

Message from the Chairman

With a new mission firmly in place, the National Center for Responsible Gaming (NCRG) embarked on an ambitious agenda in 2003, furthering its efforts to be the leading source of science-based research and information on gambling and health and to advance education, prevention, treatment and public policy.

In its eighth year, the NCRG continued to support only the highest-quality scientific research on disordered gambling through the Institute for Research on Pathological Gambling and Related Disorders, a program at Harvard Medical School's Division on Addictions. In 2003, the Institute awarded four external neuroscience research grants, totaling \$671,626. The Institute also was active with gambling research projects of its own, including studies focused on the rate of gambling among U.S. college students and the impact of Missouri's self-exclusion program, among others.

On the education front, the NCRG also made great strides. Perhaps the most significant development of 2003 was the expansion of the NCRG's annual conference. The expansion is part of the NCRG's new effort to approach disordered gambling as a public health issue and to promote dialogue among those concerned with working toward the continued advancement of research and understanding of disordered gambling.

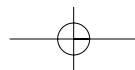
Last year also heralded the start of several new funding commitments for the NCRG. These new contributions, along with proceeds from three charity events held in 2003, helped push total funding for the NCRG beyond the \$13 million mark.

This annual report gives you a closer look at the NCRG's myriad accomplishments in the research and education arenas, as well as an update of our funding status and a glimpse at our goals for the future. Since the creation of the NCRG in 1996, we have made significant progress toward the understanding of gambling disorders, and this field of research is more robust and respected than ever. The generous support of some of the world's leading gaming companies has made these past accomplishments possible, and recent contributions, from both new and old supporters of the NCRG, will lead us into the future. I look forward to using these new resources to meet the many challenges that lie ahead.

Sincerely,



Dennis Eckart



NCRG Structure and Programs

NCRG Board of Directors

Role: Set policy and raise funds

Composition

50%	50%
Gaming Industry	Academic-Health-Civic Sector

Mission

Founded in 1996, the National Center for Responsible Gaming (NCRG) was the first national organization exclusively devoted to funding scientific research on pathological and youth gambling.

The NCRG's mission is to be the leading source of science-based research and information on gambling and health, advancing education, prevention, treatment and public policy.

Research

Institute for Research on Pathological Gambling and Related Disorders
Division on Addictions
Harvard Medical School

Education

Internal Research

Annual Conference

Publications, Programs and Presentations on Disordered Gambling

Competitive Research Grants to Universities

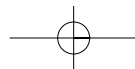
Independent entity supported by a contract from the NCRG

For more information about the NCRG:

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Tel: 202-530-4704
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Email: mgranahan@ncrg.org
www.ncrg.org

For more information on gambling research:

Christine Reilly,
Executive Director
Institute for Research on Pathological Gambling and Related Disorders
Division on Addictions
Harvard Medical School
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2nd Floor East
Boston, MA 02215
Tel: 617-384-9028
Fax: 617-384-9023
Email: Christine_Reilly@hms.harvard.edu
www.hms.harvard.edu/doa/institute



Board of Directors

The National Center for Responsible Gaming (NCRG) is a tax-exempt, nonprofit organization founded in 1996 to address pathological and youth gambling through research and public education. The board of directors' membership is balanced between representatives of the gaming industry and leaders from the civic, charitable, educational, community and public service sectors.

The following individuals served on the board of directors in 2003:

BOARD OF DIRECTORS

G. Thomas Baker

*President and CEO
International Game Technology*

Robert Boswell

*Senior Vice President
Pioneer Behavioral Health*

Thomas J. Brosig

Roland W. Burris
*Of Counsel
The Peters Law Firm*

Glenn Christenson

*Executive Vice President,
CFO and CAO
Station Casinos, Inc.*

Sue Cox

*Founding Executive Director
Texas Council on Problem and
Compulsive Gambling*

Frank J. Fahrenkopf, Jr.

*President and CEO
American Gaming Association*

Alan Feldman

*Senior Vice President, Public Affairs
MGM MIRAGE™*

Richard J. Glasier

*President and CEO
Argosy Gaming Company*

Maj. Gen. Paul A. Harvey (Ret.)

*President/Owner
PDH Associates, Inc.
Former NCRG chairman,
1996-2002*

Timothy Hinkley

*President and COO
Isle of Capri Casinos, Inc.*

David A. Korn, M.D.

*Assistant Professor
Department of Public Health Sciences
University of Toronto*

Phillip Martin

*Tribal Chief
Mississippi Band of Choctaw Indians*

Brian McKay

*Of Counsel
Lionel Sawyer & Collins*

Kevin P. Mullally

*Executive Director
Missouri Gaming Commission*

Carol O'Hare

*Executive Director
Nevada Council on Problem Gambling*

Philip G. Satre

*Chairman
Harrah's Entertainment, Inc.*

Glenn Schaeffer

*President, CFO and Treasurer
Mandalay Resort Group*

Howard J. Shaffer, Ph.D.

*Director, Division on Addictions
Harvard Medical School*

OFFICERS

Chairman

Dennis E. Eckart

*Partner
Baker & Hostetler LLP*

President

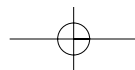
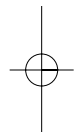
William Boyd

*Chairman and CEO
Boyd Gaming Corporation*

Secretary and Treasurer

Judy L. Patterson

*Senior Vice President and Executive Director
American Gaming Association*



Contributors

Since Boyd Gaming Corporation provided the start-up funds in 1996, the NCRG has received generous support from various financial donors, including gaming companies, suppliers and vendors, NCRG board members, gaming employees and individuals.

In 2003, new funding commitments from several leading gaming companies, along with proceeds from three charity events, have pushed total funding for the NCRG beyond the \$13 million mark. The most recent funding commitments will be used to launch the NCRG's new initiative aimed at approaching disordered gambling as a public health issue and bringing together, with the gaming industry, all those concerned with working toward the continued advancement of research and understanding of disordered gambling.

Contributors 2003-2007

(as of 12/31/03)

\$1,000,000

Harrah's Entertainment, Inc.
International Game Technology
MGM MIRAGE
Mandalay Resort Group
Park Place Entertainment Corporation

\$500,000

Argosy Gaming Company
Boyd Gaming Corporation
Isle of Capri Casinos, Inc.

\$200,000

Aztar Corporation
Station Casinos, Inc.

\$50,000

The Palms Casino Resort
Alliance Gaming Corporation

\$10,000-\$49,000

Hard Rock Hotel and Casino
JCM American Corporation
Southern Wine and Spirits of Nevada

Contributors 1997-2002

\$1,350,000*

Park Place Entertainment Corporation/
Grand Casinos, Inc./
Hilton Hotels Corporation/
Caesars World, Inc.

\$875,000

Boyd Gaming Corporation
(10-year pledge – Founding Contributor)

\$600,000

International Game Technology
The Lincy Foundation
Mandalay Resort Group
MGM MIRAGE

\$585,000**

Harrah's Entertainment, Inc./
Harveys Casino Resorts/
Rio All-Suite Hotel & Casino/
Showboat, Inc.

\$300,000

Aztar Corporation

\$100,000-\$299,000

Coast Resorts, Inc.
Hollywood Casino Corporation
Hotel Employees & Restaurant Employees International Union
Isle of Capri Casinos, Inc.
Pinnacle Entertainment, Inc.
Station Casinos, Inc.

\$50,000-\$99,000

Alliance Gaming Corporation
Argosy Gaming Company
Casino Data Systems
Empress Riverboat Casinos, Inc.
Horseshoe Gaming, Inc.
JCM American Corporation
Mississippi Band of Choctaw Indians
Shuffle Master Gaming

\$10,000-\$49,000

Foxwoods Resort Casino
Mission Industries
Mohegan Sun
The Riviera Hotel & Casino
Sandia Casino
Sky City Casino, Pueblo of Acoma
Southern Wine and Spirits of Nevada

*Park Place Entertainment Corporation was formed when Hilton Hotels Corporation acquired Grand Casinos, Inc., and Caesars World, Inc. The contribution listed above reflects previous grants and commitments made by these companies.

**The amount reflects donations by Rio All-Suite Hotel & Casino and Showboat, Inc., which were acquired by Harrah's Entertainment, Inc., in 1998.

Fund-raising Events

Three major fund-raising events, the American Gaming Association's (AGA) Gaming Hall of Fame Charity Dinner and Induction Ceremony and a pair of JCM-AGA Golf Classic tournaments, helped raise \$300,000 for the National Center for Responsible Gaming (NCRG) in 2003. Proceeds from the events directly benefit NCRG research and education activities.

2003 GAMING HALL OF FAME CHARITY DINNER AND INDUCTION CEREMONY

The 15th Annual Gaming Hall of Fame Charity Dinner and Induction Ceremony raised a record \$225,000 for the NCRG to help fund research on youth and disordered gambling.

The event, held July 26 as part of the grand opening celebrations at the Borgata Hotel Casino & Spa in Atlantic City, took place outside Las Vegas for the first time in its 15-year history in recognition of the 25th anniversary of gaming in Atlantic City.

More than 600 people attended the Hall of Fame dinner, where Harrah's Entertainment, Inc., Chairman Phil Satre and pop music legend Tom Jones were honored for their lifetime achievements in gaming by being inducted into the Gaming Hall of Fame.

Hosted by Boyd Gaming Corporation and MGM MIRAGE, the event featured performances by Grammy Award-winning band Hootie & The Blowfish and *Saturday Night Live* cast member Darrell Hammond.



Frank J. Fahrenkopf, Jr., congratulates Phil Satre on his induction into the Gaming Hall of Fame (far left). Music legend Tom Jones (left) also was inducted in 2003.

The following companies and individuals generously supported the event:

Major Underwriters

Boyd Gaming Corporation
South Jersey Transportation
Authority
Atlantic City Convention and
Visitors Authority

\$15,000

Harrah's Entertainment, Inc.

\$8,350

MEI

\$7,000

Alliance Gaming Corporation

\$6,000

Global Gaming Expo

\$5,500

A.C. Coin & Slot
MGM MIRAGE

\$5,000

Cooper Levenson,
Attorneys at Law

\$4,500

Argosy Gaming Company
Fox Rothschild, LLP
International Game Technology
Tishman Construction
Corporation

\$4,000

Bower Lewis Thrower Architects
Cope Linder Architects

\$3,500

Atlantic City Regional
Chamber of Commerce
Aristocrat Technologies
Atronic Americas
Bank of America
Baumgardner Construction
Coca-Cola North America
DCO Energy

Deloitte & Touche LLP
The Duberstein Group
Fleet National Bank
Foxwoods Resort Casino
Hotel Employees & Restaurant
Employees International
Union

Hyatt Gaming Services, LLC
JCM American Corporation
Mandalay Resort Group
Mohegan Sun
Park Place Entertainment
Corporation
PricewaterhouseCoopers
Sands Casino Hotel
South Jersey Industries
Tropicana Casino Atlantic City
WMS Gaming
Yates Construction

\$2,000 - \$3,400

Konami Gaming, Inc.
MARSH USA, Inc.
North American Video, Inc.

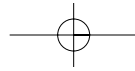
\$1,000 - \$1,999

Marnell Corrao
Marshall Retail Group
New Jersey Casino Control
Commission
Press of Atlantic City Media
Group
TransacT Technologies
Valetnoir
Wells Fargo
Claudine Williams

Under \$1,000

Emmanuel Mathioudakis,
Atlantic City Jitney
Association
Stan Brown, Brown Global
John Cullinan, Commerce Bank
John Harrison, Commerce Bank
John McEnergy, Commerce Bank

Ronald Brunner, Currency
Counting
Harry DeMaria, Global Cash
Access
Dennis Eckart, Greater Cleveland
Growth Association
Harrah's Cherokee
Howard Silver, Hogan & Hartson
Horizon Blue Cross/Blue Shield
New Jersey
Bradford Smith, International
Gaming Consultant Services
Tim Hinkley, Isle of Capri
Casinos, Inc.
Richard Meister, Isle of Capri
Casinos, Inc.
LoBiondo for Congress in New
Jersey
Frank Luntz, The Luntz Research
Companies
Phyllis Lacca, Masterpiece
Advertising
Cory Morowitz, Morowitz
Gaming Advisors, LLC
Terry Trobiani, Paltronics, Inc.
Ronald Coiro, Paulson Gaming
Supplies
Nancy Myers, QWIC, Inc.
David Stewart, Ropes & Gray
Teddie O'Keefe, Smith O'Keefe
Associates
Nicholas Casiello, Sterns
& Weinroth
Sue Cox, Texas Council on
Problem and Compulsive
Gambling
Trump Casino Resorts
David Korn, University of
Toronto
John Bloom, UPI
Frank Wade, The WadeGroup, Inc.
Frank DiGiacomo, Wolf Block
Michael Young, Young Electric
Sign Company



Fund-raising Events continued

2003 JCM-AGA GOLF CLASSIC

The fifth annual JCM-AGA Golf Classic, organized by JCM American Corporation (JCM) in conjunction with the American Gaming Association (AGA), raised a record-breaking \$75,000 for the NCRG in 2003.

For the first time ever, the golf tournament was held on both coasts, featuring events in Las Vegas and Atlantic City that drew a combined 228 players. The sold-out Las Vegas tournament was held May 12 at TPC Summerlin and included a live auction supported by nearly 25 sponsors. A foursome from MGM Grand won the event.

In its inaugural year, the Atlantic City tournament, co-sponsored by law firm Cooper Levenson April Niedelman and Wagenheim, was held May 20 at the Seaview Marriott. More than 80 players participated in the tournament, representing both gaming and nongaming interests. A team from Fleet National Bank won the event.



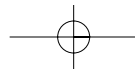
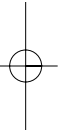
Dennis Eckart, Frank Fahrenkopf, Aki Isoi and members of MGM Grand's winning foursome at the Las Vegas JCM-AGA Golf Classic.

The Association of Gaming Equipment Manufacturers, Global Gaming Expo, IGT and Southern Wine and Spirits of Nevada sponsored both the Las Vegas and Atlantic City tournaments. Since JCM and the AGA first conceived the event in 1998, the golf tournament has raised nearly a quarter of a million dollars for the NCRG.

The following companies generously supported the event through sponsorship or participation:

A.C. Coin & Slot
 American Gaming & Electronics
 Association of Gaming Equipment
 Manufacturers
 Aladdin Resort & Casino
 Argosy Gaming Company
 Aristocrat Technologies
 Ascend Media
 Atlantic City Convention and
 Visitors Authority
 Atronic Americas
 Bally/Alliance Gaming
 Bellagio Hotel and Casino
 Borgata Hotel Casino & Spa
 Boyd Gaming Corporation
 Chateau Julien Wine Estate
 Commerce Bank
 Compudigm International Inc.
 Conectiv Power Delivery
 Cookie Bouguets
 Cooper Levenson
 CORESTAFF Services
 David Saxe Productions
 Fleet National Bank
 Flower Peddler
 Fondacaro Companies
 Friedmutter Group
 Global Gaming Expo
 Gary Platt Manufacturing
 Gaming Laboratories International
 Global Cash Access
 Golf Augusta
 Hamada of Japan
 Happ Controls
 Harrah's Las Vegas Casino & Hotel
 Harrah's Showboat-The Mardi Gras
 Casino

HIKAM America, Inc.
 Hi-Tech Gaming
 Ho-Ho-Ho Chinese Gourmet
 International Game Technology
 Kline Construction Corporation
 Konami Gaming
 Martin-Harris Construction
 MGM Grand Hotel and Casino
 Mohegan Sun Casino & Resort
 Monte Carlo RESort & Casino
 New York-New York Hotel & Casino
 Paris Las Vegas
 Petrocelli Electric Company
 Rio All-Suite Hotel & Casino
 Scenic Airlines
 Sega Corporation
 Showroom at the Venetian
 Shuffle Master, Inc.
 Sierra Design Group
 South Jersey Industries
 South Jersey Transportation Authority
 Southern Wine & Spirits of Nevada
 Southwest Print Source
 Squire, Sanders & Dempsey LLP
 Station Casinos
 Summitech LLC
 Tahoe Biltmore Lodge & Casino
 The Stirling Club at Turnberry Place
 Tovis Company
 TPC Summerlin
 Tropicana Hotel and Casino
 Uniglobe Dazey Travel
 United Coin Machine Company
 WMS Gaming



RESEARCH

INSTITUTE FOR RESEARCH ON PATHOLOGICAL GAMBLING AND RELATED DISORDERS

The National Center for Responsible Gaming funds rigorous scientific research on gambling disorders through the Institute for Research on Pathological Gambling and Related Disorders. The Institute is a program of the Division on Addictions (DOA) at Harvard Medical School, ranked by *U.S. News and World Report* in 2003 as the top medical research institution in the nation and second in the specialty of substance abuse.

Dedicated to the pursuit of effective prevention and treatment through high-quality research, the Institute supports scientists at both Harvard and other academic and medical institutions in their investigations into the origins, nature, recovery from and maintenance of gambling disorders. The following are highlights of the Institute's research program in 2003.

STUDY OF MISSOURI'S SELF-EXCLUSION PROGRAM

In 2003, the Institute and DOA received a competitive grant of \$297,000 from the Port Authority of Kansas City, Mo., to study individuals enrolled in the Voluntary Exclusion Program, created and administered by the Missouri Gaming Commission. The program allows individuals to ban themselves from Missouri casinos, and more than 5,000 individuals have enrolled since the program was established in 1996. Led by DOA Director Howard Shaffer, Ph.D., the research team will use the information compiled in the Voluntary Exclusion Program to estimate the comparative prevalence of disordered gambling in various areas of Missouri and evaluate the effectiveness of the Voluntary Exclusion Program in helping people with gambling-related problems. This study will enable public health and public policy officials to plan and allocate resources for self-exclusion programs on the basis of empirical evidence.

NEUROSCIENCE GRANT AWARDS

The Institute's extramural grants program, which is open to applicants from non-Harvard institutions, alternates between the research domains of neuroscience and behavioral and social science. In 2003, the Institute awarded four neuroscience research grants examining the genetics of pathological gambling and the role of the brain's reward system in predisposing some individuals to gambling and other addictive disorders:

Population-Based Twin Study of Pathological Gambling

Kenneth S. Kendler, M.D.

Rachel Brown Banks Distinguished Professor of Psychiatry
Virginia Commonwealth University

This study is currently conducting a detailed assessment of pathological gambling by a self-report questionnaire of 7,500 adult male and female twins from a population-based registry. The main objectives of the project are to shed light on the question of whether pathological gambling is an inherited disorder, clarify the relationship between various levels of severity of the disorder, and determine the genetic and environmental relationship between pathological gambling and major psychiatric disorders and personality traits. The investigators are testing whether the disorder is best conceptualized as a nonpharmacologic form of drug abuse or a variant of obsessive-compulsive behavior. They also are exploring the impact of sex differences on gambling disorders.

Functional MRI of Decision-Making in Substance Abuse and Pathological Gambling

Jody Tanabe, M.D.

Assistant Professor of Radiology
University of Colorado Health Sciences Center

Pathological gambling is an addiction that shares many features with substance abuse. Both patient populations demonstrate insensitivity to future

Research continued

consequences of their choices despite the possibility of harming themselves or others. A diagnosis of pathological gambling, however, can exist without substance abuse and vice-versa. Distinguishing between addiction to activities (e.g., gambling, sex) and to substances (e.g., cocaine, alcohol) may provide insight into the relationship between these two linked diseases. This project is currently examining the degree to which substance abusers with pathological gambling differ or resemble nongambling substance abusers in their neurophysiological responses to decisions involving monetary contingencies. The goal of this project is to elucidate the brain regions involved in decision-making processes related to gambling behavior. Using functional MRI technology, the investigators seek to determine if differences in activation can be identified in substance abusers, substance abusers with a gambling disorder, and a control group.

Rules, Rewards, and Decisions in the Orbital Prefrontal Cortex

Charan Ranganath, Ph.D.

Assistant Professor
Center for Neuroscience
University of California-Davis

Basic research on the brain's reward processing and cognitive control can provide promising insights into pathological and related disorders. For example, recent research has suggested a link between pathological gambling and dysfunction in the orbitofrontal cortex (OFC). Accordingly, research on the neurocognitive functions of the OFC can provide a foundation for new diagnostic and therapeutic approaches to pathological gambling and other addictive disorders. This project is using state-of-the-art functional Magnetic Resonance Imaging (fMRI) to test the hypothesis that cognitive processes are likely to be impaired in individuals with gambling problems. The investigators are using the experiments to determine if learning is based on gains, such as monetary rewards, or losses, such as



monetary punishments. A second set of experiments is investigating the role of the OFC in behavioral inhibition and in the use of motivational information (i.e., monetary rewards and punishments) in decisionmaking.

Dopamine Release in Response to Monetary Reward Measured with Positron Emission Tomography

Alain Dagher, M.D.

Assistant Professor
Department of Neurology and Neurosurgery
McGill University

The neurotransmitter dopamine is thought to be the key component of the response to natural and conditioned rewards, including money, and it is likely released in the mesolimbic system during gambling activities. The investigator has used PET (Positron Emission Tomography) scans to map dopamine release in human subjects and demonstrated the release of dopamine in response to drugs of abuse (alcohol and amphetamine), natural reward (food), conditioned reward (money) and psychological stress. Preliminary evidence suggests that the amount of dopamine released varies from one individual to another and that this may be a marker for vulnerability to drug addiction. The investigator now is extending this work to pathological gambling by comparing 10 DSM-IV-diagnosed pathological gamblers to 10 healthy controls on a monetary reward gambling task. He also is testing two additional groups of subjects on a mental stress task that does not involve monetary reward.



Faculty and staff who worked on projects for the Institute for Research on Pathological Gambling and Related Disorders, from left to right: Howard J. Shaffer, Ph.D., C.A.S.; Debi LaPlante, Ph.D.; Richard LaBrie, Ed.D.; Christine Reilly, M.A.; Rachel Kidman; Tony Donato, M.P.P.; Gabriel Caro; Sarah Nelson, Ph.D. and Michael Stanton.

ASSESSING PATHOLOGICAL GAMBLING AND OTHER PSYCHIATRIC DISORDERS

In 2003, the Institute and DOA collaborated with the University of Michigan to adapt the Composite International Diagnostic Interview (CIDI) to expand the use of this instrument in research. The CIDI is a standardized computer-guided interview that assesses mental health disorders and provides diagnoses according to the definitions and criteria of the World Health Organization's International Classification of Diseases and the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*. The CIDI is currently used in 27 countries. DOA researchers and technology staff are modularizing this instrument so that trained interviewers (who need not be clinicians) are able to select a particular battery of questions focused specifically on one disorder, such as pathological gambling, rather than having to administer the entire battery. The modularization of the CIDI will have an enormous impact on the study of pathological gambling and other mental health disorders by making its use easier and less expensive because interviewers will not need as much training. Furthermore, the CIDI offers a community norms database that will enable investigators in the United States and around the world to compare their data to a larger community sample.

IMPACT OF NCRG RESEARCH

The NCRG has provided more than \$8 million in support of research on gambling disorders since 1996. However, the true impact of NCRG-funded research on our understanding of gambling disorders and on prevention and treatment was unknown until 2003, when the Institute began a study of the NCRG's impact, as well as an analysis of the field in general.

NCRG grants are intended to support pilot projects that will be competitive for larger federal grants. According to the study, for several investigators, NCRG support has provided crucial seed money that led to major grants from the National Institutes of Health (NIH). For example, Suck Won Kim, M.D., director of the Impulse Control Disorders Clinic in the Department of Psychiatry at the University of Minnesota Medical School, parlayed a \$54,000 grant from the NCRG into an NIH grant of \$464,463. This study will determine whether the drug naltrexone is effective in treating pathological gambling. Results will have profound implications for treatment because currently there are no established drug treatments for this disorder.

Massachusetts General Hospital researcher Hans Breiter, M.D., Ph.D., offers another example of the importance of NCRG seed money. His NCRG-supported study "Functional MRI of Neural Responses to Monetary Gains, Losses, and Prospects in Pathological Gamblers and Normal Subjects" became one of the influential studies of the brain's reward system when published in *Neuron* and attracted significant federal support for the continuation and expansion of the study.

The number of times a publication is cited in other peer-reviewed studies is an index of its influence on the field. A good illustration is offered by "Estimating the Prevalence of Gambling Disorders in the U.S. and Canada:

Research continued

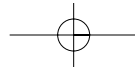
A Research Synthesis,” the study conducted by Howard Shaffer, Ph.D., and his team at DOA. The findings were published in 1999 by the highly influential *American Journal of Public Health*. To date, this study has been cited in more than 50 peer-reviewed publications. Perhaps most significantly, the study’s findings were endorsed by the National Academy of Sciences and National Research Council as the best estimates of the rates of gambling disorders in the seminal report, *Pathological Gambling: A Critical Review* (National Academy Press, 1999).

Research proceeds at a slow pace with projects typically spanning several years. At the completion of a study, it can take one to two years before findings are published. Although only 50 percent of NCRG projects have been completed, the peer-reviewed publications list of NCRG-funded projects, dating from 1997, now numbers more than 100. According to indexes PsychINFO and Medline, references to “pathological gambling” have increased by 123.5 percent since the beginning of 1996. Clearly, the NCRG, which began funding research in 1996, has made a significant impact on the field directly through support of research and indirectly through its advocacy of the highest standards of scientific inquiry in gambling research.

According to indexes PsychINFO and Medline, references to “pathological gambling” have increased by 123.5 percent since the beginning of 1996.

DETERMINING THE RATE OF COLLEGE GAMBLING IN THE UNITED STATES

The first national survey of gambling among college students was published in 2003 in the *Journal of American College Health*. Funded by the Institute for Research on Pathological Gambling and Related Disorders and the Robert Wood Johnson Foundation, the study involved analysis of data from the 2001 Harvard School of Public Health College Alcohol Study (CAS), which for the first time included questions about gambling as well as alcohol use. The Harvard investigators determined that college students, as a group, appear to be at no greater risk for gambling problems than their adult counterparts. The findings indicate that 2.6 percent of students in the nationally representative sample gambled weekly or more often during the school year — a percentage researchers say may define the ceiling for the proportion of problem gamblers among college students. This rate is very similar to reports of prevalence of past-year gambling disorders among adults from the general population, which hovers around 2.25 percent. The survey also reports that 42 percent of college students gambled in the past school year, a percentage much lower than the 82 percent of adults who reported gambling in the past year, according to a 2000 national survey. Researchers also analyzed six different categories of personal characteristics for potential predictors of being a student gambler, including demographics, lifestyle choices, school status and rate of substance-use risk behaviors. Among all six categories of predictors, alcohol-related behaviors were the strongest risk correlates of gambling. This concordance of risky behaviors suggests an underlying problem-behavior syndrome, or a tendency to engage in several risky behaviors.

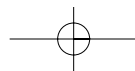


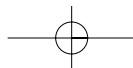
Research continued

2003 PUBLICATIONS BY NCRG-FUNDED INVESTIGATORS

- Albanese, M. J., & Shaffer, H. J. (2003). Treatment considerations in patients with addictions. *Primary Psychiatry, 10*, 55-60.
- Black, D.W., Moyer, T., & Schlosser, S. (2003). Quality of life and family history in pathological gambling. *Journal of Nervous & Mental Disease, 191*, 124-126.
- Chambers R. A. & Potenza, M.N., (2003). Impulse control disorders. In M.J. Aminoff & R.B. Daroff (Eds.), *Encyclopedia of the Neurological Sciences (Vol. 2)*. San Diego, CA: Academic Press.
- Chambers, R. A. & Potenza, M.N., (2003). Neurodevelopment, impulsivity and adolescent gambling. *Journal of Gambling Studies, 19*, 53-84.
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Research continued

PROGRAM ADVISORY BOARD

The Program Advisory Board collaborates with the faculty and staff of the Institute for Research on Pathological Gambling and Related Disorders in developing research priorities and procedures for the external competitive research grants program. Composed of leading academic researchers representing the relevant research domains, as well as experts on gambling, the Program Advisory Board performs a peer-review quality assurance function to evaluate whether the Institute's research standards have been met, using the methods of the National Institutes of Health as a reference standard.

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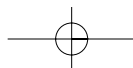
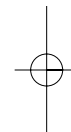
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EDUCATION

The NCRG's education programs took a major step forward in 2003, working to facilitate cooperation and information sharing among the diverse audiences affected by disordered gambling issues. Through various initiatives — most visibly the expansion of the organization's annual conference — the NCRG strived to raise public awareness of pathological gambling; provide meaningful research-based education for clinicians, health providers and the gaming industry; and to promote a lively exchange of ideas within the field of gambling research.

ANNUAL CONFERENCE

Regulating Addiction: How Individuals, Groups and Institutions Manage Excessive Behaviors

The most significant NCRG education initiative of 2003 was the expansion of its annual conference to encompass a broader range of issues and a more diverse audience base. Held Dec. 7-9 at the MGM Grand in Las Vegas, the fourth annual NCRG Conference on Gambling and Addiction attracted more than 400 attendees, a 30 percent increase in attendance from the previous year.

With previous conferences geared primarily to academics and health care professionals in the addictive disorders, the 2003 conference for the first time offered a more comprehensive agenda with a greater appeal to members of the gaming industry, gaming regulators, attorneys and state legislators. While maintaining its continuing education curriculum for the academic and treatment community during sessions offered in the "Scientific and Clinical" track, the event also offered a parallel group of sessions in a "Government and Industry" track, providing a comprehensive, practical agenda for these new audiences.



Panelists at the town hall meeting discuss the roles of regulation and personal responsibility in the addiction recovery process at the 4th annual NCRG Conference on Gambling and Addiction.

The conference theme, "Regulating Addiction," offered fresh perspectives — informed by new research — to encourage critical thinking about how individuals, communities, governments and industry attempt to control behaviors deemed risky and potentially addictive, including gambling and alcohol use disorders.

The "Government and Industry" track offered a critical examination of responsible gaming issues facing the gaming industry, government regulators and public policy-makers. One of the most popular sessions featured the first public discussion of the article "A Science-based Framework for Responsible Gaming," which proposes principles to guide industry operators, health service providers, community groups, consumer and government agencies in the adoption and implementation of responsible gaming and harm minimization initiatives. Additional sessions took an in-depth look at international gaming regulations, responsible gaming practices, harm minimization features on gaming machines, an evaluation of state-supported intervention and treatment programs and more.

The established "Scientific and Clinical" track, co-sponsored by the Institute for Research on Pathological Gambling and Related Disorders at Harvard Medical School's Division on Addictions (DOA), included topics such as self-guided therapy for problem gamblers and drinkers, how individuals regulate problems with alcohol and weight, and the role of 12-step programs in regulating excessive behaviors.

Education continued

Conference attendees were invited to attend sessions from either track, and there was significant crossover in many sessions.

The conference also offered several plenary sessions designed for all attendees. Topics included an overview of the public health approach to disordered gambling, as well as the presentation of findings from Harvard Medical School's college alcohol and gambling study, recently published in the *Journal of American College Health*.

In addition, a town hall meeting at the conclusion of the conference focused on the role of personal responsibility in the addiction recovery process. Panelists for the town hall represented a diverse cross-section of the responsible gaming arena, including Ron Barbaro, chairman and CEO of the Ontario Lottery and Gaming Corporation; Phil Satre, chairman of Harrah's Entertainment, Inc.; Scott Scherer, member of the Nevada Gaming Control Board, Howard Shaffer, Ph.D., director of the Division on Addictions at Harvard Medical School; and John Wilhelm, member of the National Gambling Impact Study Commission and president of the Hotel Employees and Restaurant Employees International Union.

Expansion of the conference centered on NCRG's belief that all sectors concerned with gambling should come together to explore gambling as a public health issue in order to effectively work toward the reduction or elimination of gambling-related harms. The event represented the first step in opening dialogue among industry, regulators, and the scientific and treatment communities, with the goal of developing a comprehensive public health approach to disordered gambling. The diversity of audiences was also evidence of the renewed mission of the NCRG, including the development of practical industry- and public-oriented peer-reviewed research and education that can be applied within the gaming setting.

According to post-conference evaluation reports, attendees were overwhelmingly positive about the new dual-track format, which will return in 2004. The expanded NCRG conference also garnered significant media attention. Conference events and speakers were covered by the *Las Vegas Sun*; *Las Vegas Review-Journal*; *Global Gaming Business*; "Face to Face with Jon Ralston;" KLAS - Las Vegas One TV, and several Nevada radio stations.

NCRG conference sponsors included the Association of Gaming Equipment Manufacturers (AGEM); Ameristar Casinos, Inc.; Aristocrat Technologies, Inc.; Bally Gaming and Systems; Boyd Gaming Corporation; Foxwoods Resort Casino; Global Gaming Expo; Harmony Healthcare; Harrah's Entertainment, Inc.; International Game Technology (IGT); Park Place Entertainment Corporation; Shuffle Master, Inc.; Station Casinos, Inc.; and WMS Gaming, Inc.

PROGRAMS

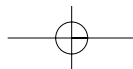
Scientific Achievement Awards

One of the premier events at the 2003 NCRG Conference on Gambling and Addictions was the presentation of the second annual NCRG Scientific Achievement Awards. Established in 2002, the awards formally honor individuals who have made exceptional scientific contributions to the field of gambling research.

Robert Ladouceur, Ph.D., professor of psychology at Université Laval in Quebec, Canada, received the 2003 Senior Investigator Award for his work in cognitive behavior therapy and treatment outcomes, which is among the most well-known and widely referenced in gambling studies.

Robert Ladouceur, Ph.D. accepts the 2003 Senior Investigator Award from Linda Cottler, Ph.D.





Education continued

Marc Potenza, M.D., Ph.D., assistant professor of psychiatry at Yale University School of Medicine, received the 2003 Young Investigator Award. Potenza has made a significant impact on the field of biological psychiatry as one of the first investigators to publish brain-imaging studies of individuals with gambling disorders. He has also made significant contributions in the areas of clinical care, neuropsychiatric research and biological psychiatry. Lastly, Renee Cunningham-Williams, Ph.D., a research associate professor of social work in psychiatry at Washington University School of Medicine, was awarded the Young Investigator Honorable Mention for her important work on the comorbidity of gambling disorders and the development of an assessment instrument to diagnose the disorder.

Recipients of the 2003 NCRG Scientific Achievement Awards were selected by an independent committee of distinguished leaders in the field of addictions and gambling research chaired by Joseph Coyle, M.D., Eben S. Draper Professor of Psychiatry at Harvard Medical School.

The second annual NCRG Scientific Achievement Awards luncheon was sponsored by International Game Technology (IGT).

EDUCATIONAL RESOURCES

In just two years, *Responsible Gaming Quarterly (RGQ)* has become one of the leading international resources for news and analysis of disordered gambling issues, counting more than 1,000 gaming industry representatives, treatment providers, academics, regulators and government officials as subscribers. A joint publication of the NCRG and the American Gaming Association, the publication provides a broad range of coverage, including articles on recent research results, regulatory initiatives, studies and developments in the treatment field and model industry programs. The publica-

tion is an effort to pull together information from these diverse sources, all of which share a common goal: better prevention and treatment of gambling disorders.

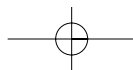
The WAGER, published continuously by DOA since 1995, is a weekly online research bulletin cited by *The New York Times* as an important Web site on gambling research. The mission of *The WAGER*, which has a circulation of 10,000, is to gather, distill and share resources in order to provide readers with a direct pipeline to the latest information on pathological gambling. The NCRG provides financial support for production of *The WAGER*.

The newly redesigned NCRG Web site (www.ncrg.org) continues to be an invaluable source for information on various activities and programs of the NCRG. The site, which recorded 42,509 visits in 2003, includes information on past and present research initiatives on disordered gambling, educational programs and news about upcoming events such as the NCRG's annual conference. In addition, the site features NCRG publications, video clips from leading responsible gaming experts and resources for treatment providers, gaming industry professionals and problem gamblers.

EVENTS AND PRESENTATIONS

The NCRG and the Institute for Research on Pathological Gambling and Related Disorders shared an information booth during Global Gaming Expo 2003 in September. Representatives from the NCRG, the Institute and DOA talked with attendees and distributed information.

As part of the American Gaming Association's Responsible Gaming Lecture Series, Howard Shaffer, Ph.D., presented a discussion in Chicago on the four principles of a public health approach to gambling. Richard LaBrie, Ed.D., associate director of research and data analysis at DOA, delivered a talk in Detroit on the science of gambling regulations.



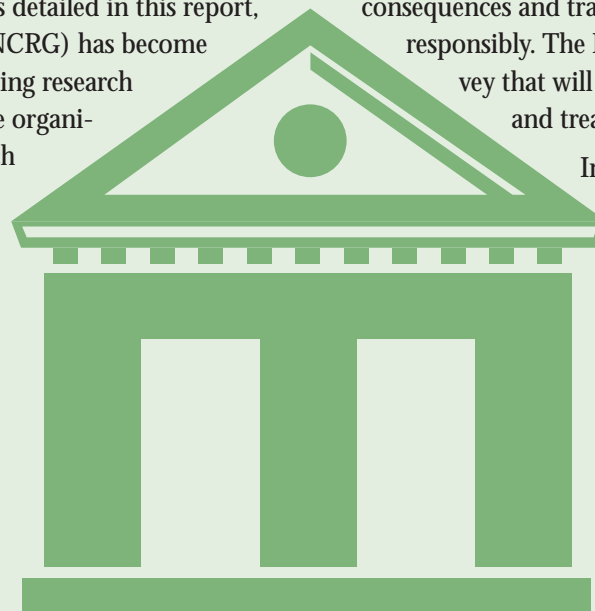
Look to the Future

As shown in the activities and accomplishments detailed in this report, the National Center for Responsible Gaming (NCRG) has become a credible force in the field of disordered gambling research since it was created in 1996. In the past year, the organization strengthened its commitments to research and education, paving the way for an even more productive future. In 2003, the NCRG renewed its financial commitment to Harvard Medical School to fund the Institute for Research on Pathological Gambling and Related Disorders, and numerous gaming interests renewed and expanded their financial commitments to the NCRG.

To date, a majority of the NCRG's efforts have been focused on creating a database of credible baseline research, updating existing research on the subject of disordered gambling and striking down many of the common myths associated with gambling-related disorders. With significant progress achieved in these areas, the NCRG has entered a new phase of the organization's mission.

In the coming months, the NCRG will move beyond the description and investigation of disordered gambling to place increased emphasis on the development of treatment and prevention programs as well as enhanced education activities.

The NCRG is currently working with the Institute to create an employee responsible gaming certification program. Scheduled to debut in 2004, the program will teach employees about disordered gambling and its



consequences and train them to encourage customers to gamble more responsibly. The NCRG also is working to develop a best practices survey that will highlight the most effective methods to identify, study and treat disordered gambling.

In addition, now that the NCRG has established a solid framework for understanding gambling as a public health issue and for directing credible, peer-reviewed scientific research in the United States, it will look to expand on that foundation by shifting focus to become part of the international discussion on disordered gambling. As gambling opportunities have grown around the globe, new funding sources for scientific research on gambling disorders have emerged in various nations. Recognizing the mutual interests of these organizations, the NCRG plans to host an international forum of representatives from such organizations and government entities. The

purpose of the forum is to explore the idea of a coordinated research agenda that could result in data sharing and avoidance of duplication, as well as discuss commonalities and differences across geographic and cultural borders. This event is scheduled to take place in the next 12 months.

Through all these projects, the NCRG's singular goal remains clear: to help individuals who have difficulties with gambling and help prevent some individuals from reaching that point. The NCRG will continue to maintain a high standard of excellence as it embraces the exciting challenges that lie ahead.