One member said that gamblers will often tell their doctor first about a gambling problem because they are depressed or having trouble sleeping as a result. She added that, currently, doctors receive no specific training in medication protocols tailored to the needs of problem gamblers. Such protocols should be standardized and widely disseminated at medical schools and conferences and in the scholarly literature so that they become the common standard of practice.

In addition to multi-modal approaches and pharmacotherapies for problem gamblers, group participants stressed the need to provide culturally-competent treatment to sub-groups of problem gamblers. In particular, the focus groups identified the needs of women, older adults, cultural minorities, and individuals with disabilities as groups most underserved by current treatment protocols. Commented one participant:

> *Asian communities, for example, think of gambling as a bad habit. It's a moral problem. They treat it as a cancer that is incurable. How do we frame public awareness programs to impact people culturally so they will access treatment? How do we tailor treatment to counter or address those attitudes?*

Another participant added:

> *Among Latinos, we see higher rates of substance abuse among second and third generation immigrants, largely because the first generation has less disposable income and is sending money back home. Down the road, will we see more or less problem gambling among Latino populations? What are the risk and protective factors? How do these change as people*

acculturate, and how can we account for them in our treatment approaches?

Group participants raised several additional considerations for future research into treatment-related issues including:

- Strategies to motivate gamblers to access services and remain in treatment.
- The relative effectiveness of controlled gambling versus abstinence: Which clients benefit from which approach?
- The need for audio-visual aids for treatment, particularly for youth.
- The need to develop community-based education programs and campaigns, similar to those for tobacco and cervical cancer, that actively involve community groups and faith-based organizations.
- Sequencing treatment for gamblers with co-occurring disorders: Do we treat all disorders together or sequentially? Does that depend on the disorder?

Finally, participants in all groups stressed the need for longitudinal outcome studies for all aspects of treatment services to determine which approaches work best over time.

Factors in the Gambling Environment

Both survey respondents and focus group participants identified the influence of the gambling environment on problem gambling as significant area in need of research. Focus group participants underscored the need for more research in the area of machine features, largely because many were treatment providers who encountered cognitive distortions, dealing with machine features and other environmental factors.

Several participants suggested that a majority of clients in treatment have problems with gambling machines, but little is known about which features actually contribute to "luring" people to gamble more than they should (i.e. clocks, bill acceptors, spin speed etc.). Participants stressed that states with legally-sanctioned machines should fund research to determine which features most contribute to problematic play and, subsequently, should enact regulations that limit problematic features. They indicated that states should also commission independent agencies to develop informational brochures on the workings of machines to dispel irrational cognitions that are due to a lack of education. In addition, participants stated that research is needed regarding the effect of 24-hour gambling versus more limited hours of operation on the development of problem gambling. Group members also stressed the need to explore the effect of the ready availability of ATMs and other forms of credit on impulse gambling and the need for states to develop limitations to ensure gamblers who want to access additional money while in a "hot" state have ample time to "cool down" and make an informed decision.

Social Costs

In response to Question 3, a majority of the group members indicated that future gambling funding depends in large part on the acquisition of sound economic data on the social costs of problem gambling to individuals, communities, and society. To date, such

estimates have been methodologically flawed, based on small sample sizes and/or economic formulas predicated on assumptions that are subject to challenge.

Participants indicated that it will be important to undertake rigorous scientific research, similar to research in the area of tobacco control, to demonstrate a causal connection between problem gambling and various social costs. Said one participant:

> *It all comes down to a cost-benefit analysis.   Unemployment, suicide, bankruptcy, domestic violence, divorce, health and mental health care costs, costs of incarceration and homelessness... We need to be able to show dollar costs compared to dollar benefits through economic projections.*

Governmental Responsibility

Participants were unanimous in asserting that, because state governments profit significantly from legalized gambling, they have an ethical duty to invest in prevention, education and treatment for problem gambling. Currently, however, most states continue to expand legalized gambling without apportioning a percentage of the profits to research, prevention, and treatment of problem gambling. One participant noted that, unlike in some other countries, the gaming industry in the U.S. has provided the bulk of the meager research funding. Instead, funding should be provided by federal and state governments who are in the best position to drive an public health-based research agenda and to ensure that research is not only peer-reviewed but independent of positive or negative perspectives on legalized gambling.

Even in states with problem gambling funding, noted one participant, the funding is not secure because it is not provided through a dedicated revenue stream. Rather, the funding typically flows through the general fund where it can be used for other programs, including subsidizing chemical dependency treatment. In addition, very few states with problem gambling funding dedicate any of the money to research. For that reason, it is very difficult in times of budget-tightening to fend off cuts to problem gambling programs, because there is no empirically based evidence of the effectiveness of prevention and treatment programs on minimizing harm or decreasing problem gambling.

Several participants suggested that any future expansion of legalized gambling should include a dedicated percentage specifically for problem gambling-related research, treatment, and prevention. In addition, though gambling is legislated on the state level, one participant noted that the federal government earns substantial revenue from the income taxes on gambling winnings and should, therefore, provide funding for gambling research at parity with research for drugs and alcohol. Optimally, federal and state governments would coordinate efforts to provide a comprehensive, strategic plan for addressing problem gambling without duplicating efforts.

Two participants suggested there should be one designated agency for all addictive disorders, rather than independent institutes with a narrow and exclusive focus. In addition, grant solicitations should encourage studies that include multiple addictions, including gambling.

Said one group member:

> *States are asking: What are the opportunity costs of spending money on gambling research and prevention that could be spent somewhere else? We have to show not only the good things that come from investing in gambling research but also how that knowledge contributes to other addictions. They don't have to be mutually exclusive. There are things we can learn about gambling and chemical addiction at the same time. Once legislators begin to realize that, they'll be more willing to include gambling in addiction initiatives rather than limiting those initiatives exclusively to substance abuse.*

Another participant agreed:

> *We need to hook gambling into existing research goals around public health issues and specific priority areas in NIH institutes. Gambling needs to be related to the mainstream addictions framework, so it doesn't look like such a narrow field and becomes everyone's issue. We don't have to reinvent the research programs, just make them available with existing dollars.*

Several participants suggest that the future of gambling research funding will come down to advocacy:

> *We need a champion. Someone highly visible and passionate who won't back down. Congress responds to obvious needs from constituents. How do we get family members and others in recovery to stand up? Families need to go to the legislature.*

SUMMARY

The present study suggests that the future of gambling research will require state and federal officials to allocate designated funding and to prioritize problem gambling issues at parity with other addictive disorders particularly substance abuse. In addition, it is necessary to establish a clear, longitudinal framework for research that systematically investigates important questions based on multiple facets of key issues in a rigorous and scientific way. Suggested research questions and/or studies to guide future research initiatives, generated by both survey and focus group participants, are provided in Appendix A.

Overall, treatment-related topics were highlighted by internet study as well as focus group participants as the highest research priority area, followed by issues related to responsible gambling and special populations. Participants in the study were particularly concerned with the need to develop evidenced-based, standardized, multi-modal treatments that could be systematically implemented across settings and jurisdictions and tailored to the needs of specialized sub-groups. Likewise, they stressed that research should focus on initiatives that promote informed choice, both for gamblers in their decision-making related to continued play and for legislators in identifying areas deserving of harm reduction regulation. A summary of topic and sub-topic areas by overall rank are provided in the Table 13.

TABLE 13. OVERALL PRIORITY RANKING OF TOPIC AND SUB-TOPIC AREAS (N=199)

Topic Area by Rank	Sub-Topic Area by Rank
1. Treatment Issues	(1) Improving Treatment Attendance and Service Utilization (2) Developing Manualized Treatments (3) Addressing Comorbidity
2. Responsible Gambling	(1) Promotion of Informed Choice (2) Influences of the Gambling Environment (3) Industry Marketing and Promotion
3. Special Populations	(1) Youth (2) Racial and Ethnic Minorities (3) Individuals with Comorbid Psychiatric Disorders

4.	**Classification and Measurement**	(1) Sub-groups and Sub-Types of Problem Gamblers
		(2) Prevalence
		(3) Defining and Measuring Problem Gambling
5.	**Personal and Familial Impacts**	(1) Depression, Suicidality and Other Mental Health Consequences
		(2) Children of Problem Gamblers
		(3) Gambling-Related Family Violence
6.	**Etiology**	(1) Risk and Resiliency Factors
		(2) Family and Social Influences
		(3) Bio-Behavioral Aspects of Impaired Control (tie)
		(3) Brain Reward Systems (tie)
7.	**Internet**	(1) Internet Gambling
8.	**Legal and Financial Issues**	(1) Gambling Courts and Court-Sponsored Programs
		(2) Gambling-Related Crime
		(3) Economic Impacts of Gambling on Communities (tie)
		(3) Debt and Debt Management (tie)

The study has obvious limitations, including a subjectively-selected expert sample and a convenience sample of conference participants who registered on-line with a valid email address and, subsequently, chose to access the survey or attended the focus groups at the conference. However, this project is the first to provide a detailed summary of problem gambling research priorities in the U.S. from the perspective of a sizeable sample of diverse stakeholders. To that end, the findings should provide a useful template for establishing an ongoing research agenda that expands empirical knowledge in the area of problem gambling.

CLASSIFICATION AND MEASUREMENT	

Sub-Groups and Sub-Types of Problem Gamblers	• Are particular gambling activities differentially related to the development and maintenance of problem gambling?
	
	• Do binge (episodic) gamblers become pathological gamblers?
	   o What is the course of disorder among episodic gamblers?
	   o Do these gamblers fit within existing diagnostic criteria?
	
	• Should diagnostic classification of sub-clinical problem gambling parallel the classification in substance abuse that provides for both dependence and abuse categories?
	   o We need to develop a clear, sub-threshold classification system, adopted in the DSM-V, to provide uniform categorizations for problem gamblers.
	
	• What risk factors are most predictive of problem gambling by sub-group?
	
	• What intervention strategies are most effective at mitigating problem gambling by sub-group?

Defining and Measuring Problem Gambling	• Which risk factors can be targeted and minimized by specific intervention strategies? • How do we measure "recovery"? How do we measure it based on specific interventions? For each point on the problem gambling spectrum? • How do we determine the success of a public awareness effort for helplines, formal treatment, and/or prevention and workforce development programs? • Which factors in treatment are most related to preventing relapse and sustaining recovery over time?
Prevalence of Problem Gambling	• What is the effect of legalized gambling on the prevalence of problem gambling over time? Will it increase?

	• What is the prevalence of problem and pathological gambling among specific groups (e.g. age, sex, education, job, marital status, socio-economic status, ethnicity, rural vs. urban, etc.)? • What are the long-term social costs (i.e. bankruptcy, crime, suicide, foreclosures) of problem gambling? o We need a longitudinal survey examining these factors from the inception of legalized gambling over a period of years.
Incidence of Problem Gambling	• What are the increases in costs related to divorce, litigation, incarceration, bankruptcy, lost savings and pension, etc. due to new problem gamblers each year? • Are gambling-related problems static or chronic? How do they change over time? • How do we differentiate prevalence from incidence? What happens between prevalence studies – Do gamblers or recover or simply run out of money? Do previously abstinent gamblers re-enter the gambling progression?
Other	• Could advances in brain research differentiate different sub-groups of problem gamblers across levels of problem severity?
LEGAL AND FINANCIAL ISSUES	
Debt and Debt Management	• What strategies will best help gamblers manage debt and overcome hopelessness and frustration related to the consequences of their gambling? • How do gamblers manage debt while continuing to gamble? What techniques do gamblers use to shift finances to allow them to keep gambling? What policies could best "shore up" these loopholes? • What legal mandates are needed to address predatory lending and/or credit practices that contribute to problem gambling (e.g. payday loans, casino credit, ATMs in venues etc.)?

	• What is the role of family members in debt management? o We need to develop debt management protocols that include families.

Gambling Courts and Court-Sponsored Programs	• How can we best educate judges on identifying and addressing gambling related crimes in sentencing?
	
	• How can courts address gambling-related crime as they have addressed drug offences?
	    o We need to develop models for court diversion programs that utilize a framework of treatment and peer support services.
	    o We need to expand drug court services to incorporate problem gamblers.

Gambling-Related Crime	• What is the long-term effect of new legalized gambling venues on the incidence of gambling-related crime? • What framework would best assist police and probation officers, attorneys, and court officials in identifying and addressing gambling-related crimes from the time of initial arrest through release? • What programs would best assist counselors in dealing with gamblers with legal issues (e.g. bad checks, embezzlement)? o We need education for counselors and clients regarding management of debt and gambling-related crimes.
Economic Impacts of Gambling on Communities	• What are the economic costs of gambling to the community and society at the state and national levels (e.g., gamblers, families, communities, businesses, and criminal justice, health, mental health, social service, and other systems?) What are the lost opportunity costs? • What is the impact of incremental expansions in types of gambling on communities? • We need longitudinal studies at various levels (micro, mezzo, macro) and time intervals before and after gambling expansion.

Other	• What legal protections on the state and federal levels are necessary to protect families from the financial and legal consequences of excessive gambling by one family member?
	• What is the prevalence of gambling in prison and what effect does the behavior have on recidivism, criminality etc.?

| **Personal and Familial Impacts of Problem Gambling** |

Gambling-Related Family Violence	• What is the prevalence of gambling-related family or domestic violence? Who is affected most?
	• How can treatment providers best screen for and treat gambling-related violence? What are the implications of addressing violence on treatment outcomes?
	• What prevention and treatment programs (e.g. anger management, family therapy) should be developed to address this issue?

Children of Problem Gamblers	• How does problem gambling in families affect the emotional and mental development of children?
	• What parental factors (i.e. attitudes, habits, gambling or other addictive practices) contribute significantly to the development of problem gambling in children?
	• What are the most significant risk factors for the development of problem gambling in children of problem gamblers?
	• What is the impact of parental education and communication regarding gambling limit-setting, risk taking etc. on the development of gambling problems in children?
	• What factors variously impact the development of gambling problems in children (e.g. gambler in versus out of the home, age of child when gambling became a problem, etc.)?

	• What problems do adult children of problem gamblers encounter as a result of their upbringing with a gambling parent (e.g. addictions, mental health issues, etc.)? • Do similar or different roles exist in gambling families as compared to those in families of alcoholics?

Depression, Suicide, and Other Mental Health Consequences	• How can we develop a uniform, systematic framework of services from intake through follow-up for clients and their families that address all mental health needs of problem gamblers?
	     o We need to develop a standardized screening for depression, suicide, and other mental health disorders for use across treatment settings.
	
	 • What is the prevalence of suicidal ideation/attempts, depression, etc. caused by problem gambling?
	
	 • What is the prevalence of comorbid depression, suicidality, anxiety etc. among problem gamblers?
	     o How do these rates differ based on whether the disorders preceded or followed the onset of problem gambling?
	
	 • How do the systems that involve the gambler contribute to or exacerbate mood disorders and suicidality?
	     o Which factors in which systems have a protective effect?
	     o How can we develop systematically-based interventions to decrease the incidence of gambling-precipitated suicidality and/or mood disorders and reduce harm of pre-existing disorders?
	
	 • What is the incidence of gambling-precipitated mood disorders and suicidality?
	     o We need to develop education programs for all mental health counselors to address comorbidity among these disorders.
	
	 • What is the effect of a problem gambler in the family on the development of mood disorders and suicidality in spouses and children?
	     o We need to develop treatments and assessments that include identification of these factors in family members.

Physical Health Considerations	• How can we best identify individuals with gambling-related health problems in primary care settings? o We need to educate physicians, social workers, nurses etc. in the identifications of clients who are either coping with health problems by gambling or experiencing health problems as a result of the stresses of problem gambling.
Other	• What role does the availability of bailouts (e.g. family, Pay Day Loan etc.) play in the severity and duration of problem gambling behavior? • Who are the enablers of problem gamblers? How do gamblers manipulate others to obtain repeated bailouts? • How do we address and minimize the stigma involved in problem gambling to increase the likelihood that gamblers and families will access help?

INTERNET AND OTHER NEW TECHNOLOGIES

Internet Gambling	• Are youth who are accustomed to technology and isolation in a virtual world more likely to develop problems with internet gambling? • What is the prevalence and incidence of internet gambling by age group? • Can governments develop ways of policing underage gambling on the internet? • Does the progression of problem gambling (e.g. chasing) differ when gambling on the internet or in other venues? If so, how?

SPECIAL POPULATIONS

Youth	• What factors contribute to the development of problem gambling in youth? • What protective factors could colleges put in place to decrease the incidence of problem gambling on college campuses?

National Research Priorities for Problem Gambling

	• What is the best method of reaching and positively influencing youth to reduce the development of gambling problems? • What is the effect of the promotion of gambling by schools (e.g., charitable bingo, poker or casino night) on the development of problem gambling in youth? • Which treatment modalities are most effective for problem gambling among youth? • Which gambling-related curricula are most effective in providing informed choice information without encourage youth to gamble? • What is the link between delinquency and youth problem gambling?

Women	• What is the prevalence among women of problem gambling and other co-occurring disorders?
	   o Are the risk factors for developing comorbid problems the same as for men?
	   o What is the temporal sequence of development of comorbid disorders (i.e., What comes first? Does one disorder lead to another?).
	   o How do these factors differ by age, ethnicity, marital status, sexual orientation, etc.?

Older Adults	• How do those who begin gambling later in life differ from those who gamble at a younger age? • Does the course of gambling disorder differ for older versus younger adults?
Racial and Ethnic Minorities	• Is there an increased risk of gambling problems among certain minority groups? Which ones? What factors contribute to increased prevalence? • What are the unique risk/protective factors for specific groups (Asians, African Americans, Native Americans, etc.)? • Are specific sub-groups within minority groups more affected than others (e.g. disabled, older, single females etc.)?

	• How can we customize treatment to better fit the needs of individual minority clients?
Individuals with Comorbid Psych. Disorders	• What is the prevalence of comorbid pathological gambling and individual psychiatric disorders? • Do different psych meds affect (increase, decrease) gambling behavior differently? What is the best treatment for different combinations of disorders? • How do comorbid disorders develop? What comes first? How are they best addressed? • What is the role of anxiety and depression in the development and maintenance of problem gambling?
Other	• How does acceptance and perception of gambling vary by cultural group? How do these differences variously affect the development and maintenance of problem gambling in those groups? • What is the prevalence of problem gambling among the developmentally disabled? What types of gambling are particularly problematic? What protective policies could we put in place to safeguard their income and provide education?
	TREATMENT ISSUES
Family and Couples Counseling	• What techniques are most effective in engaging families and spouses in therapy? • What effect does including families in treatment have on the ultimate "success" of maintaining recovery and avoiding relapse?
Developing Manualized Treatments	• How can we best incorporate multi-modal approaches to problem gambling assessment and treatment into a standardized framework? • What combination of motivational interviewing and specific treatment modalities is most effective in retaining gamblers in treatment and maintaining recovery?

	- We need large-scale, longitudinal studies to evaluate effectiveness of specific treatment approaches and components. - We need to develop standardized treatments that incorporate outcome evaluation of treatment outcomes, participant feedback, treatment of comorbid disorders. - We need to develop "best practices" for gambling treatment.
Addressing Comorbidity	• What is the interrelationship among psychiatric conditions comorbid with problem gambling and what is the best approach to treatment? - We need treatment protocols that address the best way to treat all comorbid disorders. Should we treat disorders at the same time or in stages? • What is the prevalence of "addiction shifting" (i.e., moving from one addiction to another) and how can treatment best address this? What are the most common addiction shifts for problem and pathological gamblers? • Are different treatments more effective for particular types of comorbid disorders? • How can we best simultaneously assess problem gamblers for comorbid conditions? - We need to develop strategies for intervening at optimal times with comorbid clients. - We need to develop comprehensive assessments for identifying the most prevalent comorbid conditions and evaluating those clients for decreases in or elimination of all maladaptive behaviors. • What is the rate of under-diagnosis of conditions like bipolar disorder or ADHD in problem gambling? What is the effect, if any, on problem gambling of medicating those conditions?
Improving Treatment Attendance and Service Utilization	• Is motivational interviewing effective at increasing treatment attendance? We need best practices standards for MI, retention strategies etc.

	• What is the relative efficacy of in-patient versus intensive outpatient or outpatient-only treatment for problem gambling?
	• What factors increase a client's desire and willingness to commit to treatment?
	• What qualities of a treatment provider, if any, are more highly correlated with increased treatment attendance and/or sustained recovery?
	• Is a harm reduction approach to treatment more effective than an abstinence-based approach in retaining gamblers in treatment?
	• Why don't more problem gamblers seek treatment? What are the primary barriers and how can they best be addressed? What factors attract gamblers to treatment?
Self-Help Groups	• How does the process of the 12-steps contribution to reductions or cessations in gambling with or without formalized treatment? Does this differ by demographic factors or gambling preferences?
Natural Recovery	• What are the primary factors that lead to natural recovery?
	• Is natural recovery sustained over time? Or is there "addiction shifting"?
Brief Interventions	• Which brief interventions are most effective at decreasing problem gambling? How long do the changes last versus traditional forms of therapy?
	• How effective are brief interventions delivered via internet and/or phone in decreasing problem gambling over time?
Telephone and Helpline Services	• What is the relative effectiveness of distance counseling (telephone, internet) versus face-to-face counseling? Are distance modalities more effective for certain sub-groups of the problem gambling population?

Psychopharmacology	• What medications best address various aspects of impaired control in problem gamblers? Can we establish a medication protocol for problem gambling with or without comorbid conditions like ADHD, bipolar disorder, depression, etc.?
Other	• What treatment modality is the most effective in decreasing problem gambling? • How do non-traditional therapies like art and/or expressive therapy compare to the effectiveness of CBT and other forms? • What are the long-term outcomes of various treatment modalities with different populations of gamblers? o We need longitudinal treatment-outcome studies. • Which culturally-specific factors should be included in treatment protocols to improve outcomes for various groups? • What are the mechanisms for change (i.e. moving clients from one stage to the next) and how are these best operationalized in standardized treatments? • How can we standardize counselor competencies to ensure that gamblers are receiving the most effective, evidenced-based treatment available?

ETIOLOGY (ORIGINS OF PROBLEM GAMBLING)

Brain Reward Systems	• What neural mechanisms underlie problem gambling and how can we use those mechanisms to identify those most at risk for developing gambling problems? • How does neurotransmitter activity and/or brain function differ among problem gamblers, substance abusers and/or those with other addictive disorders?
Bio-Behavioral Aspects of Impaired Control	• What are the mechanisms of impaired control and what is the optimal psychiatric management of impaired control?

National Research Priorities for Problem Gambling

	• How does treatment differ when pathological gambling is viewed as a process addiction?
Family and Social Influences	• What is the effect of early exposure to gambling on the subsequent development of gambling problems?
	• How do parental attitudes toward gambling (e.g. acceptability versus contempt) affect the development of gambling problems in youth?
	• What is the effect of early childhood trauma on the development of gambling problems?
Risk and Resiliency Factors	• What are the primary risk factors for developing gambling problems?
	• What are the developmental pathways from late childhood and early adolescents into adulthood that are most likely to result in problem or pathological gambling behavior?
	• What are the distal and proximal risk and resiliency factors in the onset and development of problem and pathological gambling?
	• What factors influence the move from social to at-risk to pathological gambling?
	• What protective factors mitigate against developing a gambling problem in those who are otherwise at-risk?

RESPONSIBLE GAMBLING AND HARM REDUCTION STRATEGIES

Self-Exclusion	• How effective is self-exclusion in decreasing problem gambling?
	• Are certain terms of exclusion (e.g., lifetime, five years) more effective than others?
	• Is self-exclusion more effective for some sub-groups compared to others?

	• How could we best utilize self-exclusion as one of several gateways to triage gamblers into a network of treatment-related services?
Machine Features	• What machine features are most highly correlated with the development or maintenance of gambling problems? • What is the effect of particular features (e.g., bet size, reel spin, bill acceptors) on gambling losses?
Industry Marketing and Promotion	• What, if any, game-related information would best contribute to gamblers making better informed choices? • What is the effect of general industry marketing and promotion on the initiation of youth gambling? Can this effect be minimized by harm reduction prevention programs? • What targeted marketing strategies most contribute to increased and/or continued gambling among problem gamblers?
Influences of the Gambling Environment	• Can elements in the gambling environment be manipulated to decrease problem gambling? • Which machine and/or environmental factors most contribute to the initiation and maintenance of problem gambling?
Promotion of Informed Choice	• What elements of information are necessary for individuals to make healthy and responsible gambling choices? • What impact, if any, do casino-sponsored responsible gambling policies have on individual decision-making (i.e., setting limits, avoiding cash machines)? • What are the most effective strategies for conveying information across gambling sub-groups and across levels of problem severity?
Other	• How can income from gambling revenue best be reallocated to strengthen communities as well as to generate profit?

- o We need socio-ecologic, cultural analyses of gambling environments and their effects on different populations of gamblers to inform the development of community-based programs.