

SPR Community

Newsletter of the Society for Prevention Research



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Spring 2013 , Volume 3, Issue 1

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President's Message

Dear SPR Members:

It has been a privilege to serve as President of the Society for Prevention Research and to work with the SPR Board of Directors, each of whom are dedicated to addressing the increasing challenges that face the Society and the field of prevention science. The Board, SPR standing committees and special task forces have been very busy over the past year working on advancing the field of prevention science and increasing SPR's presence as the leading scientific organization in the field. I'm pleased to have the opportunity to share with you some highlights of the contributions of many outstanding SPR members who volunteer with great commitment, time and energy for SPR.



Deborah Gorman-Smith

Standards of Evidence: Criteria for Efficacy, Effectiveness and Dissemination: During the SPR Board of Directors annual retreat held in October, 2012 the SPR Board acknowledged that, given the advances in the field over the last 10 years, a review and updating of the SPR Standards of Evidence: Criteria for Efficacy, Effectiveness and Dissemination was needed. In response, the Board created the SPR Standards-Next Generation Task Force to review the Standards and to recommend revisions. The SPR Board is very pleased that Denise Gottfredson (University of Maryland) has agreed to chair the task force. Other members are Felipe Gonzalez Castro, SPR President-Elect (University of Texas at Houston), Frances Gardner (University of Oxford), George Howe, SPR Treasurer (George Washington University), Irwin Sandler (Arizona State University), and I. The task force met in April 2013 in Washington, DC. We are most appreciative that Thomas Cook (Northwestern University) attended the meeting in an advisor capacity. The goal of the task force is to submit a revised set of Standards to the Board for review at its annual retreat in October 2013.

The SPR Standards of Evidence are frequently cited when identifying effective prevention programs and policies, to justify methods used in evaluation of programs, and has been influential more generally in the policy world. Once finalized, the updated Standards will be disseminated to the membership, the prevention science community, practitioners and policy makers at the state and federal levels.

Type 2 Translational Research Task Force: The Type 2 Translational Research Task Force is supported through the National Institutes of Health, National Institute on Drug Abuse R13 Conference Grant Supplement (5R13DA021047-08SI). The Mapping Advances in Prevention Science (MAPS) Task Forces are charged with advancing promising ideas and scientific efforts generated through the Society for Prevention Research annual meeting, in order to: (1) foster promising, emerging areas of prevention science; (2) articulate an agenda to move research forward in such emerging areas; and (3) nurture the scientific leadership and capacity required to make the advances. The MAPS advance a specific focal area in prevention science through mini-conferences, plenary sessions, roundtables, invited symposium, and preconference workshops at the SPR Annual Meeting, and journal articles and policy briefs. With the outstanding leadership of co-chairs, Richard Spoth (Iowa State University) and Luanne Rohrbach (University of Southern California) the MAPS II, Type 2 Translational Research Task Force has been working for more than four years to address a number of aims including: preparation of guidelines for the conduct of Type 2 translational research, development of training materials for new prevention researchers, recommendations for support of Type 2 translational research, and development of materials on the key elements of Type 2 translational research designed for program implementers and practitioners. The culmination of their work is the recent publication of the article Addressing Core Challenges for the Next Generation of Type 2 Translational Research and Systems: The Translation Science to Population Impact (TSci Impact) Framework in Prevention Science (Richard Spoth, Louise A. Rohrbach, Mark Greenberg, Philip Leaf, C. Hendricks Brown, Abigail Fagan, Richard R. Catalano, et al) (<http://www.preventionresearch.org/wp-content/uploads/2011/05/Advancing-Type-2-Translation-Research-PS-SPR-Task-Force-Springer-ONLINE.pdf>). The completion of the work of the task force coincides with contemporary federal initiatives that have placed a priority on supporting science based approaches through encouraging and, in some cases, mandating the use of evidence-based programs. The final work of the Type 2 TF will include a document on the "state of the science" and recommendations intended to target agency directors and practitioners (essentially a "brief" based on the work of this paper) and a resource document for training in Type2 science.

Economic Analysis in Prevention Research: During the October 2012 retreat the SPR Board also approved the creation of the Economic Analysis in Prevention Research Task Force. This task force is the third Mapping Advances in Prevention Research (MAPS) initiated by SPR and funded by the NIH R13 conference grant 1R13DA033149-01A1. The purpose of the Economic Analysis task force is to bring together prevention scientists working across diverse fields and economists working within the area of prevention science to outline elements of standards for high-quality benefit-cost studies. Through this work the goal is to inform the science and methods to aid prevention scientist as they work to integrate these data into their research. The Board is very pleased that Kenneth Dodge and D. Max Crowley (Duke University) have agreed to serve as co-chairs of the task force. Members of the task force are: Steven Barnett (NIEER/Rutgers University), Jon Baron (Coalition for Evidence-Based Policy), Phaedra Corso (University of Georgia), Sarah Duffy (National Institute on Drug Abuse), Mark Greenberg (Pennsylvania State University), Ron Haskins (Brookings Institute), Laura Griner Hill (Washington State University), Damon Jones (Pennsylvania State University), Lynn Karoly (RAND), Margaret Kuklinski (University of Washington), and Robert Plotnick (University of Washington). The task force will hold its first meeting in late summer/early fall of 2013.

NIH Office of Disease Prevention: I am very pleased to report that in September 2012 long-time SPR member David M. Murray was appointed as the NIH Associate Director for Disease Prevention and Director of the Office of Disease Prevention. One of Dr. Murray's first activities as Director has been to lead a strategic planning process to develop a vision, mission and priorities for the Office of Disease Prevention (ODP). I was honored to be included in the strategic planning working group. On March 13, 2013, the ODP released a Request for Information (RFI) seeking comments on the draft mission, vision, and strategic priorities. This RFI is an extensive process to develop the ODP Strategic Plan for Fiscal Years 2013–2018. The deadline to respond to the RFI was April 30, 2013. The SPR Board prepared a response to the RFI and provided talking points to our members should they have been interested in responding as individuals (http://www.preventionresearch.org/SPR_ODP_RFI.pdf).

Prevention Science: I am very pleased to report that Catherine Bradshaw, Associate Dean for Research and Faculty Development and Professor in the Department of Human Services at the Curry School of Education, (University of Virginia) has accepted the appointment as the next editor of Prevention Science effective January 1, 2014 (Click here for press release <http://www.preventionresearch.org/news-release-catherine-p-bradshaw-ph-d-m-ed-named-new-editor-of-prevention-science/>). The SPR Board is most appreciative of the work of the SPR Publications Committee, chaired by Margaret Ensminger, for recruiting Dr. Bradshaw to this critical role. Dr. Bradshaw will succeed Robert McMahon whose seven year term as editor will end December 2013. Dr. McMahon's distinguished service to SPR as editor of Prevention Science will be acknowledged at the 2013 SPR Annual Awards Presentations, May 30, 2013.

I am also pleased to report that Luanne Rohrbach, Director of the MPH Program and Associate Professor of Research, Preventive Medicine (University of Southern California) has accepted the appointment as associate editor of Prevention Science and joins associate editors J. Mark Eddy (University of Washington), Stephanie Lanza (The Pennsylvania State University), David MacKinnon (Arizona State University), Hanno Petras (JBS International, Inc.), and Steven Schinke (Columbia University). Rohrbach fills the appointment formerly held by Zili Sloboda (JBS International, Inc.). We are most appreciative of the service of Zili Sloboda who served twelve distinguished years as associate editor.

2013 Annual Meeting Planning: The hard work of the 2013 SPR Program Planning Committee, chaired by Guerillmo (Willy) Prado (University of Miami), will be evident for all of those who will be attending the 21st Annual Meeting "The Science of Prevention: Building a Comprehensive National Strategy for Well-Being," May 28 – 31, 2013 in San Francisco, CA. The committee is comprised of members of the board of directors, chairs of each of the SPR committees, as well as, representatives from the NIH, CDC, ODP, and ACYF. In addition to the program planning committee, the Early Career Preventionist Network (ECPN), the Diversity Network Committee (DNC), and the International Task Force (ITF) each plan their activities for the annual meeting. The program development would not be possible without the contributions from the 120 members who reviewed the 772 abstracts that were submitted. Each abstract is reviewed by three reviewers and the time commitment contributed by these volunteers is highly valued. If you didn't volunteer this year, please consider participating next year!

SPR Fellows: This year the first cohort of SPR Fellows will be honored at the SPR Annual Awards Presentation. The SPR Fellows program was created to honor a select group of members who have a particularly distinguished record of contribution to the field of prevention science. Please join me in congratulating the 2013 SPR Fellows who are Gilbert J. Botvin (Weill Cornell Medical College), Patricia Chamberlain (Oregon Social Learning Center), J. David Hawkins (University of Washington), Sheppard Kellam (Johns Hopkins University), David MacKinnon (Arizona State University), David Olds (University of Colorado, Denver), Irwin Sandler (Arizona State University), Patrick Tolan (University of Virginia) and Zili Sloboda (JBS International, Inc.). We are very pleased that David M. Murray will be giving the keynote address "Developing a Strategic Plan for Prevention Research at NIH" which precedes the awards presentation.

2013 Elections: The 2013 elections have concluded and I'm very pleased to announce the new members of the SPR Board of Directors for the 2013 – 2016 term are Leslie Leve (Oregon Social Learning Center), Greta Massetti (Centers for Disease Control and Prevention), Irwin Sandler (Arizona State University) and Patrick Tolan (University of Virginia). The new ECPN chair-elect is Marie-Hélène Véronneau, (Université du Québec à Montréal). The chair-elect serves a two-year term before becoming chair.

It has been my honor to have served as President of the Society and work with the Board of Directors and the members to advance the field of prevention science.

I look forward to seeing you at the annual meeting in San Francisco.

Sincerely,
Deborah Gorman-Smith, PhD
President

Editor's Welcome

Welcome to the third issue of the SPR Community. I am very pleased with this issue since it builds on the themes and success of the past issues. While we have not been able to adhere to a stable submission schedule, which I hope we will be able to iron out in the future, I am sure that you will find the content of interest. As we have done in the past, I have invited two of the founding members of SPR, namely Gene Oetting and Ralph Tarter to reminisce on the past and future of Prevention Science. In addition, many discussions in 2013 were centered on the Affordable Care Act and what it will mean for Prevention. I feel fortunate that Larry Cohen and Rob Waters from the Prevention Institute were able to submit their perspective on this.

As always, we welcome contributions from members who wish to share the highlights of their experiences, anecdotes and memories of the SPR annual meetings and your reflections on SPR's role in the development of Prevention Science. We will publish them in the Fall/Winter 2013 issue of SPR Community. Please send your contributions to Hanno Petras, PhD, SPR Community Editor at hpetras@jbsinternational.com. Please note that due to space limitations, the Newsletter editor reserves the right to edit copy that is received and to omit submissions that are not directly concerned with SPR annual meeting and activities.



Hanno Petras

I look forward to hearing from you as well as talking with you at the annual meeting in San Francisco.

With best regards,

Hanno Petras, PhD
Editor

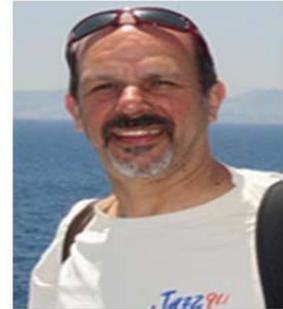
Health Reform Helps Prevention Flower but Threats Endanger Progress

By Larry Cohen and Rob Waters

Many of us have been working for years to demonstrate the power of prevention to improve people's health and wellbeing while reducing healthcare costs. For prevention researchers and advocates, passage of the Patient Protection and Affordable Care Act (ACA) was an affirmation of our work and an opportunity to demonstrate the value of prevention.



Larry Cohen



Rob Waters

The Act puts prevention at the center of efforts to reshape the most expensive health system in the world. The words prevent or prevention appear more than 400 times in the bill, and with good reason: Chronic, often preventable conditions such as heart disease, cancer, stroke, diabetes and injuries account for seven of ten deaths among Americans and roughly three-fourths of our \$2.7 trillion-a-year healthcare bill. About 40 percent of premature deaths are linked to smoking, poor diet, lack of physical activity and other unhealthy behavior, according to the Institute of Medicine. Preventable injuries are a major contributor to hospital visits, death and costs, with an estimated annual price tag of \$406 billion in medical costs and lost productivity.

The Act makes health insurance more widely available, encourages coordination among service providers and payers and incentivizes high-quality—rather than high-quantity—treatment. It also set up grant programs to:

- support school-based health centers
- reward Medicaid users who quit smoking, lose weight or take other health-enhancing steps
- improve laboratory and research capacity and improve the ability to track disease and risks
- send health professionals to the homes of mothers and infants to improve their health and mental health

The Act established the Center for Medicare and Medicaid Innovation to foster new ways of embedding prevention and preventive services into the delivery of healthcare in community-center health systems. It created a National Prevention, Health Promotion and Public Health Council headed by the Surgeon General and including a dozen cabinet-level and high-ranking federal officials, along with an advisory group of non-government leaders to advise the Council. These two bodies were charged with devising a comprehensive prevention and health promotion strategy to guide the effort.

It also included this critical element: In the largest commitment ever made by the U.S. government to prevent illness and injury and keep people healthy in the first place, the bill created an ongoing Prevention and Public Health Fund and gave it \$15 billion in its first 10 years.

Some of this money went to the Centers for Disease Control and Prevention to help states, cities and tribes develop community-based prevention activities. In 2011, the CDC awarded nearly \$300 million in Community Transformation Grants to support local efforts to create safe, walkable streets, promote healthy food environments, support worksite wellness, help children get after-school exercise and reduce exposure to tobacco.

By supporting prevention and health-enhancing community improvements on a broad scale, these investments help shape new values and expectations around the importance of community health and safety. Resulting changes in environment and behavior benefit everyone and reduce the number of people who become injured or develop chronic disease.

Prevention's cost-saving potential has been demonstrated. In 2008, we at Prevention Institute, with our colleagues at Trust for America's Health and the Urban Institute, reviewed hundreds of evidence-based studies and identified 84 that measured the ability of interventions to reduce disease by promoting physical activity, good nutrition or smoking cessation. All these interventions were non-medical—meaning they didn't provide treatment—and all targeted communities, not individuals.

We found that relatively modest investments can result in significant reduction in chronic disease, lowering rates of Type 2 diabetes, heart disease, kidney disease, and other conditions. The economic model we generated found that within two years of initial investment, every dollar would be recouped and an additional \$1 would be saved. In the fifth year of investment, our analysis concluded, each dollar invested would lead to a savings of \$5.60 in reduced health care costs, not including other benefits such as improved worker productivity and reduced absences from work and school. Scaled to a national level, an investment of \$10 per person per year would return \$16.5 billion after five

years. This analysis was critical in winning the Senate health committee's strong support for the prevention components of ACA.

Asthma prevention efforts can pay similar dividends. When symptoms flare in people with asthma, they often end up in emergency rooms or hospital beds—expensive, one-off interventions that don't address the underlying problems and are doomed to be repeated. To change this equation, prevention programs can alter community environments by reducing air pollution and making parks and public spaces smoke-free. They can improve home environments by removing toxic matter—moldy carpets, dust-mite infestations and the like—that trigger symptoms. The CDC's Preventive Services Task Force found that every dollar invested in home-remediation efforts leads to a cost-savings of \$5.30 to \$14.

The potential savings from preventing asthma is so dramatic that a firm called Collective Health is now working to attract private investors to finance the first "health impact" bond in the U.S. to pay for home-based interventions in Fresno, California. Private and public insurers would return a portion of the dollars saved to investors. Their efforts may help create an innovative, market-based model to finance prevention efforts.

In 2011, nearly \$300 million in Community Transformation Grants (CTG) was awarded by the Centers for Disease Control and Prevention to communities across the country to create safe, walkable streets, promote healthy food environments, support local worksite wellness, help children get after-school exercise and safeguard tobacco-free air.

-In Omaha, Nebraska, 1500 children in 12 after-school programs took part in Movin' After School, a curriculum designed by University of Nebraska researchers. The programs eliminated sugary beverages, encouraged kids to exercise and received free recreation equipment if they met certain goals. Researchers monitored the programs, identified best practices and are publishing them to guide other efforts. They found that if staff members take a "hands-on" approach, actively encourage children (especially girls) to take part and make use of recreation equipment, kids spend more time being active. Programs using all these strategies achieved the highest participation levels, with about two-thirds of both boys and girls taking part in physical activity.

-In Seattle, 22 corner stores in neighborhoods considered food "deserts" because of their lack of available fresh produce started selling fruits and vegetables, with support from the health department. Another 28 corner stores were coming on line, according to the CDC, making healthier food options available to 650,000 residents.

-Los Angeles set up programs to promote exercise, build community cohesion and cut violence and crime. Parks After Dark offered recreational and social activities to youth and families in neighborhoods with high rates of violence during high-crime summer evenings. The city provided used bicycles to low-income residents, trained them in bike repair and created a social marketing campaign using transit posters and billboards to encourage people to cut down on sugary foods and drinks.

Other programs help urban farms grow fruits and vegetables and farmers' markets expand, support city planners to set up bicycle lanes and pedestrian paths and bring anti-smoking messages to young people. These programs show how multi-pronged approaches can help people access good food and exercise and have a multiplier effect by spreading beyond the specific sites of interventions to inspire actions in other communities. We saw this with tobacco prevention, where initial efforts in a few communities led to success across the country—even internationally—and a growing consensus that preventive change is doable and makes sense. Such change and consensus starts slowly and its impact grows: we are just beginning to see this kind of impact emerge from the CDC grants.

To have long-term success, such programs need to be maintained and strengthened. The Affordable Care Act's emphasis on prevention should be just the beginning and serve as a catalyst to a 21st century approach to health. But attacks on the Act—and the Prevention and Public Health Fund in particular—threaten our ability to continue this progress. Some Republicans have called it a "slush fund" and worked to slash its funding level. Early this year, the \$15 billion fund was cut by a third to maintain unemployment benefits and avoid cutting pay to doctors in the Medicare program (the so-called "doc fix"). Further attempts to repeal, weaken or raid the fund surely lie ahead.

As researchers and advocates who have worked to build the case for a prevention agenda, we need to celebrate what we have achieved—and recognize the threats that lie ahead. The coming months will be critical for the future of the Prevention and Public Health Fund and we must be prepared to defend it. We must keep making the case for prevention to Congress and to President Obama, as he enters his second term. The next time members of Congress attempt to repeal the Fund or use it as an offset to fix doctor's fees or fund other programs, we must raise our voices and point out that pitting prevention against healthcare is a false choice. We should encourage our colleagues, especially in the healthcare sector, to join us and say that in order to truly bend the healthcare cost curve, we must keep on investing in prevention.

Larry Cohen, MSW, is the founder and executive director of Prevention Institute. Rob Waters is the institute's chief communications officer.

The opinions or views expressed in this article are those of the author and do not necessarily reflect the opinions and recommendations of the Society for Prevention Research and its Board of Directors.

Reflections on SPR and Prevention Science: The Phoenix Principle

By Gene Oetting

It was dusk in the Colorado foothills and, after the trail ride, the horses were back in the stable. We were sitting, cold beer in hand, on the cleared picnic tables; listening to the cowboy poet tell tales of the old west while warming his hands at the campfire. Behind him, heat lightning was flickering far on the horizon, reflected in the lake.

On this final night of the first meeting of the Society for Prevention Research, about three dozen of us were gathered at Lory State Park, above Ft. Collins, Colorado. It was a dream-like evening, but our finest fantasies for the future could not have matched what we have become today, a vital, thriving society of hundreds of scientists from a wide range of disciplines, all committed to preventing harm of one form or another.



Gene Oetting

And the campfire is symbolic. Fire is beautiful and warming and stimulating, but dangerous and damaging as well. A large part of that park just burned in a major forest fire. It destroyed much of the beauty, leaving behind the raw black spikes of scorched tree trunks and blackened earth.

But the forest will recover, and eventually the beauty will come back. We can already see the green shoots of new growth struggling through the ash. Like the phoenix, the forest will return, fresh and new, from the ashes of its own destruction.

Why do I think that this is a useful symbol for our Society? Because, as prevention scientists, we always need to be prepared for failure and ready to replant and regrow. Prevention, by its very nature, must be a phoenix. Whatever we are trying to do, no matter how successful we are, there is almost undoubtedly going to be failure down the road. We must be aware that this will occur and be ready to start over again.

Why is failure likely? First, our attempt to alter whatever it is we are trying to change may not succeed. Unless they are trivial, and none of us is devoted to the trivial, the problems that we are trying to solve are deeply ingrained in society and the environment; they are difficult and resistant to change. No matter how brilliant, our endeavors simply may not work. We go down in flames and have to try again.

On the other hand, we might succeed. We may actually change behavior, change social structures, develop a vaccine, or alter the poisonous environment and reduce the damage and the harm being done. What happens then?

With rare exceptions, like smallpox and the guinea worm, where the causative agent can, perhaps, be eliminated, a prevention program has to be maintained to be effective. So even if we develop a superb prevention, essentially eliminating the problem, some idiot is likely to proclaim that it causes autism, or is against God's will, or is a CIA plot, or for some other inane reason should not be used. And prevention can always be challenged. One reason is that, while you can point to the people you cured, you can't point to the ones that were kept from harm, so it is harder to put a face on prevention. Even a great program may be eliminated and, while not exactly having to start over, the phoenix principle applies, and we have to rise again and be ready to find ways to reinstate what we have gained.

But this level of success is exceptionally rare. Most of us are trying to deal with ingrained societal problems or damaging behaviors that have multiple causes and multiple and complicated outcomes. Our best efforts, much of the time, are likely to reduce harm by a few percentage points. Those few points are critical; they can mean lives saved, improved well-being, and better health for hundreds or even thousands of people.

Despite that success, our prevention programs are likely to die. Politics change, priorities shift or money gets tight, and prevention is cut. This happened to us in one of our first projects. Forty years ago, we proved that vocational rehabilitation kept mental patients out of the hospital longer and was hugely cost effective. But the treatment professionals were in charge and, with the first budget cuts, rehab was eliminated. Follow the logic: Rehab kept people out of the hospital. That reduced the patient load. Fewer patients justified cutting the budget. So rehab was eliminated. All we could do was dust off the ashes of defeat and start over.

There are ways of staving off defeat. If you institutionalize a program, it is much more likely to continue. Prevention becomes part of the system, accepted as a normal expense or effort. But that creates its own dangers. Programs that become part of the system are likely to deteriorate in effectiveness over time. And, since the environment is always changing, if the program remains the same, it is likely to eventually become irrelevant or inappropriate or less effective.

Further, since institutionalization usually means that people believe it is the “right” thing to do, these programs are rarely evaluated. Getting it tested and, if necessary, changed, may be a harder task than simply starting a new program.

Back to the phoenix principle: In prevention, whatever we create will eventually, fail and we must be ready to rise again from the ashes. Well, at least that keeps things interesting; it means that we will always have a new challenge. But more than that, the whole function of the Society for Prevention Research is inherent in the legend of the phoenix. Failure is just part of the ongoing process. We need to recognize that, be ready for it, and constantly plant the seeds or lay the eggs that produce a new generation of prevention programs.

And, unlike the forest and the phoenix, which simply regenerate themselves as they once were, we are scientists. Each time we try, we produce new knowledge, new theories, new concepts, and we spread and disseminate those ideas. We are not merely rising from the ashes, we are creating a science of prevention, the theories and methods of inquiry that ultimately must lead to progress. In the long run, we will always win. That is the meaning and the purpose of the Society for Prevention Research.

The first meeting of the Society was hosted at Colorado State University by Gene Oetting, Fred Beauvais and Ruth Edwards. Gene is now a Professor Emeritus, meaning that he gets a free parking sticker and letters asking for donations. He still works with the faculty of the Tri-ethnic Center for Prevention Research, struggling to get funding for prevention research aimed at the problems of disadvantaged populations.

Eugene (Gene) Oetting, PhD, is Professor Emeritus at Colorado State University and a founding member of the Society for Prevention Research.

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The Future of the Scientific Practice of Prevention

By Ralph Tarter

Many summer afternoons were spent with my father in the cheap seats rooting for the Montreal Royals, then the triple A farm club of the Brooklyn Dodgers. My dad, like thousands of men, wore a white shirt, tie and fedora. Fast forward six decades, men today at the ballpark typically wear a tee shirt (if any), never a tie, and baseball cap (often pointed backwards). Changing norms pertaining to dress mirror relaxation of behavioral norms. Ubiquitous examples of currently normative behavior that were only recently beyond societal boundaries include “body art” (previously confined to criminals and sailors), babies born outside of marriage (currently the majority for women under 30), and ornamental jewelry skewered to many body parts apart from traditional earlobes. Attributions of these changes to “secular trends”, “birth cohort” or “historical period effect” do not account for the causes. Because prevention is modification of processes predisposing to a disorder, it is essential to understand the causes of the disorder for the intervention to be effective. This approach to prevention is consistent with the NIH Roadmap. Indeed, it is a cardinal principle of medicine.

Prevention is directed at either averting expression of phenotypes comprising the prodrome (primary prevention) or disturbance portending the clinical disorder (secondary prevention). Since all biobehavioral characteristics (phenotypes) result from the environment impacting on the genotype, effective prevention thus involves modifying gene expression. The outcome of this intervention is the desired phenotype.

Within this framework, the concept termed individual norm of reaction is central to prevention practice. This concept asserts that the individual’s genotype predisposes to a range of phenotypes (e.g. IQ between 90 and 112). The person’s specific expressed phenotype (e.g., IQ = 103) is the result of the individual-specific environment affecting expression of the genotype so as to produce a cascade of biochemical reactions resulting in numerous neurobiological events that ultimately manifest as physiological and psychological traits. Clearly, this process is enormously complex. Nevertheless, the overarching effort in scientifically grounded prevention practice, albeit a daunting one, requires marshalling the appropriate environmental resources to potentiate development of desired phenotypes. However, because the range of possible phenotype outcomes (i.e. the individual norm of reaction) is set by the individual’s genotype, a discomfiting reality is that the genotype may not have the potential to realize the desired outcome.

Let me illustrate: The average Dutch male is 6’1” tall. During the past 200 years mean height of Dutch men increased 7”. Because the genetic pool of the Dutch population has not changed within this period, the increased height is due to societal (environment) changes enabling previously unrealized genetic potential. Specifically, universal access to



Ralph Tarter

healthcare, food availability, policies preventing destitute poverty, social safety net that lowers stress (and consequent psychiatric and medical disorders), cultural norms fostering physical fitness (one quarter of the population are members of athletic clubs) and lifestyle emphasizing exercise (e.g. walking and bicycling) all contribute to the increase in stature. Dutch men are the tallest in Europe and surpass U.S. men by an average of four inches! Nevertheless, many Dutch men are shorter than the average American male. Hence, despite an environment that facilitates height, the genotype of many Dutch men prevents attaining even the average height of Americans. In effect, commensurate with the individual norm of reaction principle, the genotype constrains the benefit of the environment.

What does this mean for the scientific practice of prevention? Essentially, the answer is that prevention practice will avert disorders and diseases by engineering the environment tailored to the individual's genotype to promote optimum phenotypes. This will be neither easy nor straightforward. There are ~20,000 genes with numerous functional polymorphisms. Since most disorders are polygenic, complexity is further magnified by gene-gene as well as gene-environment interactions. Nevertheless, there is reason to believe that this complexity can be managed using computers which today already have reached the network performance of quadrillions of operations per second. Ethical and policy considerations notwithstanding, prevention practitioners in the future will have an armamentarium of tools to potentiate impact of the environment on the genotype to promote desired biological and behavioral phenotypes.

You may have noticed that this future has arrived. If not, check out 23andMe.com (founded by Anne Wojcicki, the wife of Google co-founder Sergey Brin). Send this company some saliva and for a small fee your genetic risk for a variety of diseases or for an adverse reaction to some medications is estimated. The Federally-funded Person Centered Oriented Research Innovation Institute (PCORI) places human individuality at the center of the big question of "what works for who". The International College of Person Centered Medicine, a network of scientific and professional societies (including the WHO) is one key organizational leader of this movement.

Having had the privilege of being present at the founding of SPR, I believed then as I believe now that prevention is essentially the practice of ecology. That is, the goal is to maximize a good fit between the individual and multiple environments within a lifespan framework. Adaptation conceptualized in this fashion is contingent on acquisition of a large array of biological and psychological characteristics (phenotypes) that are related to lowered risk of disease and disorder. Accordingly, the scientific practice of prevention will directly connect to an understanding of etiology, and as such, deploy environmental resources tailored to the individual genotype to maximize expression of optimum phenotypes.

This is the mission of SPR as I see it from my seat in the bleachers.

Ralph E. Tarter, Ph.D. is Director of the NIDA-funded Center for Education and Drug Abuse Research (CEDAR), Professor of Pharmaceutical Sciences at the University of Pittsburgh School of Pharmacy and a founding member of the Society for Prevention Research.

An Interview with 2012 SPR Cup Winners

In recognition of the importance of the collaborative process to the field, the Society for Prevention Research (SPR) annually sponsors a friendly competition amongst teams of researchers for the honor of bringing home the Sloboda and Bukoski SPR Cup. The Cup is named for two of the founders and long-time active members of SPR, Dr. Zili Sloboda and Dr. William Bukoski. The Cup competition is an opportunity for an unique experience: several independent teams of scientists, each working with the same data set, problem solve together for a brief period of time and then jointly present their ideas to each other and a larger group of experienced prevention scientists.

At the 20th SPR Annual Meeting, five teams competed for the 7th Annual SPR Sloboda and Bukoski Cup. The teams all worked with the same data set the Second Injury Control and Risk Survey (ICARIS-2). Collection of this dataset was sponsored by the National Center for Injury Prevention and Control (NCIPC), Centers for Disease Control and Prevention (CDC).

SPR Cup teams received the data set two months prior to the annual meeting. During the months preceding the meeting, each team conducted a literature review, generated hypotheses, conducted analyses, and prepared a presentation for a 10-minute symposium talk on their results. The five teams presented their results during an invited symposium at the SPR annual meeting. A panel of senior prevention scientist judges and the audience at the symposium rated the quality of the research work and of the presentation.

SPR Community interviewed Alexis Harris (captain) of the 2012 SPR Cup winning team, The Cohort Effect, The Pennsylvania State University. Harris's team mates are Charles Beekman, Jacqueline (Jacqui) Cox, Kathleen Zadzora and Shu (Violet) Xu.

SPR Community: What motivated you to compete in the SPR Cup?

Harris: We've all witnessed and admired students in our research centers (the Prevention Research Center and the

Methodology Center) at Penn State University (PSU) that have competed in the past, and we even felt a little pressure to follow in their footsteps. Mostly, though, competing in the Cup represented a challenge to pull together the different elements of our training and to stretch ourselves with data and research questions that were different than what we work with every day in our respective labs. We all know that collaboration is an important part of research, but as students we typically collaborate with our advisors and those within our own labs. This competition was an opportunity for a different kind of collaboration with our peers who have different backgrounds, research interests, and skills.

SPR Community: How did the team come together?

Harris: All of the members of our team have common interests in prevention, methodology, and the study of development, and we also each have a bit of a competitive side that really drew us to the challenge of the Cup. Alexis, Jacqui, and Kathleen are part of a tight-knit cohort in the Human Development and Family Studies (HDFS) doctoral program at PSU and work in the Prevention Research Center (PRC). Charlie is in the developmental psychology doctoral program but has been dubbed an honorary cohort member because he completed his methods sequence with our HDFS cohort. Three of us (Charles, Kathleen and Alexis) are on the same IES predoctoral training fellowship. We met Shu (Violet), a post-doctoral research associate at the Methodology Center, when four of us took a course on causal inference methods with Donna Coffman, who became our mentor for the Cup.

SPR Community: What inspired you to choose your topic?

Harris: Because most of us consider ourselves prevention-oriented developmental scientists, we saw great potential for this data set to tell a developmental story that would inform prevention efforts. The previous reports on the ASAP Study had examined intervention effects in detail, but we thought that the study also successfully compiled a very rich longitudinal dataset capturing the transition into high school and teens' experience of substance use throughout middle and high school. We knew that taking an innovative approach (such as those being studied at Penn State's Methodology Center) to documenting the changes in adolescents' substance use over time would aid the field in the nuances of design and targeting of prevention and intervention efforts.

SPR Community: What was the biggest challenge in preparing your presentation?

Harris: The biggest challenge in preparing a ten-minute presentation was finding a way to communicate the whole story of our analyses without hitting the audience with an overwhelming amount of information. Visually representing Latent Transition Analysis was a huge challenge, and all five of us worked long hours together to experiment with different graphics and animations to find the best way to depict the processes studied in LTA.

SPR Community: In what ways did this experience change how you thought about prevention science and a career as a prevention scientist?

Harris: Competing in the SPR Cup gave us a new understanding of interdisciplinary collaborative work and its value for advancing the science of prevention. Our experience in the competition also reinforced for us the importance of combining the study of developmental processes with intervention studies to enable a project to contribute to a deeper understanding of the phenomena of interest in addition to the efficacy of a particular prevention effort.

SPR Community: Do you have any recommendations for future SPR Cup teams?

Harris: Make sure you have the time available to thoroughly tackle the project. When we were planning our work schedules for the spring, we all set aside most of the month of May to devote the majority of our time to this and knew that we would be working long hours to be able to balance the Cup with the demands of our other projects. Push yourself to really get to know the dataset inside and out before proceeding with your analyses. Don't underestimate the data management demands, and take the time to be as thorough as possible.

Try to have as many team members as possible who have a strong foundation in both prevention and methodology rather than one or the other. Having a team with a diversity of experience will increase your chances that someone will be familiar with the content area of the dataset, but a common foundation or interest among team members helps as well. We found it particularly advantageous that everyone on our team has a strong base of methodological training from which to draw. Since you receive a large, novel dataset and have a very tight timeline to pull together your research question and analyses, it helps to have as many people as possible comfortable in data management tasks, dealing with missing values in the data, trying out preliminary analyses, etc.

We would also recommend getting feedback and critiques from people outside the team in order to strengthen your project and find the best way to present it to a diverse audience.



Caption: left to right: Shu (Violet) Xu, Kathleen Zadzora, Alexis Harris, Jacqueline Cox, Charles Beekman

International Networking Forum and International Task Force Report

By Brenda A. Miller

The International Task Force (ITF) is currently comprised of the following members: John Toumbourou (Australia), Moshe Israelshvili (Israel), Josipa Basic (Croatia), Jeff Lee (England), Hanno Petras (USA), Zili Sloboda (USA), and Brenda A Miller (Chair-USA).

The ITF meets on a (nearly) monthly basis via teleconference calls. We have established a number of ongoing efforts for the later part of 2012 and for 2013.

First, we are providing networking opportunities for international colleagues to meet during the yearly pre-conference networking forum at the annual meetings. We will continue to provide this International Networking Forum at the 2013 conference in San Francisco (click here for agenda <http://www.preventionresearch.org/2013-annual-meeting/international-focused-events/>).



Brenda Miller

The ITF has been engaged in facilitating and supporting the exchange of prevention science scientific knowledge and ideas worldwide. Members of the ITF have actively supported the Drug Prevention and Health Branch of the United Nations Office on Drugs and Crime (UNODC) in their efforts to develop international prevention standards that emphasize science based prevention strategies. Towards this end, the SPR Board has written a letter of support to the UNODC effort. The ITF has been actively engaged in the yearly SPR conference planning, supporting development of roundtable, plenary, paper, and poster sessions.

An ongoing effort has been made to identify opportunities for establishing "seed monies" for international collaborations to become established for the purposes of advancing prevention science globally. To support collaborations, there is a need to provide opportunities for face-to-face encounters between prospective research teams so that ideas and proposals can be developed. One source of support for these seed monies has been the funding from NIDA that has supported travel funds to a small number of international colleagues who are presenting posters at the NIDA International Poster Session. The Task Force wants to identify other possible sources of funding to support opportunities and make members aware of these potential opportunities.

The ITF is incorporating an advisory board to the task force that will represent different regions around the world and will assist the board in identifying issues, strategies, and opportunities for achieving our goals. In addition the advisory board will assist the ITF in reviewing and updating our goals as we move forward. We are currently developing this board and to date, the following individuals have agreed to serve on this advisory board: Harrie Jonkman (Netherlands), Renati Solomon (India), Jeremy Segrott (UK), Meen Chhetri (Nepal), Dale Weiss, (USA-NIDA), Gregor Burkhart (Portugal), Giovanna Campello (UNODC), Hanna Heikkila (UNODC), Methinin Pinyuchon

(Thailand). Additional names are currently being considered and this advisory board will be participating at the 2013 SPR Annual Conference International Networking Forum.

Brenda A. Miller, PhD, a senior research scientist at the Pacific Institute for Research and Evaluation, is chair of the International Task Force, a former member of the Society for Prevention Research Board of Directors, and chaired the 2011 Conference Program Committee.

National Preventionist Network

By Craig L PoVey

The National Association of State Alcohol and Drug Abuse Directors, Inc. (NASADAD) is a private, not-for-profit educational, scientific, and informational organization. The system that NASADAD represents is primarily funded by the Substance Abuse Prevention and Treatment (SAPT) Block Grant.

NASADAD's basic purpose is to foster and support the development of effective alcohol and other drug abuse prevention and treatment programs throughout every State. NASADAD serves as a focal point for the examination of alcohol and other drug related issues of common interest to both other national organizations and federal agencies.

The National Prevention Network (NPN), is a component of NASADAD. State prevention representatives work to ensure the provision of high quality and effective alcohol, tobacco, and other drug abuse prevention services in each State. Research and evaluation efforts are critical to fulfilling this mission and the NPN is eager to form stronger relationships with the research community. The NPN recently celebrated its 25th annual NPN Research Conference where several SPR members attended and delivered high quality researched based breakouts and keynote presentations. One such presentation was a plenary session panel moderated by Craig PoVey and made up by David Hawkins, Zili Sloboda and Ralph Hingson. The focus was on research advancements in the past 25 years.

The NPN uses its leadership role to promote high-quality prevention services through:

- Communication among States to increase awareness and availability of effective and innovative prevention strategies;
- Advocacy at National, State, and regional levels for prevention services;
- Development of recommendations and policy guidelines to guide and enhance State use of prevention resource;
- Involvement of prevention professionals nationwide as associate members;
- Leadership of national campaigns to mobilize cooperation around national efforts.

The current NPN liaison to SPR is Craig PoVey from Utah. Craig is the immediate Past President of the NPN and sits on the NPN Executive Committee. As liaison, he attends the SPR Board Retreat and shares the NPN research agenda. An overall goal is for the NPN liaison is to develop relationships with the research community and find ways to partner with researchers.

NASADAD is headquartered at 1025 Connecticut Avenue NW, Suite 605, Washington, DC 20036; telephone (202) 293-0090, <http://nasadad.org/>.

Craig can be reached at CLPoVey@Utah.gov or (801) 538-4354

Member News

GRANTS

Jessica Duncan Cance, MPH, PhD, received her first grant: R03 DA033413 "Examining the relations of cigarette and alcohol across emerging adulthood" from the National Institute on Drug Abuse.

PROFESSIONAL APPOINTMENTS

Patrick Malone, PhD, a quantitative and social psychologist, has been awarded tenure as an Associate Professor of Psychology at the University of South Carolina. He specializes in methods for latent variable modeling and longitudinal analysis for adolescent health risk behaviors.

Weiwei Liu, PhD, finished her post-doctoral fellowship in Prevention at Johns Hopkins School of Public Health in June 2012 and transitioned to NORC at the University of Chicago as a Research Scientist in the Substance Abuse, Mental Health, and Criminal Justice Studies (SAMHCJ) department in July 2012.

PUBLICATIONS

Bettencourt, A. F., Farrell, A. D., Liu, W., and Sullivan, T. N., "Stability and change in patterns of peer victimization and aggression during adolescence", *Journal of Clinical Child and Adolescent Psychology*. Doi: 10.1080/15374416.2012.738455 (Online first).

Coffman, D.L., & Kugler, K.C. (2012). Causal mediation of a human immunodeficiency virus preventive Intervention. *Nursing Research*, 61(3), 224-230. PMID (https://ucsf.edu/zimbra/CID), PMC3377683.

Lanza, S.T., Tan, X., & Bray, B.C. (in press). Latent class analysis with distal outcomes: A flexible model-based approach. *Structural Equation Modeling*.

Liu, W., Lee, G., Goldweber, A., Ialongo, N., Petras, H., Storr, C. and Martins, S. (2012) "Impulsivity trajectories and gambling in adolescence among urban male youth", *Addiction* doi: 10.1111/add.12049 (Online first).

Liu, W., Kuramoto, J., and Stuart, E. (In press) "An Introduction to Sensitivity Analysis for Unobserved Confounding in Non-Experimental Prevention Research", *Prevention Science*

Martins, S., Liu, W., Hedden, S., Goldweber, A., Storr, C., Derevensky, J. Stinchfield, R., Ialongo, N. and Petras, H. (In press) "Youth aggressive/disruptive behavior trajectories and subsequent gambling among urban male youth", *Journal of Clinical Child and Adolescent Psychology*

Masyn, K., Petras, H., and Liu, W. (2013) "Latent Growth Models and the Study of Change with Binary and Ordinal Outcomes" in Gerben Bruinsma and David Weisburd (Ed.) *Encyclopedia of Criminology and Criminal Justice*

Two years ago, SPR members were invited to share their experiences with and views on the topic of mentorship via an online survey. Preliminary results were presented during the Early Career Preventionist Network (ECPN) luncheon at the 2010 SPR annual meeting. Complete results of the survey are now available in an article recently published in *Prevention Science*, along with reflections and advice for the advancement of mentoring within the SPR community. Reference:

Véronneau, M.-H., Cance, J. D., & Ridenour, T. A. (2012). Mentoring early-career preventionists: Current views from mentors and protégés. *Prevention Science*, 13 (5), 493-503.

The American Psychological Association has recently published a volume titled: *Methodological Approaches to Community-Based Research*. This book offers innovative research tools that are most effective for understanding social problems in general and change in complex person-environment systems at the community level. Methodological pluralism and mixed-methods research are the overarching themes in this groundbreaking edited volume, as contributors explain cutting-edge research methodologies that analyze data in special groupings, over time, or within various contexts. Allison Dymnicki and SPR Member David Henry wrote a chapter for this volume on the uses of clustering methods in community research. Reference

Leonard, J.A., Glenwick, D.S. (2012). *Methodological Approaches to Community-Based Research*. American Psychological Association. Washington, D.C.

SPR Community welcomes contributions to Member News a regular feature of the newsletter. If you would like to have your recent honor, award, professional appointment, and publication featured in the next issue please forward the details of your achievement to Hanno Petras, PhD, SPR Community Editor at hpetras@jbsinternational.com.

Prevention Puzzle

Like all other parts of your body, your brain also needs exercise. Research has shown that solving a Puzzle is one of the most beneficial exercises for the brain. You are to find the last names 18 founding members of SPR. The solution is shown at the bottom of the page. Good luck!

R C F H C T C I G L H M O S S J
K B O E Q O Z Y K Z P O Z X B N
X X S L A W C Y C N O T Y A L C
L V E P L Z P K R O E T T I N G
M C I A B I Z B E U G H L I H Y
A A T D I S N B D N B S K G W L
C R Z O L X J S Y N D N S W O A
K N H B T A R T E R C P E E G L
I E U O Y G R L A T R H O S B F
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T B Z I N E S N A H X F J N R E

Bardo
Bukoski
Carney
Clayton
Collins
Donohew
Dusenbury
Edwards
Flaherty

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Seitz
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Tarter