Center Staff

Christopher Welsh, MD, Medical Director
Robert White, LCPC, Director
Lori Rugle, PhD, NCGC II, Program Director
Kathleen Tracy, PhD, Research Director
Patrick McArdle, PhD, Associate Director of Research
Carl Robertson, MRE, MDiv, Prevention Manager
Michael Rosen, MSW, LGSW, NCGC I, Network Development and Helpline Coordinator
Donna Gaspar, Program Administrator

Affiliates

RESEARCH
Amelia Arria, PhD
Marie Bailey-Kloch, MSW, LCSW-C
Ivonne-Marie Berges, PhD
Julie Brownley, PhD
Brittany Bugbee, BA
Kimberly Caldeira, MS
Yuching Cheng, PhD
Anna Cohen
John Cole, MD
Patricia Dischinger, PhD
Nancy Ellish, DrPH
Kevin E. O’Grady, PhD
Lynn Grattan, PhD
Deborah Greenberg, MA
Shiu Ho
Sailor Holobaugh, MPH
Seth S. Himelhoch, MD, MPH
Samir Jafri, PhD
Nancy Knight, PhD
Julie Kreyenbuhl, PhD
Wendy Lane, MD, MPH
Lauren Levy, JD, MPH
Deb Medhoff, PhD
Christopher Meenan
Haley Miles-McLean, BA
Braxton Mitchell, PhD
Amber Million-Mrkva
Denise Orwicg, PhD
Jigar Patel, MD
Wendy Potts, MS
Lily Jarman-Reisch, MSW
Geoffrey Rosenthal, MD, PhD
Diane-Marie St. George, PhD
Nicholas Schluterman, PhD
Paul Sacco, PhD
Gordon Smith, MB, ChB, MPH
Kathryn B Vincent Carr, MA
Robert Wachbroit, PhD
Owen White, PhD
Teresa Yates

PUBLIC AWARENESS
MedSchool Maryland Productions
Susan H. Hadary
Producer
University of Maryland School of Medicine
John Anglim
Producer
Heather Filtz
Outreach Director
Maryland Council on Problem Gambling
Deborah Haskins, PhD, LCPC, NCGC II
President
Michael Hundt
Executive Director

POLICY
University of Maryland School of Medicine, Center for School Mental Health
Sharon Hoover Stephan, PhD
Co-Director
Nancy Lever, PhD
Co-Director
Kelly Dunn, LCSW-C
MH Counselor
Christina Huntley, MS
Coordinator
Sylvia McCree-Huntley, MS
Training Manager

National Council on Alcoholism and Drug Dependence of Maryland (NCADD-MD)
Nancy Rosen-Cohen, PhD
Executive Director
Susan Pompa
Associate Director
Ann T. Ciekot
Partner, Public Policy Partners

PREVENTION
University of Maryland School of Medicine, Center for School Mental Health
Sharon Hoover Stephan, PhD
Co-Director
Nancy Lever, PhD
Co-Director
Kelly Dunn, LCSW-C
MH Counselor
Christina Huntley, MS
Coordinator
Sylvia McCree-Huntley, MS
Training Manager

Athena Cymrot, JD
Fellow, Network for Public Health Law, Eastern Region

Kerri Lowrey, JD, MPH
Deputy Director, Network for Public Health Law, Eastern Region

Kathleen Hoke, JD
Law School Professor, Director, Network for Public Health Law, Eastern Region, Director, Legal Resource Center for Public Health Policy

Kerri Lowrey, JD, MPH
Deputy Director, Network for Public Health Law, Eastern Region

Athena Cymrot, JD
Fellow, Network for Public Health Law, Eastern Region
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The second year of the Maryland Center of Excellence on Problem Gambling (The Center) saw tremendous growth and renewed commitment. A major area of growth occurred in the research domain, with researchers from the Department of Epidemiology and Public Health formally joining The Center. The new Research Program in Gambling focuses on the broad impact of expanded legalized gambling across the domains of prevention, surveillance, addiction, monitoring and evaluation, impact and vulnerable populations. Additionally, a new director of The Center, Lori Rugle, PhD, was named in the second year, bringing a renewed commitment to the vision of its founding Director, Joanna Franklin, of promoting healthy and informed choices regarding gambling and mitigating the impact of problem gambling. In order to accomplish its mission, The Center engaged in activities in six major domains:

**PUBLIC AWARENESS** The use of documentary material and community developed messages presented in multi-platform media campaigns (websites, YouTube channels, billboards and TV and radio PSA's) were key features of The Center’s public awareness efforts in FY14. These campaigns contributed to a nearly eightfold increase in activity on The Center’s websites over the previous year from 7,000 to over 54,000 visits. A major event held during Problem Gambling Awareness Month was the premier of the documentary film, *Understanding Joy: The Devastation of Gambling Addiction*. The Center developed community awareness materials with guidelines for keeping gambling safe and affordable in line with a more positive health promotion message. The Center participated in a range of community fairs and events and continued to be a resource for news media.

**PREVENTION** The major prevention activity for FY14 was the piloting of the Maryland Smart Choices youth gambling prevention program in seven Baltimore City schools for students in grades 5, 7, 8 and 12. The Smart Choices program was implemented as a collaboration between The Center and The Center for School Mental Health of the University of Maryland School of Medicine. An evaluation was conducted to assess the program’s effectiveness in increasing student knowledge and awareness of problem gambling. Results of both student and staff evaluations contributed to enhanced content to be implemented in FY15.

**TRAINING AND EDUCATION** A key goal of The Center in FY14 continued to be to build the capacity of counselors in Maryland to competently provide clinical services for individuals coping with gambling problems. To this end, an intensive problem gambling training series was conducted with 21 days of problem gambling specific training during FY14. An additional 18 educational sessions were provided in response to specific requests by a variety of organizations and agencies. Across both FY13 and FY14 a total of 1,393 unique individuals have attended The Center’s intensive problem gambling training series. Additionally, across both years, all Center educational activities have had over 6,000 attendees.

**TREATMENT AND INTERVENTION SERVICES** During FY14, The Center focused on new initiatives to improve and monitor problem gambling services throughout Maryland with the focus on increasing consistency and effectiveness of interventions and accuracy of data monitoring and reporting. Standardized helpline procedures and data reporting protocols were upgraded and implemented allowing for greater service consistency. Helpline calls increased by over 100 calls during this year. The counselor referral list was
refined to assure a network of providers meeting standards of problem gambling counseling competency. Peer support referral staffed by The Center was added as an option to assist helpline callers in accessing and engaging in treatment services. In collaboration with the Maryland Behavioral Health Administration, baseline data for statewide screening and treatment for problem gambling in publicly funded substance use disorder and mental health programs for FY14 was reviewed and will be utilized for identifying best practices and service improvement.

PUBLIC POLICY The Center in collaboration with the University of Maryland Francis King Carey School of Law, Network for Public Health Law and NCADD-MD continued its focus on the issue of underage gambling. Several documents outlining existing state laws regarding youth gambling were developed. A major policy issue brief on the public health implications of youth gambling that provided recommendations for effective policy change to reduce youth gambling was completed. Testimony by The Center was submitted to the General Assembly on a bill imposing penalties on minors found gambling in casinos. The bill passed during the 2014 session and The Center with its law school partners has developed a strategy for disseminating information regarding the law and youth gambling to the judiciary, security and law enforcement, local health departments and other community agencies.

RESEARCH FY14 saw tremendous growth in the research activities of The Center. The new Research Program in Gambling was officially launched. The new Program is dedicated to a multi-disciplinary approach to research all facets of gambling and problem gambling behavior. Housed in the Department of Epidemiology and Public Health, the new Program includes affiliates from multiple schools on the University of Maryland, Baltimore campus. Together the affiliates advanced research on: gambling behavior in veterans, traffic impact and vehicular mortality around new casinos, risk factors for problem gambling behavior among college students, problem gambling screening in substance use disorder treatment settings, and attitudes and behavior assessment of those living within walking distance of an urban casino. The affiliates also have started state-of-the-art research reviews into relevant topics such as gambling and child mistreatment, history of child abuse and future problem gambling, imaging technology in understanding the pathophysiology of disordered gambling and gambling in the elderly.

FUTURE DIRECTIONS In FY15 The Center anticipates an increasing synergy as efforts in these six domains continue. We will focus on continuing to build the capacity of the problem gambling treatment and prevention networks through enhancing problem gambling specific services throughout Maryland with particular concentration on communities in which casinos are located. Additionally, in line with the integration of substance use disorder and mental health services in Maryland, The Center will develop model programs for integrating problem gambling as a co-occurring disorder into substance use and mental health disorder treatment and prevention programs. The potential for collaboration with the State’s expanded SBIRT (Screening, Brief Intervention & Referral to Treatment) initiatives will be explored to integrate screening for problematic gambling into primary care settings. The Center will also work with the University of Maryland School of Social Work’s enhanced SBIRT training of social work students and practicing social workers. Public awareness campaigns will continue to develop messages targeted to specific vulnerable and at risk groups with multi-platform delivery. Prevention and policy efforts will continue to address underage and youth gambling. Partnerships with community stakeholder groups such as Maryland Addictions Directors Council (MADC) and Mental Health Core Service Agency leadership will be expanded and strengthened to further define and bring attention to problem gambling public health issues. We anticipate substantial growth in The Center’s research program as the multi-disciplinary reviews and studies that have been initiated are completed and disseminated. Research and program evaluation findings will be used to inform policy issues and support evidence based services.
Fiscal year 2014 marks the second year of operation of the Maryland Center of Excellence on Problem Gambling (The Center) which resides in the University of Maryland School of Medicine. The Center, which began operation July 1, 2012, was created in response to legislation in 2008 that expanded legal gambling opportunities in the State of Maryland. This legislation authorized private licenses for video lottery terminals (VLT’s: “slot machines”) in five casino settings. Additionally, in November, 2012 through another referendum, a sixth casino was approved as well as the ability of casinos to have table games and the expansion to 24-hour gambling in Maryland. As part of the 2008 legislation a problem gambling fund was established to be administered by the Maryland Department of Health and Mental Hygiene (DHMH), Alcohol and Drug Abuse Administration (ADAA; now part of the Behavioral Health Administration, BHA) funded initially by a $425 fee per VLT, and when table games were added (end of FY13), by an additional $500 per casino table game. The fund was designated to provide support for problem gambling treatment, prevention, public awareness, helpline services and research (including a prevalence study). Subsequent funding was received from the ADAA in April of 2014 for expanded research on the public health impact of problem gambling in Maryland.

As part of this expansion, Kathleen Tracy, PhD, Research Director and Patrick McArdle, PhD, Associate Director of Research were added to The Center staff. Following the untimely passing of The Center’s founding Program Director, Joanna Franklin, Lori Rugle, PhD, NCGCII, was appointed as Program Director. Dr. Rugle, in honoring Joanna Franklin’s vision for the Center, renews The Center’s growth and commitment to excellence in the field of problem gambling.

THE GOAL OF THE MARYLAND CENTER OF EXCELLENCE ON PROBLEM GAMBLING IS TO PROMOTE HEALTHY AND INFORMED CHOICES FOR INDIVIDUALS AND COMMUNITIES.

MISSION: The Maryland Center of Excellence on Problem Gambling promotes healthy and informed choices regarding gambling and problem gambling through treatment, prevention, training and education, outreach and public awareness, research and public policy. It does so by working closely with appropriate state stakeholders and bringing together experts from a variety of disciplines including psychiatry, medicine, epidemiology, social work, law and others.
A key function of The Center is to improve the public's awareness of problem gambling and resources for help. The Center's public awareness campaigns involved three major efforts: a multi-platform media problem gambling awareness campaign in collaboration with MedSchool Maryland Productions (MMP); maintaining a website that is a repository of problem gambling information for the general public, those seeking help, health care professionals and the news media; and staffing informational booths and tables at a wide range of health fairs and conferences and media interviews.

Center Website mdproblemgambling.com

Data on website views were gathered throughout the year, to monitor demographics of visitors to the website and also to track impact of awareness activities. During FY14, The Center website had over 34,000 “clicks” which is nearly 5 times the activity as FY13. As Figure 1 shows website visits have consistently increased since July, 2012 (other than the dip in February, 2014 which was due to technical modification of Google adwords reporting). The most dramatic increase began in March and continued through the fourth quarter of FY14. This represents a 420% increase in visits compared to the comparable time period the previous year. The increase coincided with The Center and MMP's public awareness efforts beginning in March, 2014 (described below) for Problem Gambling Awareness Month (PGAM). Figure 2 depicts the comparison of total visits during FY13 and FY14 to the mdproblemgambling.com website (MDPG) and to the targeted youth (Youth) and Understanding Joy (Joy) websites and YouTube channels described below. As can be seen, the total Center's web presence increased nearly 8 times during FY14.
PUBLIC AWARENESS CONTINUED

Figure 3 presents number of web visits by age group during FY14. This follows expected patterns of internet usage by age groups. The only change in pattern of visits among age groups occurred in the fourth quarter of FY14, with the 45-54 age group showing a relative decline compared to other age groups. It should be noted, as might be expected that the over 65 age group shows significantly lower website visits. It will be important to pursue other avenues of awareness to reach the older adult demographic. In FY15 such efforts will include outreach to faith based groups and primary care practitioners.

![Figure 3](image)

Figure 3 Website Visits to mdproblemgambling.com by Age Group

Gender patterns for website visits were also tracked. Figure 4 shows that gender pattern shifted through the course of FY14. In the last quarter, female visitors to the site exceeded males.

The emphasis on advertising the documentary *Understanding Joy* during this period may have contributed to the increase in women’s participation on The Center website.

![Figure 4](image)

Figure 4 Website Visits to mdproblemgambling.com by Gender
Multi-Platform Media Campaigns

In FY14 The Center together with MMP developed two series of youth and young adult media campaigns that were implemented during March, 2014 (PGAM) and continued through the end of the fiscal year:

**TEEN PROJECT 1 – Baltimore Prom Gamble:** MMP collaborated with Wide Angle Youth Media (a community based program involving Baltimore City youth with goals of completing high school and entering college) to develop a series of short videos to be posted both on a Teen Gambling YouTube channel (Baltimore Prom Gamble) developed by MMP and on a teen specific website developed by MMP (www.baltimorepromgamble.org) addressing issues related to teen gambling. MMP producers worked with teens on script development, performance and production. Three videos were produced with the theme of gambling away money for prom night.

**TEEN PROJECT 2 – Baltimore Dice Zombies:** MMP collaborated with a group of older teens and young adults in Baltimore City who were or had been active participants in the gambling street culture of Baltimore. These young men participated in scripting, performance and production aspects of a zombie/gambling theme video. In the video, Dante is terrified as he watches his friends one by one transform into zombies as they become controlled by a game of dice. Filming also included a number of interviews with cast members who talk about the culture of dice which pervades the city and the violence associated with games. The website developed to host these videos was www.baltimoredicezombies.org which contains the zombie video, cast interviews and information relevant to gambling problems. A YouTube channel and Facebook page were also developed.

Informational flyers and handouts were developed from both teen campaigns that were utilized at community fairs and presentations.

Combined youth website and YouTube visits from March–June were over 8,700, the majority of these attributed to the Zombie sites with fairly equal distribution across the four months. Figures 5 and 6 show age and gender breakdowns. Clearly, the age breakdown shows that this campaign was reaching the age demographic that was targeted. The greater percentage of male visitors is consistent with the target demographic of adolescent and young adults who are likely to be involved with gambling or have gambling problems. Given that the Zombie sites were substantially more effective than the Prom ones, it is likely that involving youth who have experience with gambling and the culture of gambling is likely to be a more effective outreach strategy.
PUBLIC AWARENESS CONTINUED

UNDERSTANDING JOY: THE DEVASTATION OF GAMBLING ADDICTION

A second major public awareness effort of The Center in collaboration with MMP was the development and dissemination of a documentary, Understanding Joy: The Devastation of Gambling Addiction. This documentary follows Joy, a 57 year old woman whose gambling disorder led her to embezzle from two employers, leading to significant consequences to herself and her family. The story follows Joy as she awaits sentencing for her crime and struggles to explain her disease to her children, the world and herself. Nationally recognized experts address the biological, psychological and legal aspects of a gambling disorder.

The documentary was premiered on Maryland Public Television on March 19, 2014 as a highlight Center activity during Problem Gambling Awareness Month (PGAM). The premiere was preceded by billboard and radio ads promoting the show. The film was presented in three segments. During breaks, problem gambling experts from The Center as well as from the gambling industry were interviewed. Staff from The Center were also available to receive calls from viewers during and after the broadcast, 25 calls were responded to during the course of broadcast, which was more calls than had been received through the helpline in many previous months. Over 4,000 viewers watched the show. Additionally, a special showing of the documentary with discussion facilitated by Center staff was held at the Campus Center of the University of Maryland, Baltimore on March 12, 2014 as part of Problem Gambling Awareness Month activities. A similar presentation and discussion was conducted by Center staff at the American Psychiatric Association meeting in New York City on May 6, 2014. A total of 11,836 views have been registered for the Understanding Joy YouTube channel.

The documentary has been utilized as an integral part of Center clinical trainings and community presentations. Posters and other educational materials have been derived from all three projects and utilized for a range of community outreach and training activities. The documentary has been put into DVD format and has been made available to a broad range of community prevention and clinical agencies for problem gambling education.
Community Outreach

Another facet of The Center’s outreach efforts is participation in community events highlighting health, wellness and recovery. Such events enable dissemination of problem gambling awareness materials as well as provide the opportunity to engage in conversations with community members regarding the impact of gambling and assess community perceptions of gambling and problem gambling. Staff of The Center exhibited at a range of community events and conferences that had a total estimated attendance of over 3,200. Events included community health and wellness fairs as well as consumer and professional conferences. New messaging was created during PGAM that focused on keeping gambling safe and affordable and low risk gambling guidelines. Such messages switch the emphasis from a negative labeling of problem gambling to a more positive message that encourages safe and responsible gambling.

<table>
<thead>
<tr>
<th>FY 2014 Community Outreach Events</th>
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<tbody>
<tr>
<td>• B’More Healthy Conference</td>
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<tr>
<td>• Money Power Day</td>
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<tr>
<td>• University Community Health Fair</td>
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<tr>
<td>• Ft Meade Presentation to counselors and social workers</td>
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<tr>
<td>• Paul’s Place</td>
</tr>
<tr>
<td>• Baltimore City Detention Health Fair</td>
</tr>
<tr>
<td>• University of Maryland School of Medicine “Mini Med School”</td>
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</table>

Media Response

Center staff have continued to be available to respond to media requests for information on problem gambling and the impact of gambling in Maryland to expand our platform for public awareness. Recorded press interviews and televised news reports are posted on The Center’s website and YouTube channel.

Press interviews during FY14 included:

• The Washington Post
• NBC4, Washington DC
• Maryland Gazette
• WBAL TV
• The Star
• Baltimore Sun
• Channel 2 News
• WBAL Radio
• Capital News Service, University of Maryland
• WAMU 88.5 (NPR station Washington DC)
• WTOP Radio
PREVENTION

Based on national averages, it is estimated that 4 to 6 percent of youth ages 12-17 are likely to develop some level of gambling problem. Conservatively, that is estimated to be 47,000 to 50,000 Maryland adolescents. The Center’s youth prevention efforts in FY14 focused on developing and piloting the Maryland Smart Choices program. The Smart Choices program was originally developed by the Maryland Council on Problem Gambling in collaboration with Jeffrey Derevensky, PhD and Rina Gupta, PhD, co-founders of the International Centre of Youth Gambling Problems and High-Risk Behaviors at McGill University in Montreal, Canada. This program has been evaluated in the United States.

Phase 1: Maryland Smart Choices program was launched through a collaborative partnership of The Center of Excellence on Problem Gambling and the Center for School Mental Health of the University of Maryland School of Medicine. Graduate counseling students from the Center for School Mental Health were trained in the Smart Choices program, participated in the classroom sessions and helped establish the communication and school support in each of the pilot schools. Seven pilot schools located in the Cherry Hill section of Baltimore City agreed to participate. Various grade levels were chosen in order to test the program structure and content of the Maryland program. Students in grades 5, 7, 8 and 12 participated. This pilot represents the first time a problem gambling prevention program has been implemented in Maryland. The Maryland Smart Choices program consisted of an average of three classroom sessions of 45-50 minutes. There was a total of 21 classroom sessions offered, with the average attendance for each session of 26 (ranging from 11 to 36). Pre- and post-survey questionnaires were administered to the participating students to assess problem gambling awareness and knowledge. As seen in Figure 7, there was a slight increase overall in general awareness and knowledge, most of which can be attributed to gains such as understanding risks of gambling and its potential for addiction in the 5th and 7th grade groups.

Figure 7 Smart Choices Pre- and Post-Surveys (%correct) By Grade
This first phase of the pilot program was evaluated by teachers in the participating schools, the mental health counselors, The Center and Center for School Mental Health program directors. Challenges in administering the program were identified including classroom management and need for more interactive activities to maintain student engagement (particularly in older student groups). The extensive evaluation resulted in the Maryland Smart Choices being further refined with new content materials and structure. Additionally, during the summer of 2014, three School of Mental Health psychiatric interns and the staffs of both Centers evaluated existing youth gambling prevention programs and added further new content and student activities which were more in line with such programs as Strengthening the Family and Life Skills curriculums.

**Phase 2:** Based on the evaluation results of Phase 1, The Center and staff of the Center for School Mental Health plan on implementing the revised Maryland Smart Choices curriculum in FY15. Phase 2 is targeted to launch in October, 2014 and is presently scheduled to end in January, 2015.
A key function of The Center is to increase the capacity of mental health, substance use and other health care and prevention providers to address the issue of problem gambling. During this second year of operation, over 3,700 participants throughout Maryland attended some educational event provided by The Center. This is an increase of over 1,000 from the previous year.

The Center continued to provide a series of intensive structured trainings to behavioral health providers. These trainings were conducted in each of four regions of Maryland and included two train-the-trainer sessions. A total of 665 unique individuals participated in this intensive training series in FY14. Evaluations of trainings reflect a very high level of participant satisfaction with an average rating of 4.7 on a scale of 1 to 5. In FY14, 199 unique individuals obtained at least 15 hours of training through this series (which was the established minimal standard for that time period), and 31 obtained 30 hours of training which is the standard that will be implemented in FY15.
The second annual Maryland Conference on Problem Gambling was held in June, 2014 with 511 attendees which is nearly 200 above past year attendance. Nationally recognized speakers presented on Models of Statewide Problem Gambling Services, Developing a Problem Gambling Recovery Oriented System of Care, Evaluating the Impact of Gambling, and Cultural Diversity in Problem Gambling Treatment. Additionally, a “Stakeholders” meeting was held as part of the annual conference. Key policy makers, administrators and community providers were invited to this interactive session to engage in the conversation of the impact of problem gambling in Maryland.

Four additional webinars were presented by Center staff, including one sponsored by the Addiction Technology Transfer Center.

**Topics covered by webinars included:**
1. Problem Gambling Self-Help and Support Group Resources
2. Youth Problem Gambling Prevention
3. African Americans and Gambling Disorder Treatment
4. Problem Gambling: Screening, Brief Intervention and Referral to Treatment

(These webinars remain available on The Center website for ongoing education and training at www.mdcepgreview.com/webinars)

Due to their expertise in the field of problem gambling, Center staff also presented at two National Problem Gambling conferences and five state conferences outside of Maryland.

The Center continued to facilitate monthly case consultation calls to support the skills and competence of counselors to help clients address gambling problems. An average of 5-10 counselors participated on each call. Center staff also provided individual consultation on request as well as onsite agency consultation.

Plans for the next fiscal year include continuing a balance of regional and statewide intensive trainings to address basic competencies for problem gambling treatment and prevention as well as a series of advanced topic trainings to address continuing education needs of providers. Additionally, new webinars and online training options will be developed. As The Center works with specific agencies to enhance their capability to address problem gambling and the impact of gambling on recovery from substance use and mental health disorders, additional agency specific consultation and training will be offered.
TREATMENT and INTERVENTION

HELPLINE Services

The Helpline is a toll free number that offers information and referral services to individuals or their concerned others seeking help for a gambling problem. During FY14, The Center, in collaboration with the Maryland Council on Problem Gambling, continued to provide funding and oversight of problem gambling Helpline services which are available 24 hours a day, seven days a week. During the 4th quarter of this period, staffing of the Helpline was transitioned exclusively to the National Problem Gambling Helpline to allow for greater accuracy and consistency in data collection. Staff of The Center maintains oversight of Helpline functioning and assures accurate information regarding local problem gambling services and resources to Helpline counselors. To facilitate engagement with local resources, a system of “warm” transfer to or call back from a person in recovery (PIR Contact) was initiated in the 4th quarter of the fiscal year.

Figure 9 shows there were over 100 more calls to the Problem Gambling Helpline in FY14 than in FY13.

Ages of Helpline callers overall remains relatively consistent over the past two fiscal years. Figure 10 shows the majority of callers remain in the 35-54 age range in both years.
Relative percentages of male and female callers reversed between the first quarter of FY13 (female, 60.9%; male, 39.1%) and the first quarter of FY14 (female, 41.3%; male, 58.7%). This significant shift coincides with a significant decrease in Helpline callers reporting casino slot machines as their primary gambling problem and a more gradual increase in callers reporting table games as their primary problem. It is of interest that these changes also occurred in conjunction with the introduction of table games at Hollywood Casino in March, 2013 and Maryland Live in April, 2013.

In general, relative numbers of callers of different ethnicities are consistent with population percentages of these ethnic groups in Maryland. It should be noted that the two significant spikes in African American callers coincide with public awareness campaigns that specifically targeted that group — the “Minority Outreach Campaign” in the 4th quarter of FY13 and the Baltimore Zombies campaign at the end of the 3rd quarter of FY14.
TREATMENT and INTERVENTION CONTINUED

Information displayed and provided at casino locations continues to be the primary source for Helpline callers to obtain information about Helpline services. However, in FY14, internet sources of information increased and exceeded lottery venues. Other sources of information remained relatively low by comparison, although it should be noted that there was an increase in brochures, billboards and newspapers as sources of learning about the Helpline.

Peer Support Recovery

Peer support as a part of a Recovery Oriented System of Care has been shown to be a part of the continuum of addiction and mental health services that improves treatment engagement, retention and outcome. Therefore, The Center implemented the option offered to Helpline callers of talking to a person in recovery who is also a member of The Center staff. The goal of this intervention is to help transition the caller into community based self-help or problem gambling counseling services. The newly implemented peer support option became an increasingly chosen option during the last quarter of FY14, with 40 Helpline callers being contacted by Center recovery staff.

Counselor Referral List

In order to assure adequate counseling resources and to provide quality assurance for those seeking help for gambling problems, minimal competency requirements were established to develop a referral list of counselors who had completed training in problem gambling assessment and treatment. During FY14, 75 individual counselors were included in this list, representing 60 agencies throughout Maryland. Referral resources for problem gambling counseling were located in 16 counties and Baltimore city, including 11 county health departments.
Screening and Treatment Within Substance Use Disorder and Mental Health Treatment Programs

Individuals in treatment for substance use and mental health disorders have been recognized as being at high risk for having co-occurring gambling disorder. Research has consistently found rates of gambling problems among individuals in treatment for SUD to range from 20–40% (9–11 times higher than the general adult rate of 3.4% in Maryland). Additionally rates of gambling problems among those with mental health disorders has been found to be 2-6 times the general adult rate for problem gambling.

Data available through the state addiction treatment (SMART) reporting system also provides a picture regarding how many individuals with a gambling problem are being identified through required problem gambling screening at substance use disorder treatment programs. Admission data for FY14 indicates that of 23,466 admissions to substance use disorder treatment, 13,998 (59.7%) were screened for a gambling problem. Of those screened, 390 (2.8%) individuals screened positive for a probable gambling disorder. The data suggests two major issues. First, at least 40% of individuals were not screened for problem gambling. If the data are analyzed by agency, 50% of agencies consistently screened for problem gambling (at least 80% of clients), 20.9% screened variably (generally less than 30% of clients) and 31.8% consistently did not screen for problem gambling. Given that this was only the second year of required screening, it is commendable that half of agencies are screening so consistently and well over half are screening at least variably. In mental health treatment programs, data from Value Options, the Administrative Service Organization (ASO) reflects that 20 individuals within the mental health treatment system received a diagnosis of a gambling disorder. It is clear that further education and training needs to be planned particularly targeting agencies that are doing less than consistent screening. This will include development of online training options on basic and effective problem gambling screening, assessment and treatment practices to allow for broader dissemination of problem gambling education.

The second issue is that of potentially under-identifying problem gambling issues using current screening procedures. This is an issue that is not unique to Maryland. Indeed it has been identified pervasively throughout the U.S. Positive screening rates using a range of brief problem gambling screens in actual clinical settings have been found to be significantly lower than those reported in the research and in most settings are consistent with the rate of 2.8% reported among Maryland agencies (e.g., Iowa reported rates of 1-3%, Ohio–2.5%). A more comprehensive program of integrating problem gambling in assessment and treatment protocols and procedures will be piloted in FY15 to address this issue as well as empirical studies to more accurately understand and estimate the nature of gambling problems among individuals in primary treatment for other disorders.
PUBLIC POLICY

A major policy emphasis during FY14 for The Center was to address underage gambling. The Public Health Law Clinic at the University of Maryland Francis King Carey School of Law, under the supervision of Professor Kathleen Hoke and Kerri Lowrey, Deputy Director of the Network for Public Health Law’s Eastern Region (Network), prepared:

- An extensive chart detailing the youth gambling laws from each of the 50 states and the District of Columbia, including the minimum age for various forms of gambling and the penalties imposed for violations by the proprietor and the youth;

- An environmental scan paper containing summaries of the state laws on underage gambling along with reflections on similarities and differences in laws across the country; and

- A policy/issue brief explaining the public health implications of youth gambling, reviewing various state laws regulating youth gambling, and providing suggestions for effective policy change to reduce youth gambling.

These products contributed to a review of proposed legislation by the Maryland General Assembly to impose penalties on minors found gambling. This provided insight into how similar provisions are implemented and enforced (i.e., tobacco sales to minors prohibition) and offered suggestions to bring the proposal in line with best practices for prevention of youth gambling.

In collaboration with the Law School, Network and NCADD-MD, The Center submitted testimony submitted to the General Assembly on this issue and tracked the bill which passed during the 2014 General Assembly session. A special projects fellow within the Law School was assigned to work with The Center and researched court diversion programs and whether youth charged with underage gambling would be eligible for participation in diversion programs. An informational brochure to be used to educate judges on the implementation of the youth gambling prohibition has been developed. Additional materials will be developed in FY15 to educate other community stakeholders.

Future policy issues that The Center plans to address in FY15 include: regulations and policy issues regarding internet gambling and social gaming, funding of treatment services for problem gambling under the Affordable Care Act, and policy and regulations regarding voluntary limits on gambling. Additionally, The Center plans to play an integral role in advising the Maryland Behavioral Health Administration on appropriate policy for including gambling disorder services in the integration of substance use disorder and mental health services.
The Center’s Research Program on Gambling was formally launched on April 1, 2014 with additional funding from the Maryland Department of Health and Mental Hygiene (PI: JK Tracy). The overall goal of the Center Research Program on Gambling is to create a scientific incubator and cadre of faculty with expertise to advance an organized research program focused on myriad aspects of gambling. The current focus areas of the Research Program on Gambling include studies in the domains of Prevention, Surveillance, Monitoring and Evaluation, Addiction, Public Health Impact and Vulnerable Populations.

In FY14 activities of The Center’s Research Program on Gambling focused on Capacity Building and Outreach as well as launch of a robust collection of research projects across our domains of interest. Activities in these areas are summarized in the sections that follow.

Capacity Building and Outreach

1. RESEARCH AFFILIATE PROGRAM ESTABLISHED
The Research Affiliate Program is a networking and outreach program within the Research Program on Gambling. It is comprised of faculty, staff and other associated individuals who are interested in the scientific study of gambling and the impact of gambling on populations. The Research Program on Gambling is housed at the University of Maryland School of Medicine and Research Affiliate Program extends the outreach of the Research Program and Center.

Faculty and staff from all schools of the University of Maryland, Baltimore and other University of Maryland System campuses are eligible to be affiliates of The Center. Other interested parties are invited to apply for affiliation.

Affiliates of the research program are working together with the Research Program on Gambling faculty to extend the research agenda to the study of gambling addiction, as well as the larger individual, community and social impacts of gambling.

Examples of research being conducted by Research Program affiliates include:
- Etiology of gambling addiction
- Prevention of pathological and problem gambling
- Genetic architecture of behavioral addictions
- Neuroimaging correlates of gambling behavior
- Social impact assessments of gambling on individuals and communities
- Policy evaluation
- Data linkage studies of gambling-related traffic crashes
- Injury prevention

Status as a research affiliate confers access to a network in which junior and senior affiliated faculty members share, mentor, and collaborate on research studies of myriad aspects of gambling. Affiliates have access to the Research Program on Gambling’s Free State Data Warehouse to perform secondary data analysis projects or to provide pilot data for grant applications. The Research Program on Gambling also maintains staff trained in the aspects unique to research in the area of behavioral
addiction, including reluctance to participate, issues with self-report and heightened concerns over privacy. The Research Program on Gambling currently has 24 faculty, three doctoral students and three staff affiliates.

2. SEED GRANT PROGRAM ESTABLISHED AND AWARDED
The Research Program on Gambling extended an open call for pilot study proposals to stimulate innovative scientific research focused on gambling in the State of Maryland.

The seed grant award program had two goals:
1. To generate preliminary data that will lead to a major grant application to federal or commercial agencies; and
2. Promote scientific excellence in the domain of gaming research.

The 2014 seed grant was awarded to Yu-Ching Cheng, PhD and Lauren Levy, JD for their project titled, Gambling Behavior in Veterans: A Pilot Study. The proposed work aims to screen veterans utilizing the VA Maryland Health Care System at the Baltimore VA Hospital. The prevalence of problem and disorder gambling in a veteran population will be estimated. Information on health history, combat experience and gambling exposure while deployed will be collected and analyzed. The project also aims to collect biological samples (cheek swabs) that will allow for analysis of genetic correlates of gambling behavior.

Prevention Research

1. PREVENTION AND ETIOLOGY OF GAMBLING ADDICTION IN THE US (PEGASUS)
The PEGASUS Study will be a prospective case cohort study that broadly recruits participants with behaviors reflecting the full range of gambling behaviors in the general population, including those who exhibit no problem gambling behaviors (controls) and those with varying severities of problem gambling behaviors.

A Participant-Centered Outcomes Research Approach will be used to inform study design, selection of content, and approaches for recruitment. This will include formation of an advisory board of recovered gamblers, leaders of local and national problem gambling organizations, individuals who currently gamble, and family members of problem gamblers.

The broad purpose of the PEGASUS Study is to identify factors associated with problem gambling behavior.

1. Identify risk factors for problem gambling.
2. Identify factors that protect against developing problem gambling behaviors.
3. Evaluate biological correlates of gambling behavior, including brain activation, cognitive correlates and genetic correlates).

We propose to recruit 1,000-1,500 adults who will be followed longitudinally. Domains that will be assessed will include but not be limited to: demographics and social history, medical history, neuropsychological assessment, psychological assessment, collection of a genetic sample, functional Near Infra-Red Spectroscopy (fNIRS). Institutional Review Board approval for this project is pending. We anticipate that recruitment will begin in January 2015.
2. GAMBLING IN COLLEGE STUDENTS AND YOUNG ADULTS

A team of researchers at the Center for Young Adult Health and Development at the University of Maryland School of Public Health (led by Dr. Amelia Arria) worked in partnership with The Center to analyze existing data on the association between gambling among college students and alcohol use among college students. Data were collected on gambling behavior in the fifth year of an ongoing longitudinal study of college student health behaviors that was originally funded by the National Institute on Drug Abuse. The data from 1,019 young adults were analyzed to examine gambling behavior. Relationships between gambling and substance use were evaluated, after accounting for shared risk factors.

The results showed that 60% of these participants had gambled at least once in the past year, and 6% gambled on a weekly or daily basis. Of the seven different gambling activities assessed, casino gambling was the most prevalent (35%), followed by playing cards for money (25%), playing the lottery (20%), betting on sports (20%), betting on games of personal skill (15%), gambling on the internet (9%), and betting on horse/dog races (5%). For all the gambling activities assessed, most individuals who gambled did so infrequently (i.e., less than once a month). Compared with non-gamblers, frequent gamblers (i.e., those who gambled on a weekly or daily basis) used alcohol and marijuana more frequently, used more other illicit drugs, and were at higher risk for alcohol use disorder (AUD). These associations held true even after accounting for several variables that are risk factors for both gambling and substance use.

The results were accepted for a poster presentation at the 28th National Conference on Problem Gambling in Orlando, Florida. A manuscript on the results is being finalized for submission to a peer-reviewed journal, and a review of the scientific literature on gambling among college students is in preparation.

Figure 15 Alcohol, Tobacco, and Other Drug Use Outcomes by Gambling Frequency, Adjusted for Covariates
RESEARCH CONTINUED

Surveillance

1. FREE STATE DATA WAREHOUSE SEEDED
The Free State Data Warehouse is a curated warehouse of data implemented to support assessment of the public health impact of gambling in the State of Maryland. Data from across the State are being aggregated and made available to qualified research affiliates to study a wide range of gambling issues. Infrastructure for the Data Warehouse was procured and configured to begin the collection of data. The following data sources have seeded the data warehouse:

<table>
<thead>
<tr>
<th>Source</th>
<th>Dataset</th>
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<tbody>
<tr>
<td>Baltimore Neighborhood Indicators Alliance</td>
<td>Vital Signs</td>
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<tr>
<td></td>
<td>Community Maps</td>
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<tr>
<td>Baltimore City Dept of Finance</td>
<td>Simulated Slot Machines</td>
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<tr>
<td>Gambling Impact and Behavior Study</td>
<td>Adult Survey</td>
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<td></td>
<td>Youth survey</td>
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<td></td>
<td>Community database</td>
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<tr>
<td>National Epidemiologic Survey on Alcohol and</td>
<td>Wave 1 Data</td>
</tr>
<tr>
<td>Related Conditions</td>
<td>Wave 2 Data</td>
</tr>
<tr>
<td>US Census</td>
<td>Block/Tracts Maps</td>
</tr>
<tr>
<td>Crash Outcomes Data Evaluation System (CODES)</td>
<td>MVA Licensing &amp; Registration</td>
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<tr>
<td></td>
<td>Motorcycle Safety Training</td>
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<td>Driver Citations</td>
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<td></td>
<td>Police Crash Reports</td>
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<td></td>
<td>Ambulance &amp; EMS Logs</td>
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<td></td>
<td>Emergency Department Data</td>
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<td>Hospital Records</td>
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<td>Statewide Trauma Registry</td>
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<td>Toxicology</td>
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<td></td>
<td>Autopsy Records</td>
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<td>Vital Statistics</td>
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</table>

2. PREVALENCE STUDY
Pursuant to Health — General § 19-804, the Department of Health and Mental Hygiene (DHMH) was tasked with providing an initial assessment of problem gambling prevalence on or before July 1, 2009 and with follow-up prevalence studies to be completed no less than every five years. DHMH respectfully submitted the report, *Gambling Prevalence in Maryland: A Baseline Analysis*, in June 2011. With formation of The Maryland Center of Excellence on Problem Gambling and integration of the Research Program on Gambling into the Center, the responsibility for conduct of the statewide prevalence of gambling study now rests with the Research Program on Gambling.

The Baseline Study of Gambling in Maryland was conducted in September 2010; therefore, the second statewide prevalence study should be conducted no later than 2015 to comply with our legislative requirement. At this time, the final approved casino has yet to open. Based on consultation with DHMH colleagues and researchers in the field, it has been recommended that the statewide prevalence study of gambling in Maryland be postponed until June 2017 so that follow-up study...
will truly reflect change in gambling behavior following full implementation of casino gambling in the state. A formal request has been respectfully submitted by Secretary Sharfstein to Governor O'Malley, Senate President Mike Miller, and Speaker of the House, Michael Busch. Action on this request is pending.

Currently a partnership with DHMH’s Prevention and Health Promotion Administration is being explored by The Center’s Research Program that would allow for questions related to gambling to be included in the annual population-based Behavioral Risk Factor Surveillance System (BRFSS) survey. Partnership with the BRFSS survey would allow assessment of gambling behaviors more frequently and examination of gambling behaviors within the context of other health and risk behaviors in the state of Maryland population and nationally. Also a more extensive call-back sub-study with more in-depth assessment of gambling behavior is proposed to be completed with BRFSS participants at least once every five years. The BRFSS program has approved inclusion of a module of gambling questions in 2015. Drs. Tracy (Research Director) and Lane (research affiliate) are collaborating with the BRFSS program to meet requirements for inclusion in the 2015 survey.

Monitoring and Evaluation

1. ANALYSIS OF MARYLAND HELPLINE DATA INITIATED
   The Research Program provided technical, scientific and analytic support for evaluation of Maryland Helpline data, working closely with The Center director and support personnel that operate the Helpline to improve data completeness and streamline data transfer for reporting and analytic purposes.

2. ASSOCIATION BETWEEN CASINOS AND TRAFFIC INCIDENTS EVALUATED
   Through a research partnership with the Maryland Crash Outcomes and Data Evaluation System (CODES) at the University of Maryland, Baltimore, the Research Program initiated an evaluation of changes in traffic incidents within 1-mile and 5-miles of casinos. The CODES system includes statewide data from a diverse set of sources that can be used to examine many public safety aspects of gambling in the state. Figure 16 depicts the CODES data sources.

![Figure 16: Crash Outcomes Data Evaluation System](image)
RESEARCH CONTINUED

Addiction

In order to address changes made to the diagnosis and classification of Gambling Disorder in the most recent version of the Diagnostic and Statistical Manual of Mental Disorders: Fifth Addition, The Center in collaboration with Seth Himelhoch, MD, MPH, at the Division of Services Research, Department of Psychiatry, University of Maryland School of Medicine completed a cross-sectional study among 300 people attending intensive outpatient substance abuse treatment or methadone maintenance programs in the University of Maryland Medical System in Baltimore, Maryland.

The study found that 40.5% of the sample met DSM-5 criteria for a gambling disorder, with over 75% meeting criteria for moderate or severe gambling disorder. The two most common gambling behaviors were: the purchase of lottery tickets (76.7%; $153.7/month) and the purchase of instant win tickets (69.5%; $112.8/month).

Evaluation of diagnostic accuracy of brief gambling screens demonstrated that the NODS-PERC (a four question brief screen) was the most accurate brief screen. Although most participants were willing to be screened for gambling disorder using a brief screen measure few reported ever being screened in the past by a health professional. Given the burden of gambling disorders among those engaged in substance use disorder treatment, efforts to implement brief screening and intervention for gambling within the substance use disorder treatment context are clearly warranted.

Findings of this study have been presented as posters at a major national conference on responsible gambling and two manuscripts have been submitted to peer reviewed journals.

Impact

1. HORSESHOE CASINO CATCHMENT AREA COMMUNITY ASSESSMENT

The Horseshoe Casino Catchment Area Community Assessment was a community-based survey designed to assess the prevalence of gambling behavior in the communities in and around the Horseshoe Baltimore Casino and to evaluate attitudes of community residents about the casino prior to its opening. The broad purpose of this was to establish a baseline assessment of gambling behaviors and community attitudes against which changes can be compared over time.

The survey was designed to collect data on the following domains:
- Demographics
- Income and employment
- Housing
- Health behaviors
- Casino impact
- Gambling behaviors

The catchment area for this study included the following neighborhoods located within one mile of the Horseshoe Baltimore Casino and includes the neighborhoods of Barre Circle, Federal Hill, Otterbein, Ridgley’s Delight, Sharp-Leadenhall, South Baltimore and Washington Village/Pigtown. This study received exempt approval from the University of Maryland Baltimore Institutional Review Board on June 24, 2014. Implementation of this research study was launched just after the close of FY14, Figure 17.
Recruitment also included convenience sampling of individuals who visited the catchment area for entertainment purposes during the data collection period. Data collection was completed on August 25, 2014. Respondents were 1,136 adults between the ages of 18-87 who resided in or visited the catchment area for entertainment purposes during the study's data collection period. Analysis of data is currently in progress.

Figure 17  Selected Residential Neighborhoods for The Horseshoe Casino Catchment Area Community Assessment; Baltimore City, Maryland.

2. VULNERABLE POPULATIONS
Several of our research affiliates are currently working on state-of-the-art literature reviews focused on vulnerable populations. These literature reviews are focused on older adults, veterans and family, neurologic disorders and problem gambling, and child maltreatment and problem gambling. These state-of-the-art literature reviews will inform future research projects.
As The Center looks forward to FY15, we anticipate continuing growth in all of our six domains of function. The multi-disciplinary approach will allow for the most creative and evidence based approaches to this growth. Key goals in each domain are highlighted below.

**PUBLIC AWARENESS**
- Expand repertoire of targeted awareness materials
- Broaden reach of media resources
- Build on and expand partnerships with community groups such as the Maryland Council on Problem Gambling (MCPG), National Alliance for the Mentally Ill-MD (NAMI-MD), National Council on Alcohol and Drug Dependence-MD (NCADD-MD) to broaden public awareness messages

**PREVENTION**
- Implement and evaluate Phase 2 of Maryland Smart Choices Youth Problem Gambling Prevention Program in Baltimore City
- Develop Smart Choices training for educators and preventionists throughout Maryland, concentrating on communities where casinos are located
- Pilot problem gambling integrated prevention model programs in collaboration with community based prevention agencies throughout Maryland, concentrating on communities where casinos are located

**TRAINING AND EDUCATION**
- Provide balance of basic and advanced training opportunities
- Create additional webinars and online trainings
- Offer tailored trainings to meet agency specific needs
- Enhance dissemination of evidence based intervention and prevention strategies

**TREATMENT AND INTERVENTION SERVICES**
- Add Chat and Text features to helpline services
- Increase peer support services
- Continue enhancing helpline database and monitoring system
- Develop and evaluate model problem gambling integrated treatment programs including inclusion with statewide SBIRT initiative
- Raise standards for problem gambling counseling referral network

**PUBLIC POLICY**
- Continue to provide support for services related to underage gambling law
- Address policy regarding internet gambling and social gaming
- Address policy issues regarding funding of continuum of problem gambling treatment services under the Affordable Care Act
- Strengthen and expand partnerships with community stakeholder groups such as NCADD-MD, MADC, MCPG to assure that problem gambling public health issues are clearly defined and addressed

**RESEARCH**
- Initiate PEGASUS prospective, longitudinal study to define risk and protective factors related to problem gambling as well as biological correlates of gambling behaviors
- Expand sources of data included in the State Problem Gambling Data Warehouse
- Implement enhanced data collection and monitoring for helpline and model treatment programs
- Build on current studies of vulnerable populations and program gambling
Problem Gambling is a treatable ADDICTION. We can help.

1-800-522-4700

24/7 Confidential Helpline MDPProblemGambling.com

29th National Conference on Problem Gambling
New Challenges / Creative Solutions Baltimore, MD • July 10-11, 2015
ANONYMOUS COMMENTS ON PROBLEM GAMBLING CLINICAL TRAINING:

“Great service to clinicians who want to improve skills in addictions field.”

“I will definitely be screening adolescents for gambling from now on!”

“The presentation was the best workshop in any topic I have attended in years: energy, insight, breadth of knowledge, relevant anecdotes, and a relatable style were excellent. Overall, the trainer’s ability to integrate a catalogue of approaches was masterful.”

“The family is the client” — great concept, never thought about the family as the client before.”
Acknowledgements

Maryland Department of Health and Mental Hygiene (DHMH)
Maryland State Alcohol and Drug Abuse Administration (ADAA)
Maryland Lottery and Gaming Control Agency
Maryland Alliance for Responsible Gambling (MARG)
National Council on Problem Gambling
The Maryland Center of Excellence on Problem Gambling

Waterloo Crossing
5900 Waterloo Road, Suite 200
Columbia, MD 21045-2630
667-214-2120

www.mdproblemgambling.com

HELPLINE: 800-522-4700