SUICIDE PREVENTION AND TREATMENT: HELPING LOVED ONES IN MENTAL HEALTH CRISIS

HEARING

BEFORE THE

SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS

OF THE

COMMITTEE ON ENERGY AND COMMERCE

HOUSE OF REPRESENTATIVES

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C O N T E N T S

WITNESSES

SUBMITTED MATERIAL

[1] Mr. Diaz-Balart did not submit a written statement for the record.

SUICIDE PREVENTION AND TREATMENT: HELPING LOVED ONES IN MENTAL HEALTH CRISIS

THURSDAY, SEPTEMBER 18, 2014

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS,
COMMITTEE ON ENERGY AND COMMERCE,
Washington, DC.

The subcommittee met, pursuant to call, at 11:33 a.m., in room 2123 of the Rayburn House Office Building, Hon. Tim Murphy (chairman of the subcommittee) presiding.

Members present: Representatives Murphy, Burgess, Blackburn, Gingrey, Griffith, Johnson, Long, Ellmers, Upton (ex officio), DeGette, Braley, Schakowsky, Castor, Tonko, Yarmuth, and Green.

Staff present: Gary Andres, Staff Director; Leighton Brown, Press Assistant; Karen Christian, Chief Counsel, Oversight and Investigations; Noelle Clemente, Press Secretary; Brad Grantz, Policy Coordinator, Oversight and Investigations; Brittany Havens, Legislative Clerk; Sean Hayes, Deputy Chief Counsel, Oversight and Investigations; Robert Horne, Professional Staff Member, Health; Emily Newman, Counsel, Oversight and Investigations; Mark Ratner, Policy Advisor to the Chairman; Macey Sevcik, Press Assistant; Alan Slobodin, Deputy Chief Counsel, Oversight and Investigations; Sam Spector, Counsel, Oversight and Investigations; Jean Woodrow, Director of Information Technology; Peter Bodner, Democratic Counsel; Brian Cohen, Democratic Staff Director, Oversight and Investigations, and Senior Policy Advisor; Lisa Goldman, Democratic Counsel; Hannah Green, Democratic Policy Analyst; Elizabeth Letter, Democratic Professional Staff Member; and Nick Richter, Democratic Staff Assistant.

OPENING STATEMENT OF HON. TIM MURPHY, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF PENNSYLVANIA

Mr. MURPHY. Good morning. I now convene today's hearing, "Suicide Prevention and Treatment: Helping Loved Ones in Mental Health Crisis," a fitting topic during this National Suicide Prevention Month.

In recent weeks we have read what I think were thoughtless, uninformed, and at times callous commentary on the tragic death of Robin Williams. Words describing his death as "selfish," "heathen," and "coward." The Academy of Motion Picture Arts and Sciences

tweeted out a picture from the movie "Aladdin" with the caption, "Genie, you are free."

Now, denigrating the man who died or glorifying suicide as an escape sends the entirely wrong message and trivializes the loss and the pain felt by both the deceased and his or her family.

Today, we take the conversation of suicide out of the dark shadow of stigma and into the bright light of truth and hope.

Suicide is the deadly outcome of mental illness. Suicide is what happens when depression kills. Suicide is an epidemic and its impact is staggering.

Now, I know some have come to me and asked if we could have a hearing on Ebola, and someday we will. It is a deadly infectious disease. But to date, no American has died from the Ebola virus.

But in 2013, 9.3 million Americans had serious thoughts of suicide; 2.7 million Americans made plans of suicide; 1.3 million Americans attempted suicide; and nearly 40,000 died by suicide.

Suicide is an American public health crisis. It is a world health crisis, and that results in more lost lives than motor vehicle crashes, homicide, or drug use. As we will hear today, it is the third leading cause of death for young people between ages 15 to 24, and the second leading cause of death for adults ages 25 to 34, and each day, we lose 22 veterans to suicide.

In 90 percent of suicide, an underlying diagnosis of mental illness was a contributing factor. Suicide is the very definition of a "mental health crisis." The problem is clear and the need for action is urgent. But our national response to this crisis has been tepid and ineffectual at best. The age-adjusted death rates for heart disease, cancer, stroke, and diabetes are all trending downward as the result of a focused public and political will to address them. Yet in that same period, the suicide rate has climbed a stunning 16 percent, despite substantial Federal spending over the past 60 years and the development of Federal programs and strategies meant to reduce suicide.

We have randomized clinical data supporting the effectiveness of certain treatments to prevent suicide. However, it is unclear what we are doing to ensure that evidence-based treatments are reaching out to our loved ones in need.

Suicides, and suicidal behavior, remain underreported, undertreated, and cloaked in a stigma that infects our discussion of all aspects of serious mental illness. The existing data collection instruments we use are weak, our research is lagging, and evidence-based treatments often fail to reach those who can be helped. People do not report suicides because of stigma, worry about insurance claim issues, or misattribution of causes.

Following the December 14, 2012, elementary school shootings in Newtown, Connecticut, this subcommittee has been reviewing mental health programs and resources across the Federal Government with the aim of ensuring that tax dollars reach those individuals with serious mental illness and help them obtain the most effective care. I thank all members of this committee for their dedication to this difficult but important subject.

Helping families in mental health crisis remains my highest legislative priority, and if we have the courage to confront mental illness head-on I am certain we can save precious lives.

Now, as I have been traveling the country meeting with people to talk about mental illness, I have found that some still grossly misunderstand mental illness. They don't argue for the right to be well but I hear judges say that it is not illegal to be crazy. I hear public officials say that they have the right to be mentally ill even when we know that there are genetics and neurological components that cause this illness. It is a brain disease. It is not an uncomfortable way of life. It is not a non-contentious reality. Mental illness is not a state of mind. And people who believe those concepts, that we can just will it away with awareness, I say that such thoughts are unscientific, that it is uninformed, it is immoral, it is unethical, and it is wrong.

This subcommittee is dedicated to fight for the right of people to get treatment and the fight for them to be well, and I think all members on both sides of the aisle have been so dedicated in this cause.

So today, to provide some perspective on serious mental illness and suicidal behavior, and to begin to dispel the most persistent and pervasive myths and as well as effective strategies for suicide prevention, we will hear from a number of witnesses. First will be the Hon. Lincoln Diaz-Balart, our colleague and our friend who formerly represented Florida's 21st District in Congress; Rear Admiral Boris Lushniak, the Acting Surgeon General; Dr. David Brent, the Endowed Chair in Suicide Studies at the University of Pittsburgh, and Director of the STAR Center, a suicide prevention program for teens and young children; Dr. Christine Moutier, Chief Medical Officer of the American Foundation for Suicide Prevention; and Joel Dvoskin of the University of Arizona. I thank them all for joining us this morning, but I especially appreciate the courage shown by our former colleague, Lincoln Diaz-Balart.

Lincoln, by being here today and sharing your story, I know you are helping to save lives. We talk about statistics and numbers. For you it is from the heart, and you give help and hope to those families at risk. So on behalf of all those, quite frankly, of us who have lost a friend or family member to suicide, we thank you for being the voice of all of us.

[The prepared statement of Mr. Murphy follows:]

PREPARED STATEMENT OF HON. TIM MURPHY

In recent weeks we have read the thoughtless, uninformed, and at times callous commentary on the tragic death of Robin Williams. Words describing his death as "selfish," "heathen," and "coward."

The Academy of Motion Picture Arts and Sciences tweeted out a picture from the movie "Aladdin" with the caption, "Genie, you're free."

Denigrating the man who died or glorifying suicide as an escape sends the entirely wrong message and trivializes the loss and pain felt by both the deceased and his or her family.

Today, take the conversation about suicide out of the dark shadow of stigma and into the bright light of truth and hope.

Suicide is the deadly outcome of mental illness. Suicide is when depression kills. Suicide is an epidemic and its impact is staggering.

Infectious diseases like the Ebola virus is gaining attention and concern, as it should. Some have asked for a hearing on the Ebola virus, but to date, not one American has died from Ebola.

By comparison, in 2013, 9.3 million Americans had serious thoughts of suicide; 2.7 million made suicide plans; 1.3 million attempted suicide and nearly 40,000 died by suicide.

Suicide is an American public health crisis, that results in more lost lives than motor vehicle crashes, homicide, or drug use. As we will hear today, it is the third leading cause of death for young people ages 15–24, and the second leading cause of death for adults ages 25 to 34. Each day, we lose 22 veterans to suicide.

In 90 percent of suicide, an underlying diagnosis of mental illness was a contributing factor. Suicide is the very definition of a mental health crisis.

The problem is clear and the need for action is urgent. But, our national response to this crisis has been tepid and ineffectual at best. The age-adjusted death rates for heart disease, cancer, stroke, and diabetes are all trending downward as the result of a public and political will to address them.

Yet, in that same time period, the suicide rate has climbed a stunning 16 percent, despite substantial Federal spending over the past 60 years and the development of Federal programs and strategies meant to reduce suicide.

We have randomized clinical data supporting the effectiveness of certain treatments to prevent suicide. However, it is unclear what we are doing to ensure that evidence-based treatments are reaching our loved ones in need.

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Following the December 14, 2012, elementary school shootings in Newtown, Connecticut, this subcommittee has been reviewing mental health programs and resources across the Federal Government, with the aim of ensuring that tax dollars reach those individuals with serious mental illness and help them obtain the most effective care.

Helping families in mental health crisis remains my highest legislative priority. And, if have the courage to confront mental illness head on I am certain we can save precious lives.

Some in the country still grossly misunderstand mental illness. They don't argue for the right to be well—but gleefully declare that it's not illegal to be crazy. Some even say they have the right to be seriously mentally ill even though we know it is a genetic and neurological brain disease.

To those people I say this: Mental illness is not a state of mind or an attitude. Such a belief is unscientific. It is uninformed. It is immoral. It is unethical, and it is wrong.

This subcommittee is dedicated to fighting for the right to get treatment and the right to be well.

To provide some perspective on serious mental illness and suicidal behavior, and to begin to dispel the most persistent and pervasive myths and as well as effective strategies for suicide prevention, we will hear from the following:

The Honorable Lincoln Diaz-Balart, our colleague who formerly represented Florida's 21st District in Congress; Rear Admiral Boris Lushniak, the Acting Surgeon General; Dr. David Brent, Endowed Chair in Suicide Studies at the University of Pittsburgh, and Director of the STAR Center, a suicide prevention program for teens and young children; Dr. Christine Moutier, Chief Medical Officer of the American Foundation for Suicide Prevention; and Joel Dvoskin of the University of Arizona.

I thank them all for joining us this morning, but I especially appreciate the courage shown by our former colleague, Lincoln Diaz-Balart.

Lincoln—by being here today and sharing your story, I know you are helping to save lives and give hope to those at risk. On behalf of all who have lost a friend or family member to suicide, thank you.

Mr. MURPHY. And now I would like to give Ranking Member Diana DeGette an opportunity to deliver remarks of her own.

OPENING STATEMENT OF HON. DIANA DEGETTE, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF COLORADO

Ms. DEGETTE. Thank you very much, Mr. Chairman. Your dedication to this issue shows, and I want to commend you for trying to work in a bipartisan way to actually do something about it.

Suicide takes the lives of about 40,000 Americans every year, and of course, that leaves behind millions of devastated parents, children, spouses, and friends. So if there is anything that we can do in this committee to help suicide prevention efforts, we should

do so, and I want to thank all the witnesses for coming over today and talking to us.

I particularly want to thank our former colleague, Lincoln Diaz-Balart, who is going to talk today about his son, Lincoln Gabriel Diaz-Balart, who suffered from mental illness and committed suicide last year. I can't imagine as the parent of two young women how you could come do this, and I want to thank you for coming, and I want to let you know that our hearts and sympathy go to you and your family.

We also have Dr. Boris Lushniak, the Acting Surgeon General; Dr. Christine Moutier, who is the Chief Medical Officer from the American Foundation of Suicide Prevention; David Brent, a Professor in Psychiatry from the University of Pittsburgh; and Dr. Joel Dvoskin, a Clinical and Forensic Psychologist, and member of the University of Arizona faculty who is here today. All of you should give us a really diverse view on what we can do to begin to deal with this.

We have talked a lot of time in this subcommittee this past year about mental health issues. We have learned a lot of important things. We have learned about the need to appropriately target mental health funding and the need to adequately fund mental health research. We have learned about the importance of health insurance that provides coverage for people with mental illnesses and why the mental health parity of the Affordable Care Act has made such a big difference for those patients and their families. I think that the testimony that we will take today will only help us expand our understanding.

Some of these issues I know are politically sensitive, and Mr. Chairman, I know how badly you want to pass comprehensive mental health legislation. I support that goal. We have been working assiduously to try to come up with a bipartisan bill that can be accepted by the leadership on both sides of the aisle, and we have Democrats who stand willing and able, as you know, Mr. Chairman, who have sat down with you, who have sat down with other members on both sides of the aisle to put this bill together, and so I really think it is precisely because we have spent so much time on these issues that if we didn't put the lessons that we had learned in these oversight hearings to practice in legislation, then it may all be for naught.

This subcommittee has limited time and resources, and frankly, these mental health issues are one of the very important issues that we have tackled in this Congress, but we have also done a lot of other productive work this Congress on drug compounding that led to bipartisan legislation. We have had some high-profile hearings on the GM debacle. I am hoping that that will result in legislation to improve motor vehicle safety.

And I am also disappointed because I do think there are a couple of other issues that we could look at even before the election but certainly before the end of this Congress. The first one I have requested a hearing on is the Ebola outbreak, and I am sure, Mr. Chairman, you did not mean to imply that simply because no American lives have been lost that we shouldn't look at this because there have been hundreds of lives lost in Africa and with the potential of a pandemic if we don't address this issue. And so I

think it would be very useful to have a hearing before the end of the year on Ebola in this subcommittee, and I think we could really help see what our public health system is doing to help address these issues.

The second letter that you have, Mr. Chairman, and I have talked to Chairman Upton about this, is a letter asking this subcommittee to look at the way that the NFL and the other sports leagues are addressing domestic violence. This committee has oversight over major league sports, and frankly, the way that domestic violence has been minimized in the NFL and other sports leagues deserves investigation by this committee. There is still time to do this, and I would hope that we could work in a bipartisan way to make this happen.

I also hope that we can make progress on the goals of today's hearing, which is reducing suicides and improving suicide prevention efforts.

So Mr. Chairman, thank you for calling this hearing. I look forward to working with you on this issue and all of the many issues that we face, and most importantly, retaining our committee's jurisdiction over all of these issues. I am trying to channel Mr. Dingell today. Thank you very much.

Mr. MURPHY. Thank you. I appreciate it. The gentlelady yields back. I now recognize the chairman of the full committee, Mr. Upton, for 5 minutes.

OPENING STATEMENT OF HON. FRED UPTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. UPTON. Well, thank you, Mr. Chairman, and I appreciate your statement at the beginning and Ms. DeGette's as well.

So today we are here to examine the domestic, and indeed global, public health crisis that is suicide. It has been noted that 40,000 Americans every year commit suicide. This hearing is a natural outgrowth of this subcommittee's groundbreaking investigation of Federal programs addressing serious mental illness following the December 2012 tragedy in Newtown, Connecticut, and I know for a fact that probably every member here on this committee but our colleagues and our friends and neighbors at home in fact have been impacted with someone who has committed suicide.

No discussion of the full burden on our society of serious mental illness is complete without a discussion of suicide. For over 90 percent of them, the victim had been diagnosed with, yes, a mental illness. And tragically, our Nation's vets are one of the populations hardest hit by the crisis. While one in ten Americans has served our country, sadly over the last couple of years, one in every five suicides has involved a vet.

Like other areas covered by our committee's work on 21st Century Cures, success will depend on our ability to close the gaps between advances in scientific knowledge about treating serious mental illnesses, which have been extensive, and how the Federal Government prioritizes and delivers these treatments to the most vulnerable populations. Our delivery of mental health services must keep up with the impressive pace of research and innovation in the field.

There is significant public misunderstanding and misperceptions for sure regarding suicide. We hope that our ongoing work will educate the public about the many treatments available to address serious mental illnesses and help correct misconceptions that stand in the way of access to life-saving mental health care for many of the most vulnerable of our friends, family, and neighbors. The Federal Government has spent billions of dollars on the worthy effort of minimizing the impacts of mental illness over the last couple of years; we need to ensure that these investments can make a difference.

I appreciate the witnesses that are here, particularly our good friend, Mr. Lincoln Diaz-Balart.

[The prepared statement of Mr. Upton follows:]

PREPARED STATEMENT OF HON. FRED UPTON

Today, we are here to examine the domestic, and indeed global, public health crisis that is suicide. Suicide claims nearly 40,000 Americans and over 800,000 lives worldwide in any given year. This hearing is a natural outgrowth of this subcommittee's groundbreaking investigation of Federal programs addressing serious mental illness following the December 2012 tragedy in Newtown, Connecticut.

No discussion of the full burden on our society of serious mental illness is complete without a discussion of suicide. For over 90% of suicides, the victim had been diagnosed with a mental illness. And tragically, our Nation's veterans are one of the populations hardest hit by this crisis. While one in ten Americans has served our country, sadly over the last 2 years, one in every five suicides has involved a vet.

Like other areas covered by our committee's work on 21st Century Cures, success will depend on our ability to close the gaps between advances in scientific knowledge about treating serious mental illness—which have been extensive—and how the Federal Government prioritizes and delivers these treatments to the most vulnerable populations. Our delivery of mental health services must keep up with the impressive pace of research and innovation in the field.

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I'd like to welcome Acting Surgeon General Boris Lushniak, as well as the mental health professionals appearing before us today, Drs. Brent, Moutier, and Dvoskin. I also want to especially thank our former colleague, Mr. Lincoln Diaz-Balart, for sharing his deeply personal story. This is an issue that hits very close to home for many of us, and we are hopeful today's hearing aids the national dialogue.

Mr. UPTON. I yield to Dr. Burgess, who will yield to Mrs. Blackburn.

OPENING STATEMENT OF HON. MICHAEL C. BURGESS, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS

Mr. BURGESS. Thank you, Mr. Chairman, and thank you for bringing us here during Suicide Prevention Month. My thanks to the witnesses for presenting today. Thank you, Mr. Chairman, for correctly outlining that suicide amongst veterans that have recently attracted national headlines, and appropriately so. Perhaps this morning we will learn something about what has been learned and what is being done.

I also want to highlight a particular population that is often overlooked when we discuss suicide and suicide prevention, and that is the Nation's physicians. America's doctors, the people on the

front lines of suicide prevention, are some of the most at risk of suicide and having suicidal thoughts. This is troubling, and I hope we can hear how it is being addressed. Physicians and dentists are the most likely occupations to take their own lives. Physicians are more than twice as likely, and as it turns out, female physicians are more than three times likely to commit suicide, and it also affects a disproportionate share of young doctors. Dr. Brent's testimony states that insomnia is the single most significant predictive symptom for suicide, and what I would be interested in hearing, is that because a symptom of worsening depression or is in fact a causative factor that exacerbates some of the things that lead one to contemplate taking their own life. The medical profession deals with many challenges. Perhaps the most prominent challenge is that not every patient can be fixed. Watching patients suffer can be very isolating, and it can take a toll.

We are here today to begin a discussion about why this is the case and how Congress can help, and I look forward to hearing our witnesses, and yield to the gentlelady from Tennessee, the vice chair of the full committee.

OPENING STATEMENT OF HON. MARSHA BLACKBURN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF TENNESSEE

Mrs. BLACKBURN. I thank you, Dr. Burgess, and I do welcome our witnesses.

I want us to think about this: 105. That is the number of individuals that will take their life today: 105. Many more will attempt it, and as we have prepared for the hearing, one of the things that I have found interesting and of note is that through the decades with all the research, with millions of taxpayer dollars spent, what we have not seen is a reduction in the suicide rates, the number of suicides that are attempted and committed, and I know we are all seeking to find answers to this. We each have been touched by those that have attempted or have committed suicide, and it is a very tender issue.

I have the Centerstone Research Institute in Nashville that has done tremendous work on the issue of youth suicide and is working with the juvenile justice system, and Mr. Chairman, I would like to submit a letter for the record from Centerstone.

Mr. MURPHY. Without objection, yes.

[The information follows:]

CENTERSTONE

September 17, 2014

113th Congress of the United States
House of Representatives
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, D.C. 20515

RE: Energy & Commerce Subcommittee on Oversight and Investigations Hearing: Suicide Prevention and Treatment: Helping Loved Ones in Mental Health Crisis

Dear Honorable Representatives of the Energy and Commerce Committee,

On behalf of the thousand employees of Centerstone of Tennessee working to prevent suicides within Middle Tennessee, we want to applaud the Energy and Commerce Committee, subcommittee chairman Representative Tim Murphy, our congressman Marsha Blackburn, Representative for Tennessee's 7th district, for addressing this very important topic in your hearing on the 17th of September, 2014. Suicide is one of the top ten causes of death in Tennessee, and its results have devastating effects across the families and communities we serve.

While there has been a considerable amount of work accomplished in research regarding what is effective for suicide prevention over the last decade, we believe that there are significant steps remaining to ensure that best practices for suicide prevention are adopted by mental health providers. We endorse Goal 8 of the National Strategy for Suicide Prevention from the United States Surgeon General,[1] and we believe that screening for suicide and promoting suicide prevention should be a core mental health provider service.

As a community mental health provider with over fifty years' experience caring for persons at risk of suicide in the community, we know first-hand the life-saving potential that evidence based suicide prevention practices can have. Through Centerstone Research Institute (CRI), we participated in research & evaluation regarding prevention of suicide, especially with youth. We created the first SAMHSA-approved evidence based practice for prevention of youth suicide within the (residential) juvenile justice system – *The Shield of Care* and participated in research with the Centers for Disease Control that

[1] U.S. Department of Health and Human Services (HHS) Office of the Surgeon General and National Action Alliance for Suicide Prevention. 2012 National Strategy for Suicide Prevention: Goals and Objectives for Action. Washington, DC: HHS, September 2012. Retrieved on September 17, 2014 from http://www.surgeongeneral.gov/library/reports/national-strategy-suicide-prevention/full-report.pdf

showed that increasing connectedness[2] is one of the most powerful interventions to prevent youth suicide. While many providers in mental health care see suicide as an unavoidable byproduct of mental illness, research suggests that it is more effective to treat suicide as an adverse occurrence that is preventable. Thus, we have changed our goal as an agency to move from suicide reduction to a goal of "Zero Suicides."

This commitment has resulted in substantial changes to our clinical processes, our electronic health record, our crisis response protocol, and our quality improvement efforts. Now, all of our clients are screened for suicide risk through an evidence based measure, and at-risk clients receive intensive follow-up and interventions. Out of this commitment, we have seen steady improvement in our suicide prevention results. In the last 12 months, we have reduced the suicide completion rate for our patients by 82%. Currently, our suicide completion rate is 17 out of 100,000 patients, the lowest rate we have had since we started tracking this metric, getting closer to the Tennessee 2012 average of 14.8.

Out of our work, we have been asked to participate in several national and international organizations committed to preventing suicides. As a member of the Advisory Panel for the National Action Alliance Zero Suicides in Healthcare Task Force, the International Institute for Mental Health Leadership, and the International Collaborative for Zero Suicide, we've discovered that there are several national-level needs regarding suicide prevention that, if met, would enable mental health providers to deliver the most effective suicide prevention care.

Most importantly, behavioral health providers have limited access to electronic health records that have evidence-based suicide screening tools embedded within them, alerts to ensure that protocols are followed when an at-risk client misses an appointment, and releases that enable providers to engage with family members and significant loved ones when a client is at risk. These features have been key to our success, but many mental health providers lack these essential tools. Rep. Murphy's legislation to fix the exclusion of behavioral health providers within HITECH funding (S. 1517,S. 1685/H.R. 2957) would go a long way to address this disparity.

Additionally, as our healthcare system moves more towards outcomes-based, accountable care, the "outcome" of suicide completion needs definition. There is currently not a standard "definition" in healthcare for when and how to count a completed suicide. Currently, healthcare organizations can say that they have a "great suicide prevention" practice, but we are measuring apples & oranges nationally. Some organizations only count a client death as a suicide if the word "suicide" is on the death certificate (as opposed to "self-asphyxiation"), and some will document the death as suicide if the clinician "suspects." Who qualifies as a "client" is also loosely defined. Some organizations count someone as a client only if they were seen within the last 7 days, and others may use a 30, 60, or even 90 day threshold. The National Action Alliance Zero Suicide in Healthcare Task Force is working to address this issue, but it has no accountability or oversight within the healthcare system. The National Committee on Quality Assurance (NCQA) might be an appropriate organization to clarify the definition and test whether adding it as a Healthcare Effectiveness Data and Information Set (HEDIS) measure has value for improving care.

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2 "Connectedness is the degree to which an individual or group is socially close, interrelated, or shares resources with other individuals or groups." Centers for Disease Control and Prevention (CDC). Connectedness as a strategic direction for the prevention of suicidal behavior. Retrieved September 27, 2011 from http://www.cdc.gov/violenceprevention/pdf/Suicide_Strategic_Direction_Full_Version-a.pdf

Lastly, many mental health providers "screen" for suicide, but very few use evidence based screening tools. We have found that most providers are not screening in a way that could be effectively captured (using text boxes or paper forms to track suicide risk/suicidality). Centerstone, as part of its Zero Suicide initiative, has adopted the free/open source Columbia Suicide Severity Rating Scale (http://www.cssrs.columbia.edu/), incorporated it within our electronic health record, and all clients in Tennessee are screened using this assessment at intake and at all subsequent service delivery points. We strongly support regulations that require all mental health providers to screen for suicidality.

Thank you so very much for considering these ways to improve suicide prevention across the United States. We appreciate your leadership in this matter, and we look forward to the results coming from this investigation.

Sincerely,

Robert N. Vero, Ed.D.
Chief Executive Officer
Centerstone of Tennessee
1101 6th Ave N.
Nashville, Tennessee 37208

Mrs. BLACKBURN. And with that, I thank the witnesses and yield back.

Mr. MURPHY. Thank you. I now recognize Ms. Schakowsky for 5 minutes.

OPENING STATEMENT OF HON. JANICE D. SCHAKOWSKY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Ms. SCHAKOWSKY. Thank you, Mr. Chairman. I want to thank you for holding this hearing. Suicide affects many, many people. It has been close to me as well, and it is entirely appropriate that we address this topic.

I want to tell you, our dear former colleague, Lincoln Diaz-Balart, how much I appreciate, I think we all appreciate, you coming here today. It takes a special kind of guts to come here and talk about your son Lincoln, who suffered from mental illness, committed suicide last year, and I can only imagine the pain of losing a child to suicide. My heart goes out to you.

Mr. Chairman, I applaud your legislative and oversight efforts this Congress on mental health issues, and I know that you are really trying to make a difference, but I am disturbed by what appears to be a growing disconnect between the facts we hear at oversight hearings and our failure to heed those facts when it comes to writing legislation. We have heard a few ongoing themes at this Congress' mental health hearings and forums. We have heard about the importance of high-quality health insurance coverage for those with serious mental illness. Individuals suffering from mental illness need broad coverage. They need continuity of care. They need to be able to afford their treatments. Witness after witness has told us the same thing, and we will hear the same thing today. Earlier this year, the president of the American Psychological Association said that the availability of this coverage under the Affordable Care Act represented "a watershed moment in the effort to prevent suicide."

But Mr. Chairman, some of the Republican legislative approaches have ignored this evidence. Your colleagues have voted over 50 times to dismantle Obamacare and take health insurance away from millions of Americans. And Mr. Chairman, we have also heard about the importance of adequately funding mental health research. We hear the same about funding for suicide prevention efforts today. But Mr. Chairman, the Republican legislative approach has ignored this evidence. Again and again, your colleagues have voted on funding on an appropriations bill including sequestration and the Ryan budget that have resulted in stagnant budgets for mental health research. And today, Mr. Chairman, we will hear about the availability of guns as a risk factor for suicide. Dr. Brent's testimony says that among healthy youths, and I quote, "The only factor that differentiated suicides and controls was the presence of a loaded gun in the house." But Mr. Chairman, when we talk about legislation to improve mental health outcomes, prevent mass violence, prevent suicide, your Republican colleagues refuse to even consider guns as part of the problem.

The purpose of our oversight hearings ought to be to inform the legislative process, but in this committee, that is not happening.

Over and over again, our witnesses tell us one thing but the Republican majority does something else. That is a shame, Mr. Chairman. I hope we can listen carefully to our witnesses today and finally act on what they tell us.

And I would like to yield the remainder of my time to Congresswoman Castor.

OPENING STATEMENT OF HON. KATHY CASTOR, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Ms. CASTOR. I thank my friend, Congresswoman Schakowsky, for yielding the time, and I want to thank you, Mr. Chairman and Congresswoman DeGette, for continuing to focus on the challenges families have all across this country with mental health issues, and I would like to welcome our former colleague, Lincoln Diaz-Balart from Florida. Lincoln, you are representing families all across this country in speaking out on their behalf, and I want to thank you for your courage in talking about your son and his depression and suicide last year, and thank you for encouraging improvements in public policy when it comes to suicide prevention, and here is why this is so important. In America, the rates of suicide are going up, particularly among young people and veterans. There is some distressing news that yes, as Congresswoman Schakowsky summarized, there have been budget cuts to the National Institutes of Health, the Centers for Disease Control, substance abuse and mental health treatment, and it is going to be much more difficult to tackle these problems if we remain in this atmosphere of devolution.

But the good news is that the Affordable Care Act is now providing coverage to millions of previously uninsured Americans requires that all new individual and small group insurance plans cover mental health and substance abuse disorder services as one of the ten essential health benefits. Plans are required to cover these services at parity with medical and surgical benefits, significantly expanding lifesaving services. A February 2014 report by the American Mental Health Counselors Association found 6.6 million uninsured adults with serious mental health and substance use conditions will be eligible now for health insurance coverage including coverage for mental health and substance abuse through the new Affordable Care Act marketplaces and exchanges.

The president of the Psychological Association of America said that notwithstanding the politics of the Affordable Care Act, the prospect that millions of Americans will have health insurance covering mental health benefits at a level comparable with their physical health care is a watershed moment that could truly destigmatize mental health care and suicide prevention services.

Thank you. I yield back.

Mr. MURPHY. Thank you.

I would now like to introduce our first witness. He is the Honorable Lincoln Diaz-Balart, an attorney and consultant based in Miami, Florida. He is a former Member of Congress, where he served with great distinction between 1993 and 2011. He is here today to share for the first time a moving and personal story about Lincoln Gabriel. I greatly appreciate you being here, Lincoln. Normally at this time we would swear in a witness, but after con-

sulting with the chairman and the ranking member, we all agree that an oath to be sworn is not necessary today because you speak from the heart, and the heart binds a voice to the truth far greater than a mere oath would.

So with that, I will now give you time for your opening statement.

STATEMENT OF HON. LINCOLN DIAZ–BALART, FORMER MEMBER OF CONGRESS

Mr. DIAZ-BALART. Mr. Chairman and Ranking Member DeGette and members of the committee, when you called, Mr. Chairman, last week and graciously asked if I would consider speaking here today, I consulted with my son Daniel. He and his older brother, our dearly beloved Lincoln Gabriel—L.G.—were very close, and I have ultimate trust in Daniel's judgment. I explained to Daniel what you had told me, Mr. Chairman, with the subcommittee, the experts, the Surgeon General, who will testify here today, will consider helping loved ones in mental health crisis. Daniel's words were, "Of course L.G. would want you to be there. If one person who might not otherwise get help is able to get treatment because of that hearing and its aftermath, L.G. would be happy."

My son Lincoln Gabriel was a blessing to all who got to know him. He was all love. His was not a theoretical love. It was a constant, practical love demonstrated by his daily actions, and above all by his deep respect for all human beings. L.G. was ultimately generous. He was intelligent, courageous and of profound religious faith. He never allowed his illness, his deep depression, for which he took medication, to stop him from demonstrating his respect and his love for all human beings he came across.

Christina, Daniel and I miss him dearly, and we will continue to miss him for the rest of our days in the hope of our ultimate reunion with him.

Congress honored Ukraine today by receiving its President in a joint meeting. After their Orange Revolution, I went to Ukraine in December 2005, and the First Lady at the time, Mrs. Yushchenko, asked if my community would be able to help some of Ukraine's most severely handicapped, physically handicapped, children. I said yes, so in October 2007, 10 children arrived in south Florida from Ukraine needing prosthetics for arms or legs, or both. Our community and some south Florida firms responded admirably. Nine of the ten children were fitted with prosthetics. But I remember my then-Chief of Staff, Ana Carbonell, calling me from the airport when the children arrived explaining we have so much work to do with one particular young woman, 18-year-old Natalia. Natalia, a beautiful young woman, was born with extremely small arms and legs, and her back structure did not allow her to sit up. Hers was not a case for prosthetics. It was much more serious. She lived each day on a small wooden platform with wheels face down. The First Lady of Ukraine had been very impressed by the fact that, despite her physical disability, Natalia is an artist. She paints with a brush she holds with her teeth.

But Natalia's dream was to be able to sit in a wheelchair and face life sitting up. She had had multiple surgeries in Ukraine, but they had failed. A south Florida surgeon, Dr. Hari Parvataneni,

volunteered to operate. The community donated the funds to pay for her hospital stay. Natalia's surgery was successful. After her surgery and rehabilitation, she was able to sit upright and live independently in her new wheelchair.

She stayed in south Florida for months for her rehabilitation. Ana Carbonell and her husband, Gus Monge, opened their home to her. During those months, L.G. became Natalia's friend. He was so proud of what our community had done for those children. L.G.'s first and his last Instagram posts were photographs of Natalia's paintings. I carry his last Instagram post with me. Some friends of L.G.'s wrote, "This is pretty cool. Who painted it?" "A family friend from Ukraine named Natalia," L.G. answered.

I have never met anyone more respectful of all human beings than my son Lincoln Gabriel. As I said, he was all love. I must admit I believed that all you need is love. I never thought our tragedy of May 19, 2013, was possible, but it was possible. Sometimes love is not enough.

Assertive, proactive intervention is sometimes required to get needed treatment to those in mental health crisis, and thorough discussion of their illness with those who are sick.

I have come before you today to thank you for focusing on this painful issue and to thank the mental health experts, the physicians, those in the NGOs, in the Executive Branch, the Surgeon General, all those working to prevent tragedies such as the one my family experienced. Please, find common ground. Overcome differences in order to make progress.

As my son Daniel said, if one person who might not otherwise get help is able to get treatment because of this hearing and its aftermath, L.G. would be happy.

Thank you.

Mr. MURPHY. We thank our friend and our colleague for his words of motivation and challenge, and we will heed that challenge.

Now, as our next set of witnesses are coming to the table, I will read your introductions. Please have a seat as your nameplate is put down.

We are going to be joined today by Rear Admiral Boris Lushniak, who is the Acting United States Surgeon General. He oversees the operation of the U.S. Public Health Service Commissioned Corps comprised of approximately 6,800 uniformed health officers. Also, Dr. David Brent is the Endowed Chair in Suicide Studies and Professor of Psychiatry, Pediatrics, Epidemiology and Clinical and Translational Science at the University of Pittsburgh. Dr. Christine Moutier is the Chief Medical Officer of the American Foundation for Suicide Prevention, and Dr. Joel Dvoskin is an Assistant Professor of Psychiatry at the University of Arizona and is here today testifying on behalf of the American Psychological Association.

I will now swear in the witnesses. You are aware that the committee is holding an investigative hearing, and when so doing has the practice of taking testimony under oath. Do any of you have an objection to taking testimony under oath? Seeing none, the Chair then advises you that under the rules of the House and the rules of the committee, you are entitled to be advised by counsel. Do any of you desire to be advised by counsel during your testimony today?

You all say no. In that case, if you would please rise and raise your right hand, I will swear you in.

[Witnesses sworn.]

Mr. MURPHY. And all have answered affirmatively, so you are now under oath and subject to the penalties set forth in Title XVIII, Section 1001 of the United States Code. I am going to ask you each to give a 5-minute opening statement. We will begin with Dr. Lushniak.

STATEMENTS OF BORIS D. LUSHNIAK, ACTING SURGEON GENERAL OF THE UNITED STATES, DEPARTMENT OF HEALTH AND HUMAN SERVICES; DAVID A. BRENT, ENDOWED CHAIR, SUICIDE STUDIES, AND PROFESSOR OF PSYCHIATRY, PEDIATRICS, EPIDEMIOLOGY, AND CLINICAL TRANSLATIONAL SCIENCE, UNIVERSITY OF PITTSBURGH; CHRISTINE MOUTIER, CHIEF MEDICAL OFFICER, AMERICAN FOUNDATION FOR SUICIDE PREVENTION; AND JOEL A. DVOSKIN, ASSISTANT PROFESSOR OF PSYCHIATRY, UNIVERSITY OF ARIZONA, ON BEHALF OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION

STATEMENT OF BORIS D. LUSHNIAK

Mr. LUSHNIAK. Thank you so much, Chairman Murphy, Ranking Member DeGette and members of the subcommittee.

What a way to start in terms of hearing the words of the Honorable Lincoln Diaz-Balart. Oftentimes in public health we get caught up, certainly in subcommittees we get caught up. We get caught up in numbers, we get caught up in programs, we get caught up in initiatives and successes and failures. I submit to you, sir, starting off with a personal and poignant story such as presented to us really sets the tone for what all this is about, that this ends up being that one life at a time, and yet we know that although he came here very heroically to discuss the story of his son and their family's tragedy, the repercussions of that spread out, and each and every year, as we already heard, almost 40,000 people have stories like that. Let us remember those 40,000. Let us focus on the public health impact of this terrible scourge in our land.

I want to share with you the opening dedication of this, the 2012 National Strategy for Suicide Prevention, and it goes like this. To those who have lost their lives by suicide to those who struggle with thoughts of suicide, to those who have made an attempt on their lives, to those caring for someone who struggles, to those left behind after a death by suicide, to those in recovery, and to all those who worked tirelessly to prevent suicide and suicide attempts in our Nation.

This is one of those quintessential components of any program, of any initiative, certainly initiatives out of the Office of the Surgeon General that it is not one person, it is not one group. It is incredible clinicians as I have to the left of me. It is incredible political structures and leaders that I see in front of me. It takes that proverbial village to have success in public health.

For over a decade, the Office of the Surgeon General has led in this topic matter. This has been a priority. Surgeon General David

Satcher back in 1999 put out the first call to action, and in 2001, the National Strategy for Suicide Prevention. Most recently, my predecessor, the former Surgeon General Regina Benjamin, in partnership with the National Action Alliance for Suicide Prevention updated this U.S. National Strategy for Suicide Prevention.

I am here as an Acting Surgeon General. I am a career officer in the U.S. Public Health Service, but here committed to demonstrate the commitment of the Office of the Surgeon General to continue to be visible and a long-term supporter of our Nation's work in suicide prevention. I don't come to you as a psychologist, psychiatrist, behavioral science expert. These are people to the left of me here. We have that expertise behind me. My chief of staff, Captain Robert DeMartino, also a member of the U.S. Public Health Service, is a psychiatrist by training. He is there embedded within the immediate Office of the Surgeon General. I come to you as a person trained in family medicine, preventive medicine, and dermatology. I bring my commitment to a public health approach and public health expertise to these issues.

Let me define this public health approach. What is the problem? We define the problem through surveillance and data. Why did it happen? We identify the causes and understand the risks and protective factors. What works? We develop and evaluate innovations, programs, and policies. How do you do it and accomplish the goal? We implement and ultimately disseminate interventions that work, evidence-based interventions.

While the Office of the Surgeon General doesn't direct or have oversight over specific programs or agencies within the Department of Health and Human Services, the ability of that title of Acting Surgeon General or the Surgeon General to bring the Nation's attention and focus onto important public health issues remains an important and necessary part of our efforts to prevent suicide in our Nation. We play a leadership role to bring together Federal and non-Federal partners, inspire them to identify the solutions, take collective action to address these key issues. That collaborative leadership was fundamental to creation of this, the national strategy.

Incidence of suicide, as we have heard, in spite of an encouraging trend between 1995 and 2005, has sadly remained largely undisturbed. Many people will ask why. The unsatisfying answer is, suicide is a complex problem that defies a simple solution. Still, there are many clues out there in the international realm. The United Kingdom's steady, significant reductions in suicide rates included access to 24-hour crisis care, assertive outreach for people with severe mental illness. In Taiwan, follow-up aftercare after suicide attempts led to a 63 percent reduction. Means reduction has been successful in international settings. Regardless of the means, those who die by suicide are far from being the only ones affected by that tragedy.

We have this as a catalyst, the National Strategy for Suicide Prevention, work together by HHS agencies and outside partnerships, 13 goals, 60 objectives, reducing suicides over the next 10 years. We work together with the National Action Alliance for Suicide Prevention, a public-private endeavor. We have many examples of successes, and yes, sir, many examples of failures in this.

With the emphasis on effective treatment to prevent suicide and reattempts, one of our goals, we have various therapies that are out there that are available and need to be utilized in this evidence-based world. We are engaged in a long-term effort to change how our society thinks about serious mental illness and suicides. We have to work on those changes.

Mr. MURPHY. If you could wrap up?

Mr. LUSHNIAK. While much has been done, we know more needs to be done. I applaud you for bringing attention to this issue. I urge your continued support for suicide prevention.

Thank you, Mr. Chairman, Ranking Member DeGette and members of the subcommittee, and I look forward to further discussion.

[The prepared statement of Mr. Lushniak follows:]

STATEMENT

OF

REAR ADMIRAL BORIS D. LUSHNIAK, M.D., M.P.H.

ACTING SURGEON GENERAL OF THE UNITED STATES

DEPARTMENT OF HEALTH AND HUMAN SERVICES

BEFORE THE

OVERSIGHT AND INVESTIGATIONS SUBCOMMITTEE

OF THE ENERGY AND COMMERCE COMMITTEE

U.S. HOUSE OF REPRESENTATIVES

September 18, 2014

STATEMENT OF
REAR ADMIRAL BORIS D. LUSHNIAK, M.D., M.P.H.
ACTING SURGEON GENERAL OF THE UNITED STATES
DEPARTMENT OF HEALTH AND HUMAN SERVICES
BEFORE THE
OVERSIGHT AND INVESTIGATIONS SUBCOMMITTEE
OF THE ENERGY AND COMMERCE COMMITTEE
U.S. HOUSE OF REPRESENTATIVES
September 18, 2014

Chairman Murphy, Ranking Member DeGette, and Members of the Oversight and Investigations Subcommittee, thank you for the opportunity to testify today about the important public health problem of suicide. My testimony will provide information about what the Department of Health and Human Services (HHS) has learned about this important topic, as well as highlight the current and future directions being pursued on behalf of suicide prevention in the United States.

Background

In 2012, then-Surgeon General Regina Benjamin, in partnership with the National Action Alliance for Suicide Prevention, issued the U.S. *National Strategy for Suicide Prevention* and provided a roadmap for our country's suicide prevention efforts for the next ten years.[1] This report draws on suicide prevention experts from many sectors within and outside government. It includes 13 goals and 60 objectives and focuses on four main strategic directions, which when working together, may most effectively prevent suicides:

1. Create supportive environments that promote healthy and empowered individuals, families and communities;
2. Enhance clinical and community prevention services;
3. Promote the availability of timely treatment and support services; and
4. Improve suicide prevention surveillance collection, research and evaluation.

This approach reinforces that as we learn more, we apply more, and as we apply more, lives can be saved. These strategic directions, developed in collaboration with key stakeholders,[2] provide clear guidance on advancing prevention, treatment and aftercare.

[1] The full report is available at: http://www.surgeongeneral.gov/library/reports/national-strategy-suicide-prevention/index.html
[2] See Acknowledgements on p. 157 from: http://www.surgeongeneral.gov/library/reports/national-strategy-suicide-prevention/index.html

The 2012 report builds on more than a decade of work in the Office of the Surgeon General (OSG) on suicide prevention. In 1999, the very first "call to action" from then-Surgeon General David Satcher was the *Call to Action to Prevent Suicide,* which introduced a blueprint for addressing suicide prevention and set the foundation for developing a national strategy. Two years later in 2001, OSG released the first ever *National Strategy for Suicide Prevention: Goals and Objectives for Action.* That document was a landmark report that created the framework for catalyzing an organized effort to prevent suicide across the Nation.

In 2010, the National Alliance for Suicide Prevention was established by then-HHS-Secretary Kathleen Sebelius, and then-Secretary of Defense, Robert Gates, as the premier public-private partnership to advance suicide prevention.

I am here to build on the strong foundation of my predecessors. As you know, all Surgeon General publications are based on high priority public health needs of the Nation and provide a mechanism for disseminating scientific information that supports the Department's ability to produce improved health outcomes for all Americans. Surgeon Generals' reports address issues of public health importance in in a manner that is understood by all.

Scope of the Problem

We are all here because we know that suicide remains a serious public health problem. Although some people may perceive suicide as the act of a troubled person, it is a complex issue that is influenced by many risk and protective factors. These include the individual characteristics and relationships with family, peers, and others, and influences from the broader social, cultural, economic, and physical environments.

There is no single path that will lead to suicide. Rather, throughout life, a combination of factors, such as a serious mental illness, alcohol abuse, a painful loss, exposure to violence, or social isolation may increase the risk of suicidal thoughts and behaviors.[3]

Suicide results in over 39,000 premature deaths each year,[4] and its incidence has been increasing for more than a decade. In 2011, the most recent year for which statistics are available, suicide was the tenth leading cause of mortality in the United States. Since 2009, suicide has surpassed motor vehicle-related fatalities as a leading cause of death. And when we compare the rates of suicide with that of homicide, most people are surprised to learn that suicide rates remain much higher.[5]

Indeed, suicide is a national problem that affects people of all ages, genders, races and ethnic origins, and geographical locations, but differentially so. It is the second leading cause of death among 15 to 34 year olds. Suicide rates among males are nearly four times higher than among females. The suicide rate among American Indian/Alaska Native (AI/AN) adolescents and young

[3] For more information on substance and suicide prevention, see: http://www.samhsa.gov/matrix2/508SuicidePreventionPaperFinal.pdf
[4] See: http://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm
[5] See: http://www.cdc.gov/nchs/fastats/leading-causes-of-death.htm

adults ages 15 to 34 is higher than the national average, and the highest across all races for that age group. And suicide rates are generally higher in the Mountain West and Alaska. Suicide rates are increasing among working age people (35-64 years), and men aged 75 years and older still have the highest rate of suicide of any group.

In addition to the tragic number of deaths attributed to suicide, we must also consider the prevalence of suicidal thoughts, suicide plans, and suicide attempts. In 2013, the National Survey on Drug Use and Health[6] revealed that 3.9 percent or 9.3 million adults over the age of 18 have had serious thoughts of suicide, 1.1 percent or 2.7 million adults made a plan for suicide, and 0.6 percent or 1.3 million adults had attempted suicide.

We also know that those who die by suicide are far from the only ones affected by this tragedy. Suicide exacts a heavy toll on those left behind as well. Loved ones, friends, classmates, neighbors, teachers, faith leaders, and colleagues all feel the effects of these deaths. Sadly, these deaths are just one measure of the challenge we face. For every American who dies by suicide, many others attempt suicide, and many others suffer the despair that leads them to consider taking their own life.

We continue to research the variety of risk factors for suicide, which include factors at the community and societal levels. And, research from the Centers for Disease Control and Prevention (CDC) has indicated that the increases in recent years is, in part, associated with stressors from the recent U.S. economic downturn. While no explanation makes the increase in suicide rates any easier to bear, OSG is committed to improving our ability to understand these trends and to keeping suicide prevention a priority topic for action.

We know that it does not have to be this way. There is much we can do. There are significant opportunities to support many approaches to prevent suicide. Through early intervention and prevention efforts, treatment and aftercare, and by focusing on a public health approach that includes behavioral health strategies, we can help individuals overcome circumstances putting them at risk for taking their own lives.

The National Strategy and HHS Efforts

The National Strategy and its follow-on reports have been a catalyst for much of the work that HHS agencies and other national, state, and local organizations have been doing to address this serious public health problem. Let me now highlight some of the work that HHS agencies are doing and what we have learned.

Suicide Prevention and Response

The Surgeon General's report emphasizes the importance of treatment and support services, as well as clinical and community preventative services. Examples of strategies that support that goal include:

[6] See: http://www.samhsa.gov/data/NSDUH.aspx

- In FY 2014, $2 million in funding for National Strategy for Suicide Prevention grants will focus on implementing the recommendations of the National Strategy with working age adults 25-64 years old. These grants will specifically promote suicide prevention as a core component of health care services and implementation of effective clinical and professional practices for assessing and treating those at risk for suicidal behaviors. In addition, 20 Federally-recognized AI/AN Tribes and Tribal organizations will be funded under the new Tribal Behavioral Health grant program. The initiative's goal is to prevent and reduce suicidal behavior and substance use disorders, and promote mental health among AI/AN young people up to and including age 24.

- Ongoing Federal funding supports the National Suicide Prevention Lifeline (1-800-273-8255), operated by HHS, an immediate resource for those in critical need of support. This resource links 160 crisis centers with well trained staff to callers in need. Last year, this call line handled over one million calls. And in the aftermath of Robin Williams' death, there was a significant spike in usage of this line. Many Federal and private organizations rely on the Lifeline as a resource for those in suicide crisis (and their loved ones seeking help), including the Veterans Crisis Line serving Veterans, military personnel, and their families and friends. Evaluation of the Lifeline has found that compared to the beginning of a hotline call, at the end callers express significantly reduced hopelessness, psychological pain, and intent to die (Gould, et al., 2013).

- The Garrett Lee Smith (GLS) Youth Suicide Prevention grant program is provided to States, Tribes, and colleges to develop, evaluate and improve early intervention and suicide prevention programs for youth. Currently funded at approximately $48 million, it supports 68 state and tribal grantees and 82 colleges, and a resource center. A recent evaluation found that when compared with similar counties that did not implement GLS training, counties implementing GLS trainings showed significantly lower youth suicide rates in the year following the trainings.[7]

- Established in 2002, the Suicide Prevention Resource Center (SPRC) builds capacity and serves as a clearinghouse for science based material and best practices in suicide prevention. SPRC provides training and technical assistance to States, Tribal communities, Territories, schools, and colleges to advance suicide-prevention efforts. The website also includes a Best Practices Registry, which includes evidence-based suicide interventions and also highlights broad principles and processes for creating and implementing prevention efforts that are more likely to be effective.

The Surgeon General's report recommends the development, implementation and monitoring of effective programs that promote wellness and prevent suicide and related behaviors with respect to community prevention and community supports. Examples of strategies to support this approach include:

[7] From *Report to Congress on the Garrett Lee Smith Youth Suicide Prevention Program*

- CDC's National Center for Injury Prevention and Control (NCIPC) is funding and evaluating interventions to promote and strengthen individual, family, and community connectedness to prevent suicidal behavior. NCIPC is currently conducting evaluations promoting and strengthening connectedness among two different populations to determine their effectiveness on suicidal behavior. One program focuses on adolescents, while the other addresses an older adult population. In addition, the "Senior Connection" study, funded by CDC, is testing whether improved social connectedness lowers suicide risk among older adults in upstate New York.

- School-based interventions that are showing promise range from those that develop skills to protect against suicidal thoughts and behaviors, to programs that raise awareness, educate children about suicide's risk and protective factors, encourage help-seeking, promote tolerance, decrease stigma, and teach positive life and coping skills. The testing and implementation of a first-grade prevention program, the Good Behavior Game supported by the NIH and SAMHSA, was found to yield benefits not only in reducing aggressive behavior and substance use in youth, but also in reducing suicidal thoughts and attempts in young adulthood (Wilcox, et al., 2008).

- Comprehensive community-based programs offer other promising strategies. The U.S Air Force and Natural Helpers suicide prevention programs, in which CDC participated, are examples of multi-faceted peer-to-peer programs that have been successful. In the Air Force, it is wingmen watching out for each other, and Natural Helpers focuses on youth. The programs emphasize reaching out to peers in distress and notifying others (teachers, commanders, etc.) if one is concerned about a peer. Both used prevention approaches that were adapted to fit the cultural context of the populations who were involved (Goal 5 of the Strategy).

The Surgeon General's report recommends promoting suicide prevention as a core component of health care services. Strategies that improve access to care include:

- The Affordable Care Act includes better coverage for mental and substance use disorders (Goal 5.4 of the Strategy). The Affordable Care Act builds on the Mental Health Parity and Addiction Equity Act and will expand coverage of mental health and substance use disorder benefits and Federal parity protections by including mental health and substance use disorder benefits in essential health benefits and applying Federal parity protections to mental health and substance use disorder benefits in the individual and small group markets. As a result of these new protections, approximately 60 million people will gain expanded mental health and substance use disorder benefits and/or parity protections.[8]

In addition, the Surgeon General's report recommends improving our knowledge base about suicide prevention, intervention and treatment. For example:

[8] See: http://aspe.hhs.gov/health/reports/2013/mental/rb_mental.cfm

- We have learned that transitions in care — *e.g.*, discharge from emergency care, inpatient psychiatric care — are high risk periods for vulnerable patients. Studies of health care use, prior to an individual's suicide death, have found that improvements in maintaining 'connections' to individuals transitioning through care reduced the rates of re-attempts. Quality improvement efforts, such as the public-private "ZeroSuicide" activity of the National Action Alliance for Suicide Prevention, directly involve those with experience in health care settings — administrators, providers and service users — to identify practices that are prime candidates for research and evaluation.

- Since the IOM (2002) report on suicide research, we have learned more about the role of child abuse in later suicide risk. Early life stressors can alter gene expression within the brain and later lead to abnormal responses to stressful life events. In a partnership between the National Institutes of Health (NIH) and the Army, the recent Army Study to Assess Risk and Resilience in Service members (Army STARRS) is investigating the possible effects of prior life events and service-related stressors on mental health and suicide risk.

- We need to continue research on the effects of strategies for mandatory training of community and clinical service providers on the prevention of suicide. We are advancing research on interventions focused on the training of "gatekeepers," teachers, clergy, nurses, prison guards, etc., who can spot signs of trouble and recommend courses of action early on (Goal 7 of the 2012 Strategy).

The Strategy emphasizes improving our knowledge of interventions. For example:

- We have identified opportunities to intervene with individuals at risk who are already being served in the healthcare system. New findings revealed that 83 percent of suicide decedents who were members of health maintenance organizations accessed health care in the year before their deaths. Medical specialty and primary care visits without a mental health diagnosis were the most common visit types (Ahmedani, et al., 2014). Research from the Department of Veterans Affairs (VA) has reported that 50 percent of Veterans with substance use disorders had been engaged in care the year before their deaths (Ilgen, et al., 2012). This has led private and Federal health-care-delivery agencies to identify opportunities in care systems to better detect and treat those at risk.

- As the National Institute of Mental Health (NIMH) Recovery After an Initial Schizophrenia Episode (RAISE) study findings are rolled out and coordinated through block grants funded by the Substance Abuse and Mental Health Administration (SAMHSA), we will have the opportunity to see how better quality of care for those experiencing their first episodes of schizophrenia may also reduce risk for suicidal behavior. NIMH Guidance on Coordinated Specialty Care for Mental Illness: The Community Mental Health Services Block Grant (MHBG) Five Percent Set-Aside is a partnership between the Federal Government and States to direct five percent of a State's MHBG allocation administered by SAMHSA to support "evidence-based programs that address the needs of individuals with early serious mental illness, including psychotic disorders." To prepare States to implement the set-aside, NIMH worked collaboratively with SAMHSA to provide States with guidance, and along with NIMH

has held national webinars to inform States of the evidence-based components of coordinated specialty care. Early intervention is critical to preventing negative outcomes.

We have evidence-based treatments that prevent re-attempts among adults, including those with serious mental illness (Goal 8 of the 2012 Strategy). These include psychotherapies such as Dialectical Behavior Therapy (DBT)[9] and other cognitive-based psychotherapies (Cognitive Behavior Therapy for Suicide Prevention (CBT-SP),[10] Collaborative Assessment and Management of Suicidality (CAMS)[11]) that have been tested among individuals with comorbid psychiatric and substance use problems. While research has shown that pharmaceutical interventions, such as clozapine for patients with schizophrenia, have been effective in reducing suicide risk, we need to learn why they are underutilized, in addition to expanding the range of faster acting treatments. Collaborative care for older adult depression, highlighted in the Surgeon General's first call to action to prevent suicide, has been shown to reduce suicidal thoughts, and mortality from all causes over time.

Suicide risk assessment has become a high priority for health care providers. In 2011, the Joint Commission for accreditation of health care organizations made suicide risk assessment a National Patient Safety Goal. A number of HHS agencies are working to identify the best approaches to detection and assessment for important subgroups (*e.g.*, youth, adults, older adults, those in mental health and substance use disorder specialty care). There are also better screening and assessment tools to assess suicide risk with solid data such as the Patient Health Questionnaire 9 (PH-9) and the Columbia Suicide Severity Rating Scale (C-SSRS). Both have been used extensively across various primary care, clinical practice, surveillance, research, and institutional settings.

In addition, we need the public health tools to better monitor trends and prevalence and track the effect of interventions. Strategies to support this goal to increase the timeliness and usefulness of national surveillance systems related to suicide prevention (Goal 11 of the 2012 National Strategy):

- CDC recently awarded grants to expand the National Violent Death Reporting System (NVDRS) from 18 to 32 States, enabling greater collection of critical data on violent deaths. CDC is also linking its NVDRS to Department of Defense (DOD) and VA suicide reporting databases for a more complete data set. The NVDRS provides more useful suicide-related data by combining several datasets (death certificates, medical examiner/coroner reports, law enforcement reports, and toxicology labs). The expanded NVDRS will give States the opportunity to learn more about suicide decedents risk factors, so that prevention efforts can be more targeted and evaluated.[12]

- CDC's National Center for Health Statistics (NCHS) and its partners are funding projects to improve State-based Electronic Death Registration Systems that are helping to

[9] See: http://www.nrepp.samhsa.gov/ViewIntervention.aspx?id=36
[10] See: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2888910/
[11] See: http://www.ncbi.nlm.nih.gov/pubmed/22971238
[12] For more information, see: : http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2563480/

improve the timeliness and quality of national mortality data. NCHS has also recently transformed the National Vital Statistics System into a system capable of supporting near real-time access to the national mortality data for surveillance and early provisional estimates of a variety of causes of death, including suicides.

The recent World Health Organization report on suicide[13] described several international examples where reduced access to the most lethal suicide methods led to the rapid reduction of suicide deaths. However, there remains limited research on the best ways to field and test these approaches, such as research related to changes in health care practices (*e.g.*, dispensing less lethal doses of medications), testing approaches such as bridge barriers, and learning how community values and norms are linked to behavior that affects access to lethal means (*e.g.*, safer firearm storage) (Goal 6 of the 2012 Strategy).

HHS and its partners are active in the ongoing effort to reduce suicide through direct, on the ground activities.

Partners in Suicide Prevention

Perhaps the greatest success of the National Strategy is a coalescing of many stakeholders around this problem. We know this is not an issue that government can address alone, and we need partnerships across other non-Federal organizations. Mr. Robert Turner, Senior Vice President of Corporate Relations for the Union Pacific Corporation, recently succeeded former Oregon Senator Gordon Smith as a leader of the National Action Alliance for Suicide Prevention's private sector efforts. His focus will be to continue to engage the private sector, ensuring that all sectors with a legitimate role in preventing suicide in our Nation are engaged. The Alliance works to champion suicide prevention as a national priority, catalyze efforts to implement high priority objectives of the NSSP, and cultivate the private resources needed to partner with Federal resources to sustain progress.

Earlier this year, their Research Prioritization Task Force released, *with the support of NIMH, A Prioritized Research Agenda for Suicide Prevention: An Action Plan to Save Lives*[14]. The recommendations are based on the impact of currently known interventions and the potential number of suicide attempts and deaths that could be prevented. Two new NIH initiatives will focus on priorities of the *Research Agenda* including funding opportunities calling for research on violence with particular focus on firearm violence; and supporting research that is developing and testing screening approaches for use in emergency departments to identify children and adolescents at risk for suicide.

Another Action Alliance initiative is the Suicide Attempt Survivors Task Force, which includes suicide attempt survivors' perspectives on the effectiveness of certain interventions and approaches. Their perspectives were used in developing a technical guidance document for

[13] See: http://www.who.int/mental_health/suicide-prevention/world_report_2014/en/

[14] See: http://actionallianceforsuicideprevention.org/sites/actionallianceforsuicideprevention.org/files/Agenda.pdf

governments and organizations; in this way, the voice of those with lived experience has been included in the national efforts.

The Action Alliance is advancing high priority recommendations from the National Strategy that have the potential to substantially lower the burden of suicide in our Nation. Examples of their current initiatives include:

- *Zero Suicide:* The Action Alliance has developed the Zero Suicide framework; this is based on evidence from pioneering health organizations and is grounded in a commitment to suicide prevention in health and behavioral health care systems. Its core proposition is that suicide deaths for people under the care of any health care professional are preventable and that the bold goal of zero suicides among persons receiving care is an aspirational challenge that health systems should accept. The model, which includes a specific set of tools and strategies, is currently being piloted in selected sites across the country; it transforms suicide care through leadership, policies, practices, and outcome measurement. It represents a commitment to patient safety and also to the safety and support of clinical staff.

- *Changing the Conversation:* The Action Alliance is partnering with the media, as well as those who communicate regularly with the media, to change how we report on and speak about suicide and suicide prevention. The Action Alliance is committed to ensuring public messages are safe, accurate, and offer hope and resources to those in distress. Among our many efforts, the Action Alliance has partnered with Poynter Institute, a leading resource for journalists, to begin training both print and broadcast journalists through a Poynter/Action Alliance: Covering Suicide and Mental Health Reporting Institute. This institute will provide journalists with crucial training to effectively communicate to the public about suicide and mental health.

- *Faith Communities*: The Action Alliance launched the Your Life Matters! Campaign which provides guidance and resources to help faith communities devote one worship each year to messages of hope, social connections, reasons for living, and support for community members facing mental health and substance use challenges. As we know, faith communities are often the front line for providing assistance, support and referral for those who struggle with mental health challenges or thoughts of suicide. This initiative is intended to engage a key sector in our suicide prevention efforts.

In addition to the catalyzing efforts mentioned above, the Action Alliance is also developing action plans to address four additional high-priority areas over the next two years: (1) preventing suicide by addressing alcohol and substance use; (2) preventing suicide by improving care transitions for those receiving mental health services; (3) preventing suicide among people in the middle years; and (4) promoting a culture of safety in our health care facilities and in our communities. Recommendations to advance these priorities are being formulated as we speak by teams of both public and private sector participants and will be presented to the Executive Committee of the Action Alliance for decision and action.

Conclusion

The latest research shows that suicide is preventable, suicidal behaviors are treatable, and the support of families, friends, and colleagues is a critical protective factor. Our Nation is making steady progress in both understanding the nature of suicide and what can be done to prevent it. While much has been done, much more needs to be done. Our collective efforts are beginning to change systems, engage new partners with a role to play and provide those in need with the services and support they require to assist in their recovery.

Suicide prevention needs to be addressed in the comprehensive, coordinated way outlined in the National Strategy. We know that no one agency or one approach will solve the challenge of suicide in our nation. Reducing the number of suicides requires the engagement and commitment of people in many sectors in and outside government, including public health, mental health, health care, the Armed Forces, business, entertainment, media, and education. No matter where we live or what we do, each of us has a role in preventing suicide.

We will continue to support collaboration across public and private sectors at the Federal, State, Tribal, and local levels, and seek to identify where we can find leaders and organizations willing to test, implement, and sustain effective suicide prevention strategies. From where I sit, at this time in the field of suicide prevention, there is a sense of hope and optimism, there is a sense of urgency, and there is most certainly a need for collaborative and focused action. National suicide prevention efforts are primed to make bold, significant progress that will save lives. I applaud you for bringing attention to this issue and I urge your continued support for suicide prevention.

Thank you Mister Chairman, Ranking Member DeGette, and members of the Subcommittee. I will be happy to answer your questions at this time.

Additional Resources:

National Strategy for Suicide Prevention: Goals and Objectives for Action. 2012
http://www.surgeongeneral.gov/library/reports/national-strategy-suicide-prevention/index.html

The Surgeon General's Call to Action to Prevent Suicide. 1999
http://profiles.nlm.nih.gov/ps/retrieve/ResourceMetadata/NNBBBH

National Strategy for Suicide Prevention: Goals and Objectives for Action. 2001
http://www.sprc.org/sites/sprc.org/files/library/nssp.pdf

Mr. MURPHY. Thank you, Doctor.
Dr. Brent, you are recognized for 5 minutes.

STATEMENT OF DAVID BRENT

Mr. BRENT. First, I would like to thank you and your staff for inviting me. It is an honor to be here.

I would like to make a few points about what I think are things that we can do now that can decrease the suicide rate, and it starts with the premise that the single most important risk factor for suicide remains mental disorder, and there is evidence that if you improve the quality of treatment of mental disorder that you can decrease the suicide rate. This has been demonstrated regionally in studies based in primary care. There are pharmacoepidemiologic data that show that there is an inverse relationship between prescriptions for antidepressants and the suicide rate, and one of the ways that we think about how mental illness contributes to the risk for suicide is that it affects a balance between distress and restraint and that when you have low restraint against suicide and high levels of distress, that is when suicide ensues, and this is why insomnia, I think, is one of the most important risk factors for suicide. It is underrecognized. Many people are not well trained in its treatment. The way that it contributes is that it tends to increase disinhibition and dysphoria, which is a really bad combination and something that can either precipitate or exacerbate suicidal thoughts.

There also are efficacious treatments for suicidal behavioral, and the issue is really one of dissemination at this point, and I will just mention one of them, dialectic behavior therapy, but there are several others, and what they have in common is that they have a clear model for suicidal behavior. They collaborate with the patient, and they have a safety plan that the patient can implement when they have suicidal urges.

Another barrier to prevention of suicide, I believe, has to do with the inadvertent effects of the black-box warning of the FDA, which warns against suicidal events that may occur with antidepressant treatment, and what we have seen as an untoward consequence of that is a decline in the rate of diagnosis of depression and even a decline in referrals for psychological treatments for depression in adolescence, and although it is controversial, there are some studies showing that that is correlated with an uptick in suicide.

Another thing that I think should be in our portfolio has to do with evidence-based prevention. The Washington State Institute for Public Policy has done cost-benefit analyses on different prevention programs and showed that there are certain ones that are evidence-based and yield a very high return for investment, and I think that some of these could decrease risk factors that we know are related to suicide such as aggression and substance abuse.

The issue of lethal agents in suicide—guns in the United States—having a gun in the house greatly increases the risk of suicide, and it is not only in people who have mental illness, although that is the most concerning issue, but in our studies, we found that individuals where there wasn't a clear mental disorder, the only factor that differentiated between suicide victims and people in the community was having a loaded gun in the home, and so we know

that there are interventions that can be done in primary care that can at least encourage people to store guns in a secure manner so that a disinhibited or impulsive act won't lead to a fatality, and we would urge that this be considered as an important public health measure.

There are service system changes that can lead to improvement in the suicide rate, and Dr. Lushniak alluded to this, but in England, they showed that implementation of care coordination, 24-hour beds, crisis beds, assertive outreach if people don't show up for their appointments, and dual diagnosis treatment, that is, substance abuse and mental disorder combined. When they implemented these recommendations, it was associated with a decline in the suicide rate.

And so to conclude, I just wanted to share what I think are some recommendations that may help us to reduce the suicide rate, which has to do with improved recognition and treatment, and I think the most promising area, and this is in collaborative care where mental health treatment is collocated in primary care, dissemination of evidence-based treatments that have been shown to reduce suicide, coordination of care and the mental health service systems, innovations that have been shown in England to reduce suicide, and I think that there are some research areas that could have relatively high payoff quickly. One is whether better recognition and treatment of insomnia could have an effect on the suicide rate, safety counseling in primary care, whether restriction of availability of lethal means could reduce the suicide rate, and I think research on trying to find agents that have a more rapid onset of antidepressant effect than the ones that we are currently using, and finally, evidence-based prevention judiciously used, and I think these recommendations, many of them are partly in place now, I think could make a favorable impact on the suicide rate.

Thank you.

[The prepared statement of Dr. Brent follows:]

Testimony on Suicide Prevention and Treatment

Offered on September 18, 2014 before Subcommittee on, "Suicide Prevention and Treatment: Helping Loved Ones in Mental Health Crisis"

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Executive summary

Mental disorder and suicide. Mental disorder is intimately related to suicide risk, since 90% of people who die by suicide have at least one major psychiatric illness. The most common illnesses associated with suicide are mood disorders, anxiety disorders, alcohol and substance abuse, disorders of impulsive aggression, and psychotic disorders, especially in combination.

Imminent suicidal risk. However, psychiatric illness alone does not explain why a person chooses to engage in suicide behavior at a particular time. Imminent suicidal risk is determined by a balance between distress driving a person towards suicide, and restraint. A person with high distress, with depression, thoughts of suicide with a plan and intent, and at point of low restraint, such as being intoxicated, is someone who is at high suicidal risk. Insomnia is the single most significant predictive symptom for suicide, and yet there are very few studies that have examined whether improvements in sleep can reduce suicidal risk.

Access to good quality mental health treatment can reduce suicidal risk. Regional improvements in primary care physicians' ability to treat and manage depression are accompanied by declines in completed suicide. Integrated delivery of mental health services, called collaborative care, has been shown to be superior to usual care for depression and reduction in suicidal risk across the lifespan. The Black Box Warning on the use of antidepressants in children and adolescents may have inadvertently decreased not only the use of antidepressants, but even the diagnosis of adolescent depression, and possible the suicide rate as well.

Elements of treatment that prevent suicidal behavior. Psychotherapies have been shown to reduce suicidal ideation or attempts. Common elements of effective treatments are: a clear model of suicidal behavior; a collaborative approach between the patient and therapist; implementation of a safety plan, that is, a structured response to suicidal urges; plans to integrate the treatment with other aspects of patient care (e.g., pharmacotherapy); when appropriate, emphasis on sobriety, and mobilization of family and peer social support as protective factors against suicidal behavior.

A role for prevention. An overall national strategy for suicide prevention should also consider the impact of cost-effective prevention programs that may reduce common and significant risk factors for suicide such as maltreatment, aggression, and substance abuse.

Safe storage of firearms. Guns are much more commonly found in the homes of suicide victims, and if a gun is available in the home, a suicide victim is likely to use it. Primary care interventions that have been shown to improve the safety of firearms storage, may help to reduce the suicide rate, especially in the young and impulsive potential suicide victims.

Coordinated and assertive care. Based on studies in the UK, the type and manner in which mental health care is delivered can drop the suicide rate, such as: having assertive follow-up on non-adherent patients, provision of 24 hour crisis beds, availability of dual diagnosis services, and multidisciplinary review of any suicides.

Research to improve our ability to reduce suicide would include development and testing of new compounds to rapidly reduce depression and suicidal ideation, testing treatments for insomnia to reduce suicidal risk, identifying biomarkers for the rapid identification of likely treatment responders, testing large scale applications of the role of safety counseling, collaborative care, dissemination of evidence based treatments, and of prevention programs on suicide.

Presentation

Thank you for the opportunity to share some thoughts about how we can better care for individuals with mental disorders and reduce the suicide rate.

Mental disorder and suicide. Mental illness and suicide are intimately related, as around 90% of all individuals who die by suicide have at least one major psychiatric disorder. There is an age gradient insofar as younger individuals more often have impulsive aggression and substance abuse are prominent characteristics, whereas older suicide victims are more likely to have issues related to depression.[1,2] Pain and chronic illness also play important roles in suicide in older individuals.

Imminent suicidal risk. Suicide ensues due to an imbalance between distress and restraint. Some disorders primarily increase distress, such as depression and anxiety; others mainly decrease restraint, such as impulsive aggression and alcohol or substance abuse. Some conditions do both, such as bipolar disorder, insomnia, or PTSD. The goal of the treatment of an acutely suicidal person is to find things that will decrease distress and increase restraint. Distress may be relieved by emotion regulation, distress tolerance, or distraction techniques. Augmentation of restraint can include reviewing reasons for living and securing potentially lethal agents of suicide. Insomnia is one of the most prominent symptoms that is associated with suicide; insomnia predicts suicide in depressed individuals for example even controlling for the severity of depression.[3] Hypnotics and benzodiazepines may not be appropriate for the treatment of suicidal individuals with sleep difficulties, at least in the long run since there are associations between use of these agents and suicide. There are excellent brief psychosocial interventions for insomnia.

Improved access to care and reduction in suicidal risk. There is some evidence that improved access and treatment of depression can reduce suicide. Improvement in recognition and management of depressed individuals in primary has been associated with regional declines in suicide rates.[4,5] An inverse relationship between antidepressant use and suicide has been reported across multiple countries. Collaborative care, which increases access and quality of care for depression, has been shown to reduce depression and suicidal ideation to a greater extent than usual care for depressed elders.[6]

The Black Box Warning, adolescent depression, and antidepressants. Antidepressant treatment of child and adolescent depression has been supported by several studies. The FDA has approved escitalopram and fluoxetine for adolescent depression, and just the latter for child depression. Randomized clinical trials show that there is about a 0.9% higher risk for suicidal events in patients randomized to drug vs. placebo. Suicidal events are mostly increases in suicidal ideation, some attempts, and no completions in over 4300 patients. This finding caused the FDA to issue a Black Box Warning for the use of antidepressants in individuals under the age of 25. One unintended consequence of this warning has been a decline in the use of antidepressants and even in the rate of diagnosis of depression,[7] raising the concern that some adolescents are not receiving any kind of treatment for their depression. The risk benefit ratio appears to still be favorable for the use of antidepressants in adolescents, since 11 times more adolescents will respond to an antidepressant than will experience a suicidal event.[8]

Pharmacoepidemiological studies showing an inverse relationship between sales or prescriptions of antidepressants and suicide show this effect even in the under 25 age group.[9]

Treatments that reduce the risk of suicidal behavior. Although there has been some research in the pharmacological treatment of suicidal risk, the majority of treatment studies have involved psychotherapeutic interventions. There are some common elements across efficacious and promising treatments: collaborative, clear model of suicidal behavior, use of an explicit safety plan, use of emotion regulation to target distress, emphasis, when relevant, on sobriety, augmentation of familial and non-familial sources of support, and integration of treatment with other interventions (e.g., pharmacotherapy).

Among the best studied treatments is Dialectic Behavior Therapy (DBT), which is an intensive treatment that combines individual and group training in emotion regulation, mindfulness, distress tolerance, and interpersonal effectiveness. Its efficacy has been replicated several times and has been used successfully in a variety of disorders and age groups. The main disadvantage of the treatment is the intensity, cost, and length of training. Cognitive Behavior Therapy for Suicidal Behavior is a much briefer intervention that shows similar efficacy, but it has not been replicated. Integrated Cognitive Behavior Therapy for depressed, substance abusing suicidal adolescents has been shown to decrease substance abuse and suicide attempts over an 18 month follow up. Attachment-based family therapy has been shown to reduce suicidal ideation in depressed suicidal adolescents.[10] Other smaller studies have suggested other approaches that may be helpful, such as augmentation of positive parenting, and mentalization.[11] In adults, problem-solving therapy, and brief, home-based interpersonal therapy have also shown promise for reduction of repetition of suicide attempts. Sending letters or post cards to patients letting them know that the clinical staff are concerned about their well-being in three out of four studies also showed a reduction in the risk for suicidal behavior.

There are also some pharmacological treatment studies that suggest efficacy against suicide and suicidal behavior. Clozapine was superior to olanzapine in schizophrenics at high risk for suicide in reducing suicidal ideation and behavior.[12] Lithium has been shown to reduce suicide attempts and completions in both clinical trials and propensity matched pharmacoepidemiological samples.[13,14] Although experimental, use of IV ketamine has been reported to result in rapid, short-term reductions in depression and suicidal ideation.[15]

Prevention of suicide by prevention of substance abuse, aggression, and risk behaviors. Substance abuse, aggression, and health risk behaviors are common precursors and accompaniments of suicidal behavior and completed suicide, particularly in adolescents and young adults. There are now cost effective prevention programs that can reduce the incidence of maltreatment, which is a strong predictor of suicidal behavior, as well as of substance abuse, aggression, criminal involvement, and, in one study, even suicidal behavior.[16] (See Table 1). These interventions appear to return a high yield on their investment and should, in theory, by reducing the burden of significant risk factors for completed suicide, also result in declines in suicide in addition to having a salutary effect on intermediate targets like substance abuse and delinquency.

Table 1. Cost effective prevention that reduce risk factors for suicide

Program	Target	Cost	Effects	Return on $1.00 investment
Parent Child Interaction Therapy	Parents and young children disordant relationships	$1589	Reduction in maltreatment	$11.55
Good Behavior Game	First-graders	$159	Reduction in crime, substance abuse, suicide attempts, anxiety	$56.34
Communities that Care	10-14 year olds	$542	Reduction in delinquency, alcohol and substance abuse through 12th grade	$2.77

Washington State Institute for Public Policy, cost/meta-analytic results, Olympia, WA, August, 2014

Lethal agents and suicide. In the United States, firearms are the most common method for suicide. In countries that use other methods, availability of lethal agents, such as pesticides is also related to risk for suicide, and encouraging safer storage, or detoxification of pesticides has been accompanied by a decline in suicide in Sri Lanka.[17] Guns are 2-10 times more likely to be found in the homes of suicide victims than controls, even adjusting for rates of psychiatric disorder.[18] If a gun is available in a home where a suicide takes place, it is likely to the be method of choice.[19] Risk for completed suicide is proportional to ease of availability, with locked firearm and ammunition separately being much safer than storing a gun loaded. In fact, in young for whom no clear psychiatric disorder was present, the only factor that differentiated suicides and controls was the presence of a loaded gun in the home of the suicides.[19] Since primary care interventions have been shown to be acceptable and efficacious in encouraging families to store guns with a trigger lock and with ammunition locked in a lockbox, it seems likely that if safety promotion was initiated on a wide scale, one could detect declines in completed suicide as well.

Service system changes. Louis Appleby in the United Kingdom has devoted his career to identifying mental health service variables associated with patient deaths due to suicide and from this work, has generated a list of recommendations for locales to provide mental health care in a way that reduces the risk for suicide. These recommendations include availability of 24-hour crisis beds, availability of dual diagnosis services, assertive outreach for non-adherent patients, and multidisciplinary team to review all patient suicides. By region, implementation of these recommendations was associated with a significant reduction in suicide rate between 8.4 and 18%.[20] Thus, presumably, in the US, fairly simple system change could make substantial reductions in the suicide rate here as well.

Services for Teens at Risk. The Commonwealth of Pennsylvania has generously supported the STAR program since 1986. We have treated 9,300 patients and trained 86,000 professionals since that time. Despite our management of very high risk patients, we have not lost a patient to suicide. Although some

of this may be due to simple good fortune, there are elements of our program that we believe contribute to the safety and survival of our patients:

- Integration of research and research orientation to clinical care results in a sense of shared discovery and mission
- Team approach to promote collaboration, communication, and coordination
- Continuity of care from intensive outpatient, acute treatment, continuation treatment, and transition to adulthood
- Strong emphasis on training and supervision on use of evidence-based treatments

The STAR clinic has been a laboratory for developing and testing novel interventions and assessments, including cognitive behavior therapy for depressed and suicidal adolescents, psychoeducation for parents of depressed teens, and therapeutic approaches to treatment-resistant depression. [21-25] (see also www.starcenter.pitt.edu). This setting was also where we initiated studies of suicidal contagion,[26] familial influences on suicidal risk,[27-30] risk factors for completed suicide,[18,19,31-33] and studies in adolescent bereavement .[34-37]

Practice changes that could reduce the suicide rate now. These would include provision of collaborative care in primary care in order to improve quality and access to care for treatment of depression and other disorders, implementation of Appleby's service recommendations, and training and implementation of elements of evidence based treatments to reduce suicidal behavior. Widespread safety counseling with regard to firearms storage in primary care, and dissemination of cost-effective, evidence based prevention programs can substantially reduce the rate of risk factors for suicidal behavior.

Important areas for further investigation. First, while all of the above recommendations have the weight of evidence behind them, they should be implemented in a way that their effects can be critically evaluated to see if the proposed beneficial effects really emerge.

Second, research that is likely to pay off quickly would include studying the impact of improved detection and treatment of insomnia on suicidal behavior, effects of safety counseling with regard to firearms storage on firearms injuries and deaths, including suicide, and impact of evidence-based prevention programs on premature mortality including suicide.

Third are studies with a longer timespan but are needed. There is a need to develop and test agents that rapidly reduce depression and suicidal ideation. We need biomarkers that can identify which patients will respond to which treatments, so that we can speed up the process of matching effective treatments to patients. Since maltreatment is an important risk factor for suicidal behavior, and also predicts non-response to treatment, we need to understand why treatments don't work for these patients and what treatments should be offered instead.

Summary and conclusions

1. Suicide is intimately related to psychiatric disorder
2. Suicide ensues when there is an imbalance between distress and restraint.
3. Given the prominent role of insomnia in suicidal risk, interventions that target insomnia should be tested to see if this is a method for rapidly reducing suicidal risk.
4. Improvement in access and quality of treatment for depression in primary care can reduce the risk for suicide and suicidal behavior.
5. The Black Box Warning may have had negative, unintended consequences on the identification and treatment of depressed adolescents in the community.
6. Evidence-based prevention that has been shown to have robust effects on risk factors for suicide, may be a cost-effective method for lowering the population rate of suicide over time.
7. Safety counseling with regard to firearms storage should be implemented and tested to see if it can help to reduce the suicide rate.
8. Better coordination of care, assertive outreach, availability of 24 hour beds, dual diagnosis programs, and multidisciplinary review of all patient suicides have been shown in England to reduce suicides when these changes were implemented.
9. Research on more rapidly acting agents for depression, biomarkers that can personalize treatment, and identifying ways to treat those with refractory disorders are likely to help reduce the burden of suicide in the long run

Thank you for the opportunity to share these thoughts with you today.

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Mr. MURPHY. Thank you, Doctor.

Now, Dr. Moutier, if you would pull the mic close to you and turn it on. We appreciate your testimony.

STATEMENT OF CHRISTINE MOUTIER

Ms. MOUTIER. Mr. Chairman and members of the committee, thank you for inviting the American Foundation for Suicide Prevention, AFSP, to testify today. I am Christine Moutier, and I am AFSP's Chief Medical Officer. I would like to submit my full written statement for the record, and Mr. Chairman, thank you for your longstanding leadership in mental health and suicide prevention.

The magnitude of suicide's toll on our society is immense, but my message today is hopeful and actionable. While suicide's roots are complex with biological, psychological, and social determinants at play, clearly oftentimes suicide is the result of an unrecognized or untreated mental illness, and when one in four Americans have a diagnosable mental health condition but only one in five of those are seeking professional help, we have a lot of work to do. We must elevate the layperson's understanding of how mental health problems are experienced or what they look like in loved ones, and we must highlight help-seeking as the smart, responsible thing to do when you sense a change in mental health just like you would be proactive with any other aspect of your health.

Suicide risk tends to be the highest when multiple risk factors come together or precipitating life events in a person with a mental illness. We can start by better recognizing and effectively treating those health problems. On a population level, we can implement more upstream approaches such as shoring up community and peer support, teaching students social and emotional skills, making mental health care accessible and available to all, and addressing the health care system's failures, training frontline citizens like teachers, first responders and clinicians, and limiting access to lethal means.

The good news is that suicide is preventable, and thanks to a grassroots movement catalyzed by both suicide loss survivors and the emerging voice of those with their own history of suicide attempts, the fight against suicide is reaching a tipping point. I believe we need to focus on three key policy areas to bend the curve of our Nation's suicide rate, and these areas include suicide prevention research, suicide prevention programs, and support programs for those who are touched by suicide.

Research is vitally important to understanding what actually works to prevent suicide. Suicide research must focus on the gaps in the science, which, if understood, would have the greatest potential impact on reducing suicide burden.

AFSP uses a strategic approach to fund the best science with an eye toward impact. One AFSP-funded study, for example, trained primary care physicians in a region of Hungary that happened to have one of the world's highest suicide rates and found that their training led to a reduction in suicide rates in that region at least until the effect of the training had passed a couple years later. Studies of bridge barriers dispel the myth that people bent on suicide will find a way since suicide rates for the whole region dimin-

ished following their construction, and, as you have heard, clinical intervention studies have found promising results for those at highest risk for suicide such as people who have had a suicide attempt.

AFSP believes that the Federal Government must substantially increase funding of suicide research in the hopes of obtaining similar reductions in mortality that have come from strategic investments in other major public health problems like heart disease, HIV/AIDS, and cancer. Federal funding of research is far from commensurate with suicide's morbidity and mortality toll.

Suicide prevention needs to encompass a broad range of the issues that put people at risk for suicide and conversely, prevention needs to emphasize the conditions that provide a protective effect against suicide. The best strategies are multidimensional and sustained. They use education, media campaigns, targeted screening, resilience building, system changes that treat mental health problems as health issues and not disciplinary ones, and they address access to lethal means.

Prevailing cultural perceptions about suicide and mental health keep 80 percent of people with a mental health problem from getting help. To address this appalling level of mental health illiteracy, we must provide education universally to eradicate stigma and shatter the real and perceived barriers that keep people suffering in silence. Suicide touches many, many lives, but only recently as more and more people are speaking out about their experiences has the need for action become so apparent. Ten years ago, our organization had only a handful of people banding together. Today we have over 100,000 people walking and raising awareness for suicide prevention every year. It is time to wage war on suicide and put a stop to this tragic loss of life. I believe we can accomplish a goal of reducing the suicide rate in our country 20 percent by 2025. This is our organization's goal. Science can provide a clear roadmap, and I believe the American people are ready for a greater understanding of the issue. If we push hard with an effective strategy, we can save lives.

Thank you.

[The prepared statement of Ms. Moutier follows:]

AMERICAN FOUNDATION FOR
Suicide Prevention

Statement

Of

Christine Moutier, M.D.

Chief Medical Officer
American Foundation for Suicide Prevention

submitted to

House Energy and Commerce Subcommittee on Oversight and Investigations

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Chairman Murphy, Ranking Member DeGette, and members of the Committee, thank you for inviting the American Foundation for Suicide Prevention (AFSP) to testify today on "Suicide Prevention and Treatment: Helping Loves Ones in Mental Health Crisis." I am Dr. Christine Moutier and I am AFSP's Chief Medical Officer.

I became the Chief Medical Officer for the American Foundation for Suicide Prevention in the fall of 2013. Previously, I was at the University of California, San Diego (UCSD), School of Medicine, where I was Professor of Psychiatry and served as Assistant Dean for Student Affairs and Medical Education. I maintained an active outpatient and inpatient clinical practice through the UCSD Medical Group, the VA Healthcare System, and UPAC (Union of Pan Asian Communities), a community mental health clinic for the Asian refugee population. I worked with both high functioning people with mood and anxiety disorders, as well as with more severely ill people with chronic mental illness, continuously throughout my academic career. My clinical focus was in the areas of mood disorders, cultural issues related to mental health, and educating non-mental health clinicians about mental health issues and suicide risk. As a dean, my emphasis was on medical education through the lens of what needed to change to produce a higher quality healthcare workforce- compassionate, knowledgeable, and capable of the marathon of clinical care. Additionally, after losing too many colleagues and students to suicide, I launched and led a suicide prevention program for physicians and trainees. I saw first-hand how knowledge is power and can change even the most stoic, tough-minded workplace culture, especially when education is paired with a way for those to get help without jeopardizing their reputation or career.

Mr. Chairman, last week was National Suicide Prevention Week. AFSP hosted a briefing with Patrick Kennedy and the National Council for Behavioral Health on our new mental health consumer tools. I understand that you also participated in this important briefing to underscore the urgency of suicide as a national public health crisis. Thank you for your long-standing leadership in mental health and suicide prevention.

Sadly, actor and comedian Robin Williams has been gone now for more than a month. Since his suicide, an additional 3400 Americans have died from suicide too. Despite the unfortunate description of Robin's passing as "Genie, you are free," the starry sky from Disney's Aladdin, and the written implication that suicide is somehow a liberating option; it presented suicide in an idealized light. This type of conversation violates well-established public health standards for how we talk about suicide. Our national conversation on suicide must change now!

Nor was Robin's suicide a selfish act, or any suicide a selfish act. Suicide, as we in this room know, has numerous underlying issues that can be addressed successfully through therapy, treatment, and support.

Scope of the Problem of Suicide

My message today about suicide is hopeful and actionable. It is worth emphasizing the scope of suicide's impact: in recent years suicide has taken more lives than war, murder, and natural disasters combined. The suicide rate in the U.S. continues to climb, with the most recent CDC data revealing 39,518 suicides in 2011, and occupational loss and direct healthcare costs estimated to be $34 billion annually. Suicide is one of the leading, yet largely preventable causes

of death in our country. It is currently the 10th leading cause of death, and in adults age 18-64, it is the 4th leading cause of death. We need to do more, particularly for those vulnerable populations who have shown some of the largest rates of increase in suicide risk in recent years, such as our nation's veterans and military personnel. It is estimated that approximately 22% of the 39,518 deaths by suicide in 2011 (latest available data) were completed by veterans; and, according to the 2012 VA Suicide Data Report, an average of 22 veterans die by suicide each day. Additionally, in recent years, military personnel are more likely to die by suicide than be killed in combat. Middle-aged Americans' risk of suicide has also increased significantly over the past decade (in men age 45-64 by nearly 50% from 2000 to 2011.) For every suicide, there are an estimated 25 suicide attempts, each with their own toll on individuals, families, providers, and workplaces. And these figures do not consider the broader spectrum of suicidal behavior, which includes a range of upstream behavioral problems.

Causes of Suicide

Suicide is often the result of unrecognized and untreated mental illness. In more than 120 studies of series of completed suicides, at least 90% of the individuals involved were suffering from a mental illness at the time of their deaths. When 1 in 4 Americans have a diagnosable mental illness, but only 1 in 5 of them are seeking professional help for that condition, we have a lot of work to do in the area of mental health literacy, elevating the general lay understanding of how mental health problems are experienced or look like in a loved one or co-worker and toward destigmatizing help-seeking when you detect a change in your own or a loved one's mental health. Just like you would be proactive about any other aspect of your health such as your heart or kidneys.

But mental illness is the necessary, but not sufficient, risk factor for suicide in most cases, since most people with mental illness thankfully do not die by suicide. Mental illnesses such as depression, bipolar disorder and alcohol and drug dependence, Post-Traumatic Stress (PTS) and Traumatic Brain Injury (TBI) may create the underlying risk that when combined with life stressors such as transition from military life, job loss, relationship issues and financial or legal problems, a recipe for increased suicide risk can occur. Other important risk factors include social isolation, biological factors like aggression and impulsivity, childhood abuse, a history of past suicide attempt, serious medical problems, and a family history of suicide.

Suicide risk tends to be highest when multiple risk factors or precipitating events occur in an individual with a mental illness. The most important interventions we can start with are recognizing and effectively treating these disorders. On a population level, we can implement more upstream approaches such as shoring up community, mentorship and peer support, teaching students how to problem solve and process stress, make access to mental health care available and non-stigmatized, train frontline citizens like teachers, first responders, and clinicians, and limit access to lethal means.

Warning Signs of Suicide and Protective Actions to Take

If an individual has one or more of the risk factors highlighted above, the key to preventing suicide is recognizing the warning signs of suicide such as:

- Talking or writing about death or a wish to be dead;

- Expressing hopelessness, feeling humiliated, trapped or desperate;
- Losing interest in regular activities or losing the ability to experience pleasure;
- Experiencing insomnia, intense anxiety or panic attacks;
- Being in a state of extreme agitation or intoxication;
- Becoming socially isolated and withdrawing from loved ones; and,
- Looking for a way to hurt or kill oneself such as hoarding medicine, purchasing a new firearm, or searching online for suicide methods.

Whether an individual is in immediate crisis or is just looking for help, immediate protective actions should be taken that include:

- Not leaving the person alone and removing any lethal means for suicide (firearms, sharp objects, prescription drugs, and over-the-counter medicines);
- Encouraging an open conversation about symptoms and problems with a physician or mental health provider;
- Finding and delivering effective clinical care for mental and physical health, and seek treatment for problems with alcohol or drugs; and,
- Providing support through the recovery process, especially during the initial period when medications and treatment plans may need fine-tuning to work.

The good news is suicide is preventable, and thanks to a grassroots movement, catalyzed by both suicide loss survivors and the emerging voice of those with their own history of attempt, the fight against suicide is nearing a tipping point. To answer this call to action, AFSP has evolved a

three-point strategy that covers Research, Prevention, and Support, and if we push now, we hope to reduce the annual suicide rate 20% by 2025.

Key Policy Areas for Addressing Suicide

I believe we need to focus on three key policy areas to prevent suicide that include:

- Suicide prevention research;
- Suicide prevention programs; and,
- Programs and strategies that provide more support to those touched by suicide.

Research

Research is vitally important to understanding what works to prevent suicide. Suicide research should focus on gaps in the science, which if understood, would have the greatest potential for reducing suicide burden.

The field of suicide research is maturing. The earliest researchers are now mentoring young investigators, to improve methodology and build upon a growing body of findings.

As the leading private funder of suicide research, AFSP has played a defining role in this maturation. We do not just fund research; we also shape its direction. Our scientific advisory includes over 150 suicide researchers across disciplines who provide peer review for AFSP, galvanize interest in research and lay communities, and identify new critical areas for investigation.

But suicide is challenging to study. Timely surveillance is difficult to capture, and large sample sizes are needed to detect changes from a baseline rate (12.3/100,000 in 2011). And this is on to of the usual challenges attendant to cross-disciplinary research that the complex roots of suicidal behavior requires.

Since these challenges require creativity to surmount, AFSP uses a strategic approach to fund th best science with an eye toward impact. Untethered to the restrictions of federal funding, in addition to larger scale projects, AFSP is able to fund many pilot studies that are high risk but potentially high yield. One AFSP-funded study trained primary care physicians in a region of Hungary with one of the highest suicide rates in the world, and found that their training led to a reduction in suicide rates in that region—that is at least until the effect of the training passed tw years later. Studies of bridge barriers dispelled the myth that people bent on suicide will find a way, since suicide rates for the whole region diminished following their construction. Studies of community intervention programs, such as educating and partnering with gun shop owners, hav shown promising results. And clinical intervention investigation has broadly spanned studies of lithium, clozapine, electroconvulsive therapy, Safety Planning, Cognitive Behavioral Therapy, Dialectical Behavioral Therapy, Attachment Based Family Therapy, as well as focusing on periods of high risk.

While AFSP is the nation's largest private sector funder of scientific research across all disciplines that contribute to understanding suicide and suicide prevention, we cannot do this alone.

Perhaps the biggest problem is that federal funding of research is far from being commensurate with its morbidity and mortality toll.

Before I started in my current position, I was a Co-Investigator of the Sequential Treatment Alternatives to Relieve Depression (STAR*D) study funded by the National Institute of Mental Health. STAR*D is the largest study of treatment for Major Depressive Disorder to date with over 4000 subjects enrolled. It was a unique experience because it utilized a combination of blind randomization and patient preference with no placebo group-therefore a hybrid Randomized Clinical Trial and naturalistic design. It sought to compare the effect of typically used treatment options when an initial SSRI antidepressant was not effective for an individual's depression. The results of the study were sobering to the clinical community because we found that achieving response or remission from depression, even with a combination of treatments and cognitive behavioral therapy, is more difficult and less common than had been previously thought. For example, with the initial antidepressant treatment, about one-third of patients' depression remitted and an additional 15% had a partial response, during 12 weeks of treatment. Those who did not have full remission of symptoms went on to another treatment option or tier of the study (such as switching to a different antidepressant, combining with another medication, or combining with psychotherapy). With each subsequent four tiers of treatment, response rates diminished, meaning more cases of depression are tougher to treat fully and effectively than had been earlier felt to be the case. Clinicians need to monitor symptoms closely and adjust treatment judiciously, just as specialists in other fields would do for other chronic illnesses like hypertension or diabetes.

NIMH showed leadership with this innovative design, using both psychiatry and primary clinics throughout the U.S., to attempt to answer the vexing question of what to do when depression is not improving or not completely resolving. It has been known since the 1990s with earlier NIMH studies like the Collaborative Depression Study (a 10-year prospective study following the course of approximately 400 people with depression from the 1980s-90s) that unless full remission is achieved, the prognosis for relapse and for impaired life functioning is significantly compromised. Therefore the appropriate goal for the treatment of depression, as stated in the American Psychiatric Association's (APA) treatment guidelines, is full and ongoing management of depression with resolution of depressive symptoms, again similar to the goals of treatment for hypertension and diabetes. Other large population based studies of depression have found that among community-dwelling people receiving treatment for depression, only 20% are receiving treatment that is considered on par with these evidence-based recommendations.

AFSP believes that the Federal Government must substantially increase funding of suicide research in the hopes of obtaining similar reductions in mortality that have resulted from strategic investments in other major public health concerns, like HIV/AIDS, heart disease, prostate, breast and colorectal cancer.

For example, we've seen a 42% decline in deaths from HIV/AIDS between 2000-2011 while the government invested more than $12 billion in research between fiscal years 2009-2012. Today, our government only spends around $40 million in direct suicide prevention research.

AFSP urges members of Congress to carefully evaluate the recently released (2/12/14)

recommendations from a three-year study of the Research Prioritization Task Force of the National Action Alliance for Suicide Prevention. This report lays out six prioritized approaches for allocating funds and monitoring future suicide research to ensure that available resources target research with the greatest likelihood of reducing suicide morbidity and mortality. Of the six approaches outlined, the top two include:

1) Research examining why people become suicidal to discover models that explain contagion as well as resilient, healthy social connections among at-risk groups and to determine if processes that reduce risk conditions (e.g., insomnia, addiction, agitation, pain, etc.) also mitigate suicide risk; and,

2) Research looking at which interventions are effective and what prevents individuals from engaging in suicidal behavior. This includes identifying feasible and effective, fast acting interventions and finding interventions for the highest risk groups in care or community settings.

Specific detailed information can be found at www.suicide-research-agenda.org.

Suicide Prevention Strategies

Another critical component would be developing and investing in suicide prevention, using education, technology, and advocacy. Prevailing cultural perceptions about suicide and mental health keep 4 out of 5 people suffering from mental health problems like depression and anxiety from seeking help. To change these numbers and encourage more to seek treatment, our strategy

must involve the eradication of stigma and the shattering of real and perceived barriers. And to do this we need to accelerate the translation of research from bench to bedside and permeate societal consciousness.

When reluctance to seek help for mental health problems is this pervasive, tools that circumvent the need for people to self-identify are key. We need mechanisms that streamline help-seeking. To that end, AFSP has developed the Interactive Screening Program, an online tool that connects those at risk with the mental health services they need to get—and stay—healthy. The screening is anonymous, it offers personal interaction with a counselor, and it is already saving lives of veterans, students, physicians, corporate employees, and police personnel. ISP is the only program to offer an anonymous connection to counselor. But we need to make it available to more workplaces.

And there is no lack of incentive for workplaces, because mental health is smart business. The costs associated with mental health problems are staggering—absenteeism and presenteeism due to mental health problems cost the U.S. over $200 billion dollars each year. These billions could be pressed into our service to encourage more businesses to invest in the mental health of their workforce.

Targeted education of frontline citizens and leaders in organizational hierarchies—especially employers, educators, first responders, physicians and other healthcare professionals, and clergy—is essential. Their regular contact with populations affords the opportunity to detect fluctuations in behavior that could signal mental health problems and suicide risk. This is why

Mental Health First Aid is so important to our communities.

Additionally, like the Air Force Suicide Prevention program's strategy, authority figures in these populations are uniquely positioned not only to encourage those struggling to seek help, but to sanction that help-seeking as well. AFSP has a commitment to study the outcomes of all of our prevention programs, addressing a significant gap in suicide prevention science.

Advocacy is a crucial component to an effective prevention strategy. In addition to securing research funding, AFSP and its thousands of field advocates lobby legislators and government officials for laws and policies that can reduce suicides and incentivize best practices. The legislation can be as simple as requiring schools to provide teachers and students suicide prevention education, or as sweeping as the Mental Health Parity and Addiction Equity Act. Finally, we need more and higher quality support in the aftermath of suicide, and we must extend our support to include the emerging population coming out as attempt survivors.

Too often our first responders, from paramedics to funeral home directors to media personnel, do not get the training they need to handle suicide. This lack of preparation can be dangerous, particularly with the media. Research shows that mishandled messaging following a suicide death can precipitate more suicides via contagion. AFSP has developed safe messaging guidelines for media as well as for those who are telling their personal stories as part of grassroots events. And we are using our relationships with media to get safe, effective messaging about suicide adopted into wider use.

But it is more than just controlling the immediate aftermath. The toll a suicide takes on family, friends, and colleagues can have a serious impact on the community, and in some cases trigger more attempts.

Support for those Touched by Suicide

AFSP has a number of programs dedicated to supporting those who are newly bereaved, such as AFSP's Survivor Outreach Program, as well as for those who are farther along in their healing journey. A national summit for seasoned loss survivors will be hosted by AFSP in the fall of 2015. And every year in November for the past 15 years, AFSP hosts more than 250 International Survivors of Suicide Loss Day Programs spanning the globe.

Thanks to grassroots funding, AFSP is now able to engage suicide attempt survivors. There are an estimated 2.5 million suicide attempts each year, with an estimated total of 100 million attempt survivors (lifetime) in the U.S. AFSP recently conducted a series of focus groups to discover more about what kinds of resources and programs would be useful for people with lived experience and their families.

AFSP's 67 chapters across the United States function as supportive networks for their local community and are the delivery mechanism for community-based suicide prevention programs. They host events where AFSP-funded scientists present their research to communities, they provide suicide prevention education for teachers and students, and educate their communities through local awareness campaigns. Chapters also partner with healthcare institutions to provide clinical training programs on suicide prevention. They are a model for community involvement,

and have made a huge impact in changing the conversation regarding mental health.

I believe we can accomplish the goal of reducing the suicide rate in our country 20% by 2025. Science provides clear evidence for strategies to take, and I believe the American people are ready for a greater understanding of the issue. If we push hard with an effective strategy, we can save lives.

One final thought, people have often asked me during my career why suicide has been left out of the conversation around mental health and how can we change this?

During the course of caring for people with mental health problems, clinicians become very busy with the clinical and social issues at hand. Some examples of the activities that need to be done during a clinical session are tracking the person's key symptoms, monitoring treatment's therapeutic and side effects and discussing ways to optimize both with the patient, addressing the functional aspects of the person's life, e.g., the impact of energy and concentration problems on work and home life, helping the person to apply for appropriate aid or health insurance, and communicating with family members when possible. Doing these tasks within a standard 20-minute session is extremely challenging; add the lack of training on the assessment of suicide risk and knowledge about effective ways to approach the suicidal patient; and the scrambling effect of anxiety on even the best of clinicians. As healthcare providers, we work hard and feel gratified when a patient's mental health is improving and we worry about deterioration in the health of our patients; but among our greatest fears is that of losing a patient to suicide. But without thorough training and preparation for working with suicidal patients, clinicians may tend

to avoid it. Like the primary care physician who proclaims, "I don't have any patients with depression," because s/he doesn't ask and doesn't recognize the signs of its presence, mental health clinicians don't always ask about suicidal thoughts even when it would be indicated and the majority do not routinely assess the suicide risk of patients ever, let alone in an ongoing way, which is recommended.

This problem can be readily addressed by 1) continuing to develop and test effective screening and interventions for people at risk for suicide, 2) developing curricula and core competency standards for suicide training for all mental health clinicians, emergency medicine, and primary care clinicians, and 3) disseminating the most effective evidence-based treatment modalities to clinicians.

Suicide touches so many lives, but only recently, as more and more people speak out, has the need for action become so apparent. Ten years ago, we had only a handful of people banding together. Today we have a movement that rallies over 120,000 people to participate in over 325 Out of the Darkness Walks.

We have a strategy that will work—the tactics are backed by sound research, and we've seen similar strategies make headway in reducing other public health related causes of death.

It's time to answer that grassroots call for action. It's time to wage war on suicide and put a stop to this tragic loss of life.

Chairman Murphy and Ranking Member DeGette, the American Foundation for Suicide Prevention thanks you again for the opportunity to provide testimony today and looks forward to working with you, other members of the Congress, the Administration, and all mental health and suicide prevention organizations inside and outside of government to prevent suicide.

AFSP is the nation's leading organization in the fight to prevent suicide, bringing together people across communities and backgrounds to understand and prevent suicide, and to help heal the pain it causes. Individuals, families, and communities who have been personally touched by suicide are a powerful force, especially when combined with the science. This combination of grassroots and science is behind everything we do. You can learn more by visiting www.afsp.org.

- We strive for a world that is free of suicide.
- We support research, because understanding the causes of suicide and the effective strategies for prevention and intervention are vital to saving lives.
- We educate community members, particularly those who serve in frontline roles, in order to foster understanding and inspire action.
- We offer a caring community to those who have lost someone they love to suicide, or who are struggling with thoughts of suicide themselves and their families.
- We advocate to ensure that federal, state, and local governments do all they can to prevent suicide, and to support and care for those at risk.

Mr. MURPHY. Thank you, Doctor.

Now Dr. Dvoskin, you are recognized for 5 minutes. Make sure the microphone is on and pull it close to you.

STATEMENT OF JOEL A. DVOSKIN

Mr. DVOSKIN. Chairman Murphy, Ranking Member DeGette and members of the committee, my name is Dr. Joel Dvoskin. I am a clinical and forensic psychologist. I am a faculty member at the University of Arizona College of Medicine. I also serve as Chairman of the Governor's Advisory Council on Behavioral Health for the State of Nevada. I thank you for holding this hearing, and I am appearing today on behalf of the American Psychological Association, which is the largest scientific and professional organization representing psychology in the United States. APA supports the committee's focus on ensuring that our Nation does all it can to prevent suicide.

As you have heard, suicide is a complex and multifaceted problem. It is also a form of violence, but with access to appropriate treatment, it can be prevented, and that is probably one of the more important things I want to say to you today, and you have heard from other people is that we know how to prevent suicide; we just don't do it.

Any act of interpersonal violence including mass homicides, which have gotten a lot of attention, are suicidal acts. The majority of people who commit mass homicide die. They either kill themselves, they are shot by police, or their life as they know it is over because they go to prison or hospital for the rest of their life. So if we prevent suicide, we will prevent mass homicide; we will just never know it because you never know which person would have decided to end their life at the expense of many others.

APA views suicide prevention as an essential part of violence prevention. As you have heard from Dr. Brent, suicide is an impulsive act, especially angry impulsivity, where an individual is desperate to relieve their suffering and can't figure out another way to do so.

Suicide risk can be reduced through identifying and providing support to address the factors that drive a person to consider suicide as well as the factors that disinhibit people and allow them act on those drives.

Much of my current work is—I am a board member of the National Association to Protect Children, and one of the important points I want to make is that child abuse and trauma is an important risk factor for suicide among a whole bunch of other bad life outcomes. Programs such as the National Child Traumatic Stress Network are essential to our efforts to prevent suicide.

Much of my own work is focused on jails and prisons. I was glad to hear you mention DBT. Just yesterday, I spent all day in the women's prison in Huron Valley in Michigan, where they have done, to my knowledge, the first DBT program in a prison in America as a large part of their effort to prevent suicidal acts among their inmate population.

By using a public health and prevention approach, experience shows that we have reduced jail suicides by about two-thirds in every jail that has implemented a public health approach to suicide

prevention. It is very simple. You ask people at the front door if they are thinking of killing themselves, and if they say yes, which they often do, you keep them alive until the crisis passes.

You have heard about interagency collaboration and programs. One example is the crisis intervention teams, which I know that Chairman Murphy has been supportive of, a program that has been developed with law enforcement, but CIT is worthless if the police don't have anybody to refer the person to. So in the absence of good mental health care, CIT, which is a tremendously valuable program, loses a lot of its effectiveness.

One of the most important things I want to share with you today is the fact that we have completely neglected to use the most important behavioral change agent in America to fight suicide, and that is television advertising. Television got everybody in America to put deodorant on every morning, but we have never tried to use it to change behavior on a much more important thing, and I think the committee could use its power to get some cooperation from television advertisers to fight stigma and to get people to tell us when somebody they care about, their life is in danger due to suicide. We know what works, but not all Americans have access to the effective treatment and crisis intervention that is necessary.

We need to have more trained professionals including people who have been through problems with mental illness and are very effective peer service providers. I very much agree with the chairman's push to at least revisit the Medicaid IMD expansion, which will hopefully make more acute crisis beds available for people who are now choking emergency rooms where people can't get lifesaving treatment, and it is bad treatment for a serious mental illness or a psychiatric crisis as well.

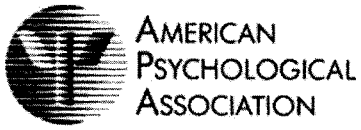
My time is almost done. I just want to add a couple of other things. One of them is that the National Violent Crime Reporting System currently only exists in 16 States, and I urge you to consider expanding that nationwide so that we can do some of the research that you have heard about before.

I want to express my deep appreciation of the committee's work and its ongoing attention to the prevention of suicide and the treatment of serious mental illness in America. Over my many years in this field, I have seen tremendous progress in figuring out how to fight suicide. We just don't implement these tools broadly enough. Suicide, like so many tragedies, is the direct result of despair, and there is only one cure for despair, and that is hope. It is my hope that our political parties can join together in a bipartisan effort to give people in the most acute despair some measure of hope for a better life by improving the services that are provided to people experiencing emotional crisis and psychological pain. This can happen to any of us, and we must ensure that help is there in time of crisis.

Can we afford to do this? I would propose to you that given the costs of each suicide, we can't afford not to.

Thank you very much.

[The prepared statement of Mr. Dvoskin follows:]



Statement

Of

Joel A. Dvoskin, PhD, ABPP

On behalf of the American Psychological Association

At a Hearing

"Suicide Prevention and Treatment:
Helping Loved Ones in Mental Health Crisis"

U.S. House of Representatives

Committee on Energy and Commerce

Subcommittee on Oversight and Investigations

September 18, 2014

Statement of Joel A. Dvoskin, PhD September 18, 2014

Chairman Murphy, Ranking Member DeGette, and members of the committee, I am Dr. Joel Dvoskin, a practicing clinical and forensic psychologist and a clinical faculty member of University of Arizona School of Medicine, Department of Psychiatry. I also serve as Chairman of the Governor's Advisory Council on Behavioral Health and Wellness for the State of Nevada. I thank you for holding this important hearing on the serious problem of suicide and for your stalwart commitment to addressing the unmet behavioral health needs of our nation.

I appear on behalf of the American Psychological Association (APA), which is the largest scientific and professional organization representing psychology in the United States and is the world's largest association of psychologists. Comprised of researchers, educators, clinicians, consultants, and students, APA works to advance psychology as a science, a profession, and as a means of promoting health, education, and human welfare. I recently had the privilege of serving on the APA Presidential Task Force on Gun Violence and helped draft our recommendations on a public health approach to reduce suicide and gun deaths.[i] We look forward to working with Congress and the Administration to make progress in preventing suicide.

APA supports the Committee's focus on ensuring that our nation does all it can to prevent suicide and to provide those in need with the best possible health care. Psychology has been at the forefront of suicide prevention efforts. Psychological research and clinical work provide key tools for assessing risk (e.g., collaborative risk assessment) and treatment (e.g., dialectical behavior therapy and cognitive behavioral therapy). The work of our members on school campuses, in health care settings, jails and prisons, with veterans, and in the military is essential to helping Americans overcome the factors that can lead to suicide.

I have served in a number of roles in the mental health system, and now I work primarily with mental health systems, psychiatric hospitals, and correctional institutions to reduce suicide and violence, and to provide mental health and substance abuse services. Earlier in my career as Acting Commissioner

of Mental Health and Associate Commissioner for Forensic Services for the State of New York, I was responsible for mental health and substance abuse treatment in large psychiatric hospitals, forensic and correctional institutions, and prison mental health programs, as well as the community care of hundreds of thousands of New Yorkers with serious mental illness. In these challenging conditions, our staff worked hard to devise approaches that reduced suicide through crisis intervention, screening and assessment, appropriate clinical services, and follow up. The following key points are drawn from my experience as a clinician, researcher, consultant, and academic.

Suicide is an urgent, complex, and multifaceted problem.

Suicide is of such extraordinary magnitude and importance that it consistently ranks among the 10 leading causes of death in the United States.[ii] Nearly 40,000 Americans commit suicide each year--approximately 105 per day. A recent survey by the Substance Abuse and Mental Health Services Administration (SAMHSA) that tracks self-report of suicide attempts and plans found that, in the past year, 1.3 million Americans over the age of 18 reported a suicide attempt and 2.7 million made plans for suicide.[iii]

Every day in the United States, 53 individuals use a firearm to commit suicide and 40% of youths who commit suicide do so with a gun.[iv] Males complete the vast majority of suicides, and firearms are the most commonly used method of suicide for men--roughly four to six times as many males as females kill themselves with firearms.[v] Among females, poisoning (including prescription drug overdose) is the most common method.

Risk and protective factors

Suicide is a problem across the lifespan. Among youth, suicide ranks high as a cause of death, and is often preceded by childhood trauma, bullying, or other abuse. In 2011, suicide became the second leading cause of death of 15– to 24-year olds, and many prevention efforts are focused on this age group. However, increasing age is also a risk factor, and the fastest growing rates of suicide are found among

middle aged and older adults. A recent study by the Centers for Disease Control and Prevention (CDC) found that over a 10-year period (1999-2009), suicide rates increased among middle-aged adults by almost 30%.[vi] Medicare beneficiaries are also at a greater suicide risk than the general population. Suicide is a major issue in men's health, and males over the age of 45 have rates that far exceed all other major demographic groups.

Alcohol and substance abuse are also risk factors for suicide. Adults aged 18 or older with a recent substance use disorder or abuse were about 400% more likely than those without dependence or abuse to have serious thoughts of suicide in the past year, to make suicide plans, or to attempt suicide.

Suicide can be prevented.

Suicide is a form of violence. Any act of interpersonal violence, including mass violence, is an act of suicide – it ends the person's life as they know it, whether the perpetrator survives or not. APA takes a multidimensional approach to suicide prevention and views suicide prevention as an essential part of violence prevention.

Suicide is often an impulsive act, where an individual is desperate to relieve their suffering and knows no other way. Suicide risk can be reduced through identifying and providing support to address the factors that drive a person to consider suicide. Our suicide prevention work in jails and prisons is one example. By using a public health/prevention approach, experience shows that it is possible to reduce jail suicides by approximately two-thirds - a major accomplishment in one of the nation's most stressful environments.

As the risk of suicide increases over an individual's lifetime, it is important to address risk factors to alter trajectories toward violence. I am proud to serve as a member of the Board of the National Association to Protect Children, an organization that understands that childhood abuse and trauma are risk factors for suicide. Preventing and treating child abuse can interrupt multiple pathways of risk. Federal

programs such as the National Child Traumatic Stress Network are essential to our efforts not only to reduce child abuse, but also to prevent suicide.

Because the risk factors associated with suicide are multifaceted and vary across groups, suicide prevention demands comprehensive, evidence-based efforts across many settings that include early intervention, timely and effective treatment for those in acute crisis, and follow-up and support after a crisis. The Mentally Ill Offender Treatment and Crime Reduction Act (MIOTCRA) provides funding for interagency collaboration and grants aimed at addressing the mental health needs of juvenile and adult offenders. Another example of vital legislation that supports a comprehensive approach is the Garrett Lee Smith Memorial Act, which funds states, tribes, universities, and colleges to provide early intervention, assessment, and treatment services to prevent youth suicide. These important programs should be promptly reauthorized and funded robustly. I am pleased that there is current legislation, such as H.R. 3717, that would reauthorize this important program.

Many of those who complete suicide have not been under the care of a mental health professional. We need to ensure that our health care system reimburses not only for suicide assessment but also for depression and substance abuse screening and treatment. Providers need to be trained in assessing suicide risk, suicide management, and treatment through using therapies especially devised for these problems. Further, we need to ensure that Medicaid eligible adults (ages 21-64) in acute mental health crisis have access to professional mental health treatment in short-term, acute facilities by revising barriers to coverage. Specifically, I believe that the Medicaid Institutions for Mental Disease (IMD) exclusion is long overdue for serious revision.

Too often, people considering suicide are forced to spend hours or days in crowded, noisy, and chaotic emergency rooms that are poorly positioned to cope with emotional, psychiatric, and intoxication-related crises. This form of care is vastly more expensive than more effective settings such as crisis residences, peer-run drop-in centers, and sobering centers. Alternatives to emergency room care can

include innovative community based programs, such as Parachute in New York City, which provides community-based options for those in crisis to help individuals cope within their community. Parachute provides a support line, mobile crisis teams, and safe respite housing for those in acute distress. This cost-effective program is a private-public partnership, but also benefits from Centers for Medicare and Medicaid Innovation grants.

Interagency collaboration and programs are essential for reaching at-risk individuals. Partnerships between mental health professionals, law enforcement, fire and rescue, paramedics, courts, and correctional institutions can help many of those who have mental health, substance abuse and legal problems. MIOTCRA, in particular, provides funding for interagency collaboration and grants that can reduce suicide risk and improve the treatment of mentally ill offenders. I am particularly impressed with the potential of Crisis Intervention Teams, a program that has been developed with law enforcement, but which requires the support of public mental health systems as referral options for people in crisis.

Psychological research indicates that there are also important protective factors against suicide. Family support and connectedness, connection to a caring adult, connection to school are all factors that decrease suicide risk. Programs that support families and provide a supportive and caring school climate are essential, as well as the presence of mental health professionals who can assess and respond to youth experiencing a suicidal crisis.

Recommendations:

We know what works, but not all Americans have access to effective treatment and crisis intervention. Therefore, I offer the following recommendations:

The 2012 National Strategy for Suicide Prevention is an excellent starting place, and we urge Congress to provide the funding to fully implement its many strategic goals.

We specifically urge Congress to take measures to:

1. Increase access to screening for depression, suicide, and other mental health concerns across the lifespan;
2. Ensure insurance coverage for prevention services, including screening for depression across the lifespan;
3. Improve access by increasing the number of trained health care professionals, including psychologists and other mental health professionals, and effective peer services;
4. Increase acute treatment resources by revisiting the Medicaid IMD exclusion to expand coverage for short-term acute inpatient stays;
5. Ensure the continuation of early intervention resources such as the National Suicide Prevention Lifeline. This program received one million calls last year alone, and many of the calls were from those who were actively suicidal. This program has not been formally authorized by Congress and is worthy of continued support;
6. Support reauthorization of essential behavioral health programs such as the Mentally Ill Offender Treatment and Crime Reduction Act (MIOTCRA), National Child Traumatic Stress Network, and Garrett Lee Smith Memorial Act;
7. Increase dissemination of evidenced-based treatments for all populations and ages, which are appropriate to a variety of settings, including schools, prisons, outpatient and inpatient centers; and
8. Support funding streams for innovative community-based programs that work with those at risk, such as Parachute, which provides a support line, peer support, mobile treatment team, and crisis respite centers.
9. Support the various forms of crisis intervention and response: including public mental health systems; first responders such as paramedic, police, and fire and rescue services; and create alternatives to the overcrowded emergency rooms and jails that are so ill-suited to treat people in emotional crisis.

10. Support research into suicide, especially aimed at reducing the prevalence of suicide by firearms, a particularly lethal method of suicide attempts. Suicide is a type of violence and must be part of any violence prevention efforts, particularly gun violence prevention.

Conclusion

I would like to express my deep appreciation for this committee's work and its ongoing attention to the prevention of suicide and the treatment for serious mental illnesses in America. The act of suicide is the result of a belief that there is no other way to end one's psychological pain. Over the many years I have worked in this field, I have seen tremendous progress in identifying approaches to reduce completed suicides, attempts, ideation, and feelings. However, we do not implement these tools effectively and broadly enough. We must reduce the barriers to violence prevention and mental health treatment for all Americans and provide the community supports so that our citizens can build lives of meaning and purpose.

Suicide, like so many tragedies, is the direct result of despair, and there is only one cure for despair – hope. It is my hope that our political parties can join together in a bipartisan effort to give people in the most acute despair some measure of hope for a better life -- by improving the services that are provided to Americans experiencing emotional crisis and the most severe forms of psychological pain. Any one of us has the potential to face unbearable emotions some time in our lives – and we must ensure help is there in those times of crisis.

Thank you for inviting me to testify.

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[i] APA Task Force Report on Gun Violence http://www.apa.org/pubs/info/reports/gun-violence-prevention.aspx and APA Resolution on Gun Violence, http://www.apa.org/about/policy/firearms.aspx

[ii] Murphy, S.L., Xu, J.Q., & Kochanek, K.D. (2013). Deaths: Final data for 2010. National vital statistics reports, 61, *4*. Hyattsville, MD: National Center for Health Statistics.

Substance Abuse and Mental Health Services Administration (2013). Results from the 2012 National Survey on Drug Use and Health: Mental Health Findings. http://www.samhsa.gov/data/NSDUH/2k12MH_FindingsandDetTables/2K12MHF/NSDUHmhfr2012.htm.

[iv] Centers for Disease Control and Prevention (2013, August 23). Injury prevention & control: Data and statistics (WISQUARS). Retrieved from http://www.cdc.gov/injury/wisquars/index.html.

[v] Centers for Disease Control and Prevention (2013, August 23). Injury prevention & control: Data and statistics (WISQUARS). Retrieved from http://www.cdc.gov/injury/wisquars/index.html.

[vi] Centers for Disease Control and Prevention (2013). Suicide Among Adults Aged 35-64 Years—United States, 1999-2010. *Morbidity and Mortality Weekly Report*, (62)17.

Mr. MURPHY. Thank you. I thank all the panelists for your important testimony. Let me open up questions here for 5 minutes, and we will alternate with other questions.

Surgeon General, in 2010, a progress review on the National Strategy on Suicide Prevention prepared by the Suicide Prevention Resource Center identified the ultimate policy goal behind the national strategy as reducing the morbidity and mortality of suicide behaviors. Is this the aim of the national strategy as you understand it as well?

Mr. LUSHNIAK. It is to a large extent, and morbidity, I have to clarify here. Morbidity is the world of attempts, right?

Mr. MURPHY. We all know that within the realm of suicide, there is a whole spectrum and it starts with the concept of, you know, suicide ideation, suicide planning, suicide attempts, and then suicide, and so ultimately within the national strategy is really a concerted effort across multiple Government agencies and with the private sector components to be able to say, as already stated here, to reduce that incredible burden on our society, the number of ultimate suicides that do occur.

Mr. MURPHY. Thank you. Also, in September of this year, in a blog post, NIMH Director Tom Insel noted that despite increased availability of mental health care and medications for depression, the U.S. suicide rate has remained largely unchanged and of, course, we also know in some areas, it has gone up. Would you agree that this data suggests that our national strategy dating back to 2001 has not been effective in reducing the number of deaths by suicide and we need to make some changes?

Mr. LUSHNIAK. Well, I think the changes are in progress of being made. I think going back to 2001, we realized in 2001 was the first strategy. This most recent strategy came out under Surgeon General Benjamin back in 2012. So actually this is second anniversary of the release of this strategy. So it is too early, in my view, to say that things are not successful, yet I realize we are all frustrated with the fact that success, if it is going to be there, is coming rather slowly, and so there is a frustration.

Now, built into this are multiple other changes that are going on including the idea of, you know, one of the objectives of this, objective 5.4, which focuses on efforts to increase access to and delivery of effective behavioral health services. Now, that certainly has changed with the Affordable Care Act. The Mental Health Parity and Addiction Equity Act will give 60 million people extended access to mental health and substance use disorder services, and depression screening, alcohol misuse screening, and counseling are now covered as pre-preventive services under ACA. So my sense is that to be able to go back to 2001 saying things aren't working, my sense is, I am going back to 2012 and re-analyzing it.

Mr. MURPHY. It is clear we have to do something, and as I have talked with former Congressman Lincoln Diaz-Balart, he told me that access was not a problem, and I am sure we would agree that for Robin Williams, insurance and money was not a problem.

But Dr. Brent, you have seen considerable success in some of your research, in particular, the STAR Center. How has the STAR Center performed? And I think it is the only one of its kind in

Pennsylvania, and is it serving as a model for other States in terms of ability to have positive results?

Mr. BRENT. Well, I don't know how unique it is, but our program is funded by the Commonwealth of Pennsylvania and it allows us to do things that often clinicians don't do because it is not billable, but I would say that the things that we do that I think lead to our effectiveness, we spend a lot of time on supervision and training using evidence-based treatment. We work as a team, and so decision-making is shared and you are less likely to make a mistake than if you have multiple opinions. We spend time coordinating with other institutions so our clinicians will go to schools, inpatient units and so on. This is not reimbursed currently but we feel that it is important. And I would say that we have a sense of mission and discovery, and I think we are critical about our own work, and we are always looking to improve.

Mr. MURPHY. And we hope you will continue to share much of that research with this committee because it is an exemplary program.

Dr. Moutier, the Washington Post ran an article in its August 12, 2014, issue quoting you extensively in the media treatment of Robin Williams' suicide. In particular, you took issue with a tweet by the Academy of Motion Pictures Arts and Sciences which you argued ran contrary to a healthy dialog. I don't know if we have that tweet available. Right there. And it says, "Genie, you are free." How can the American Foundation of Suicide Prevention and similar groups bring the myths and facts about suicide and suicide prevention to the attention of organizations and commentators acting on social media? Could you please comment on how we need to change that?

Ms. MOUTIER. Yes. I think that speaks exactly to the disconnect and the level of ignorance that is out there. Obviously they meant well with that statement, and little did they realize that to a vulnerable individual, especially a young, vulnerable person, that really presents an idea that suicide is being idealized and it is a solution and makes it more acceptable, and I am sure they did not mean to do that but that kind of messaging is being done still to this day quite frequently.

My organization partners with other organizations. We have already produced media guidelines for safe messaging, and actually maybe even effective prevention messaging about suicide after an event has occurred that has the public's attention. We are doing things like working with the media. We just attended a conference this week to try to raise this level of education. We have friends in the Associated Press who are working to, for example, get the term, the phrase "committed suicide" banned from the AP Style Guide, which would be a measure of progress as well so that it is not associated with a criminal act.

Mr. MURPHY. Thank you very much. I now recognize Ms. DeGette for 5 minutes.

Ms. DEGETTE. Thank you very much.

Dr. Lushniak, access to treatment is going to be a key part of any efforts we make in suicide prevention and reduction. Is that correct?

Mr. LUSHNIAK. Yes. I think it is a key feature.

Ms. DEGETTE. Thank you.

Mr. LUSHNIAK. Let me back up just——

Ms. DEGETTE. OK. I need to keep moving.

And Dr. Brent, in your testimony, your written testimony, you say, "Access to good quality mental health treatment can reduce risk." Is that correct?

Mr. BRENT. Yes.

Ms. DEGETTE. And I would assume, Dr. Moutier, you agree with that as well, that people have to have access to quality treatment, right?

Ms. MOUTIER. Yes.

Ms. DEGETTE. And Dr. Dvoskin?

Mr. DVOSKIN. Yes.

Ms. DEGETTE. OK. So going back to you, Dr. Lushniak, what were you going to clarify?

Mr. LUSHNIAK. Well, it is interesting because I think access to be able to diagnose appropriately severe mental illness——

Ms. DEGETTE. Right.

Mr. LUSHNIAK [continuing]. And being able to treat it appropriately is the key feature.

Ms. DEGETTE. Yes.

Mr. LUSHNIAK. One of the disturbing factors that we have seen in terms of the data that come in is that the majority of suicides that do occur have had access to medical care.

Ms. DEGETTE. Right.

Mr. LUSHNIAK. They——

Ms. DEGETTE. But they don't necessarily have access to psychological care.

Mr. LUSHNIAK. But also the issue here is——

Ms. DEGETTE. Is that right?

Mr. LUSHNIAK [continuing]. Whether that issue—whether as you are having your blood pressure taken, whether——

Ms. DEGETTE. Whether they are asking about that?

Mr. LUSHNIAK. Exactly.

Ms. DEGETTE. That is correct. And Dr. Dvoskin, part of the thing is that we haven't had high-quality psychological care, particularly for adolescents. Isn't that correct? I mean, what we have heard in all these hearings this year that we have been having is that we don't have nearly enough trained mental health professionals for adolescents, and that pediatricians and others who are treating these young people don't have the psychological training. Would you agree with that?

Mr. DVOSKIN. Some do and many don't.

Ms. DEGETTE. OK. And Dr. Brent, in your written testimony, one of—and actually, Dr. Dvoskin, you talked about this too in your testimony. You were talking about DBT, which is dialectic behavior therapy. Is that right?

Mr. BRENT. Yes.

Ms. DEGETTE. And dialectic behavior therapy is a very intensive and expensive therapy. Is that correct?

Mr. BRENT. Yes.

Ms. DEGETTE. But it seems to have shown through the studies that it works. Is that right?

Mr. BRENT. Yes. Can I——

Ms. DEGETTE. Yes. Turn the mic on, please.

Mr. BRENT. There are briefer versions and there are other treatments like cognitive behavior therapy.

Ms. DEGETTE. Right.

Mr. BRENT. There is one study——

Ms. DEGETTE. Right.

Mr. BRENT [continuing]. In nine sessions, they were able to cut the suicide rate in half.

Ms. DEGETTE. Right, but still, the cognitive behavior study, that costs money too and it needs trained professionals to administer. Is that right?

Mr. BRENT. Yes.

Ms. DEGETTE. Yes? OK. Thanks. So the reason I am asking these questions is because, of course, one thing we tried to do when we passed the Affordable Care Act is, we tried to give people mental health coverage as a result, and in fact, there was a report earlier this year by the American Mental Health Counselors Association that nearly 7 million uninsured adults with serious mental health and substance abuse conditions are now eligible for health insurance coverages under the ACA marketplaces and for 27 States through Medicaid, and so Dr. Dvoskin, I wanted to ask you, do you think that it is important that we expand mental health coverage to people as we are expanding our health care in general?

Mr. DVOSKIN. Mental health coverage crisis response is terribly important, so even if someone is in treatment, if there is—many suicidal crises occur late at night when crisis response teams, fire and rescue, police agencies are the responders, and a competent crisis response has suffered very badly from the decreases in mental health funding in the public mental health system over the last 15 years.

Ms. DEGETTE. Right. So even though we are giving people more access to mental health in the ACA, we still need to fund that crisis treatment, and we have heard that loud and clear.

Mr. DVOSKIN. Yes, ma'am.

Ms. DEGETTE. Dr. Lushniak, I want to ask you if you can talk about what has happened that you have seen since the Affordable Care Act has given increased coverage of mental health services and what that will mean in your efforts for suicide prevention.

Mr. LUSHNIAK. Well, certainly, I think it is too early to see whether we have a success or a failure here. The success is, we do have coverage. As I mentioned already, both the Affordable Care Act as well as the Mental Health Parity and Addiction Equity Act will give 60 million, 6–0 million people expanded access to mental health and substance use disorder services. So the idea here is that access, will access bring us success? Certainly, I think access is going to be a positive influence.

Ms. DEGETTE. But it is not the only thing.

Mr. LUSHNIAK. But right now it is not the only thing. It is helpful. It is heading in the right direction but it really dovetails into what I think all of our messages was. We are dealing with a very complex public health issue here, a very complex mental health issue here, and it is multifactorial with multifactorial resolutions. There is not going to be one simple answer saying access will solve the whole problem.

Ms. DEGETTE. Thank you. Thank you very much, Mr. Chairman.

Mr. MURPHY. Thank you. I now recognize Mr. Griffith of Virginia for 5 minutes.

Mr. GRIFFITH. Thank you very much. I appreciate that.

I will let any of you jump in on this. One of the things that we haven't discussed in detail but is a part of that multi—and I am not going to pronounce the word right, but multi reasons why someone might commit suicide. I noticed an article that I read indicated that there are families who suffer from depression who have multiple members who have committed suicide and other families who suffer with a history of depression who do not have suicide, not a single one, and I am wondering what the thoughts are. Do you all believe—and everybody can answer this. Do you believe that there is a gene that we might be able to identify that would say these folks with depression are more likely to commit suicide than other folks, and do we target or do we put special attention on those who have a family history both of the mental illness of depression and a resulting suicidal act in the family?

Mr. LUSHNIAK. And I will start, and then we can open it up to the panel. Certainly, there are genetic influences on a variety of conditions—substance use, abuse of substances. Alcoholism obviously has a genetic predisposition. There are also mental health disorders, severe mental health disorders that do have a genetic connection there as well. We know a definite risk factor is having a family member who has committed suicide. We know that is a risk factor, and the whole idea of genetics and its tie-in with suicide I think is still to be determined in our research world, and I will pass the microphone on to the clinicians here to further give their opinion on this.

Mr. BRENT. Well, there is definitely a genetic influence to suicide, and the families that you were describing, the two types of families, is strong evidence for that, but that doesn't mean that it is caused by a single gene, and I think that when we deal with families where there has been a completed suicide, we have to tell people actually that you are at increased genetic risk but genetics isn't destiny. If you have a risk that is 40 per 100,000 instead of 10 per 100,000, the odds are still with you, and so I think it is important not to oversell that. At the same time, we are chasing what might be some genetic factors that could be contributing to suicide risk but it is not going to be one gene.

Mr. DVOSKIN. I would just add that looking at this through a public health lens, it is very easy to identify the people who are deserving of extra attention, who is at higher risk, people who have tried before, people who have close families who have killed themselves. So we don't lack for an ability to identify the at-risk population.

Mr. GRIFFITH. Did you want to add anything?

Ms. MOUTIER. Well, I think I will just say, as you heard, we have things that we can implement now. Research is fine and good, but if it doesn't translate into something that is actionable to actually help people, I think in many cases what you are hearing is that we have evidence-based strategies and now we have growing access to care. Now we have to link the two. So I think there are things that we need to do now, and continuing to more robustly fund re-

search is very important. We are probably some years away from that genetic answer for predicting suicide risk but it could be there, absolutely.

Mr. GRIFFITH. Well, I appreciate that and hope that while I know that is just one piece of the puzzle, I would hope that the researchers and both private and governmental areas would continue to look into that.

Switching gears, I would ask the Surgeon General if he could comment on the possibility of using the U.S. Air Force's suicide prevention program as a possible model for the other branches because obviously we are all concerned with the high increase and the large numbers of our armed forces who returned from combat.

Mr. LUSHNIAK. Certainly. I think it is a discussion that I can certainly have and will have with the other Surgeons General of the Army and Navy as well as the Air Force, my fellow surgeons, if you will. That being said, I think the Air Force is a great model. The Air Force has two components to their program. One component is the wingmen component, which is servicemen watching out for other servicemen. The other component is actually built into a youth prevention program.

I think the bottom line to all of this, and it really goes back to this public health model that I described earlier, ultimately, we are looking for what works. Part of what works is to be able to look at innovations, look at changes and properly evaluate them because ultimately as we go further to implement this, whether it is across the armed services or whether it is across the Nation, I have to have proven systems that work before nationwide implementation goes. But I think we are on that pathway to find out what is working and to see how it is implementable, even in terms of further pilot studies.

Mr. GRIFFITH. And Mr. Chairman, if you all will indulge me, I am going to go back to the first question because something came to my mind.

One of the factors is also substance abuse, and I am wondering if there are any programs out there—we talked earlier about educating people on what you might do and why television—we have learned, you know, everybody should use deodorant but we haven't learned how to deal with suicide. For those families that have a history of both substance abuse and suicide, I wonder how much work is being done on encouraging those families to be abstinent when it comes to both alcohol and other substances.

Mr. LUSHNIAK. I think certainly when we look at all the risk factors—and I think we sort of described it earlier—we know a lot of the risk factors that exist out there. Now, how all these are bundled together, which is the family's history component in addition to the substance use or abuse component, we certainly look and try to strengthen our specific prevention activities within those populations, but in essence, we sometimes break them apart. In other words, the substance use is treated differently than the family history one. But again, I will turn to the clinicians here who do this on a daily basis.

Mr. BRENT. So substance abuse prevention is an interesting issue because it is so prevalent, especially in adolescents and young adults, that there is argument that a universal prevention actually

makes more sense than targeting people that are at high risk, and in that policy institute I mentioned, the Washington State Policy Institute, they have identified several intervention programs that are low-cost that are, you know, relatively brief that have shown to reduce substance abuse by about a third in communities where it had been implemented.

Mr. MURPHY. The gentleman's time is expired but if you could get us copies of—any time any of you reference any study, I hope you will get us copies. That is valuable.

Mr. GRIFFITH. Thank you, Mr. Chairman. I appreciate the committee's indulgence.

Mr. MURPHY. Thank you. Now Ms. Castor is recognized for 5 minutes.

Ms. CASTOR. Thank you, Mr. Chairman, and thank you to the panel.

I don't think it is an understatement to say that there is a suicide crisis among America's veterans. The Department of Veterans Affairs estimates that 22 veterans commit suicide every day. I am not going to use that, I have learned. What is the proper way to say it then?

Ms. MOUTIER. Died by suicide.

Ms. CASTOR. Twenty-two veterans die by suicide every day, about 7,000 per year. Veterans are three times as likely to die by suicide as non-veterans. The number of suicides among veterans is outpacing the number of combat deaths. So this is a real national tragedy.

Dr. Lushniak, why are we seeing these trends. I think people kind of understand the stresses, but what can you tell us?

Mr. LUSHNIAK. Well, again, you know, the big question is why, why we see such trends. I mean, we certainly know one of the risk factors is serving in military. Certainly in military during wartimes, the stressors increase. The issues as, you know, Chairman Murphy well knows by going on—he was sharing with me his experiences going to Walter Reed twice a month to be able to treat and to diagnose and to assist in individuals who are coming back with traumatic brain injuries, who come back with PTSD. We are in a time where there are more such service members who are coming back. That is part of the issue. The other issue also is the issue of serving in any of our uniformed services brings with it its stress, its separation from family, its separation from one's normal environs. So there are multiple reasons for that.

Let me tell you to some extent sort of the cooperation that is going on right now, to a great extent the cooperation that is going on right now, and this specifically goes back to a question we had earlier in terms of the surveillance. Part of the way we get risk factors is being able to monitor what is going on out there, and we heard a little bit about the National Violent Death Reporting System, that it is only in 18 States right now. I can tell you today that the CDC has awarded new grants to expand this from 18 to 32 States. But on top of that, there also now is an expansion to actually both CDC and NIH working with the Department of Defense and working with the Veterans Administration system to link their data sets or the data across their data sets. Now, why is this important? Ultimately, I am still looking, you know, for further infor-

mation about risk factors, and if I can get more precise information from VA databases, if I can get more information from the Department of Defense databases, for those individuals who have died from suicide, this is very helpful for us to plan the next series of strategies.

Ms. CASTOR. I represent the Tampa Bay area, and in Tampa we have the Haley VA Hospital. It is known as the busiest VA in the country and it is home to one of the five polytrauma centers, so we see the most severe cases of TBI and spinal cord injury, but I was there a couple of weeks ago talking to a veteran that had been deployed about three or four times and was from Fort Bragg and was a tough guy and was known as a leader, and he said to me, let me tell you my story, you know, I am a tough guy and I came back and I had my wonderful family and they are supportive and things were going all right, and then a couple of months later something just snapped, and he said I recommend that the VA system and all of you do a better job up front when folks come home, even if we say, oh, we are fine and we are OK, and they are physically healthy, to not just accept it, and I think the Congress has put a lot of resources into this but Dr. Lushniak, what can you tell us now about what the Federal Government is doing? We have heard a good summary, but how it is really working? Oh, I am sorry. I mean Dr. Dvoskin.

Mr. DVOSKIN. I agree that the Federal Government could profit from better coordination of its efforts, and I also think the efforts needed to be targeted along the lines that you have heard today from my colleagues, but just to give you one example, access to care doesn't mean very much if you can't get to a psychiatrist or a psychologist, and there aren't nearly enough mental health professionals in the United States, not nearly enough. There are wonderful clinicians in the VA but there aren't enough of them. It takes 5 years to expand a residency program in psychiatry, and medical schools are loathe to go into the process, so we are automatically something we have done to ourselves 5 years behind the curve to increase the number of psychiatrists that are being trained at some of these wonderful medical schools, and you can't bill for a resident. You can't bill Medicaid for the services provided by a resident. Well, this is something we are doing to ourselves. There is no reason in the world for that rule, but it is something that we do.

So there are a lot of ways that the Federal Government could streamline existing programs, coordinate existing programs, and add the kind of evidence-based practices that my colleagues have talked about today.

Mr. MURPHY. Thank you. The gentlelady's time is expired. And now Dr. Gingrey is recognized for 5 minutes.

Mr. GINGREY. I thank Chairman Murphy, Dr. Murphy, for the hearing. This legislative hearing of course is extremely important and I commend him for his bill, H.R. 3717. I gave him the thumbs-up just a second ago that I absolutely want to be signed on as cosponsor of this legislation. It is a hugely important issue, and I thank him for that.

Let me, Dr. Moutier? Is that——

Ms. MOUTIER. Moutier.

Mr. GINGREY. Moutier. Yes. Let me ask you a few questions and then maybe the time remaining, the other panelists, the Surgeon General.

Dr. Moutier, in addition to the factor of age, ethnicity also plays a role in the incidence of suicides, why has there been a consistently high suicide rate for elderly white men relative to all other groups? Any information on that?

Ms. MOUTIER. Sure. I can speak to that while we also speak to the largest rise that we have seen in suicide rates perhaps ever, which is in middle-aged men actually, 35 to 64 years old. Over the last decade, their rates of suicide rose almost 50 percent. I would speak to a number of things including all the basic things that you have already heard about the prevalence rates of mental health problems and distress and what happens when we don't take proactive care of ourselves. I would cite the role of culture that we have had in particular segments of society and we think about military veteran, physician, and first responder populations, what they all have in common is higher rates of suicide than the general population and a very tough macho sort of can't acknowledge being a human being type of culture.

Mr. GINGREY. Well, let me just interrupt you. Thank you for that, and I just intuitively think, you know, the pressures of life as you get a little older and the financial pressures are greater and maybe the children and the grandchildren didn't turn out quite the way you wanted them to and you get a little depressed, and so that leads—well, not a little depressed. That leads to my next question, and if you would comment on the statistic that 90 percent of the people who commit suicide were previously diagnosed with mental illness. Is it known what percentage of these diagnoses are comprised of—well, would quality as a serious mental illness?

Ms. MOUTIER. That is a really good question, and it is actually that in greater than 90 percent of the cases of suicide that have been studied through this method of psychological autopsy method had a diagnosable mental health condition. In most cases, they actually had not necessarily been diagnosed or treated. So that method is a little bit tricky.

Among those who had a diagnosable mental health condition, the majority of them, it was a substance abuse combined with a mood disorder. So depression is actually the most common mental illness represented in those studies but next comes substance abuse, substance abuse combining with depression and bipolar disorder, and then other conditions like personality disorders and psychotic disorders. All of those are represented by the vast majority of that 90 percent is depression, substance abuse, and other mood disorders.

Mr. GINGREY. Well, your response is why really I am so excited about Dr. Murphy's bill because it addresses a lot of those issues and gets right to the core of the problem.

Mr. Lushniak.

Mr. LUSHNIAK. Lushniak, yes.

Mr. GINGREY. Oh, what the heck. Dr. L, our Surgeon General, let me ask you this. Suicide among those who serve in our armed forces and among our veterans is a matter certainly of national concern. The 2012 National Strategy for Suicide Prevention identified the United States Air Force suicide prevention program as a

possible model for use in other settings including civilian. Are there particular evidence-based programs in use at either the Department of Veterans Affairs or the Department of Defense like the Air Force that you would recommend expanding to our civilian health care system as well?

Mr. LUSHNIAK. Well, certainly there are multiple programs within the VA system, within the DOD, within Health and Human Services. I will provide one example. Although, you know, evaluation is always the difficult thing with any programs, but I will describe the Lifeline, the crisis call-in line that exists out there. I mean, here is an example where last year in 1 year alone, a million calls come in to a Lifeline system. This is a call-in system that already—and there is evidence saying that once people have called in, there are positive repercussions from that call-in.

So the reality is, we have systems built in all through, and the real question that ends up—and I will sort of go back to the Robin Williams tragedy recently, is the fact that there was another peak right after that tragedy of call-ins to that Lifeline, and it really does dovetail into, there are so many aspects to this, so many programs that exist right now, and I think right now, 2 years after the release of this strategy, we still are in the evaluation stage, along with the experts that are here at the table to come up with that final, you know, final set of recommendations, if you will, which is, what are we going to go with nationwide, what are we really going to push, because right now we have multiple pilots going on, and I think that we will be soon ripe for a time period where we can evaluate those programs and decide what really works, and it is going to be multiple answers. It is not going to be one——

Mr. GINGREY. General, or I should say Admiral, thank you so much. I realize my time—and thank you for your patience, Mr. Chairman, and I yield back.

Mr. MURPHY. Thank you. I now recognize Mr. Tonko for 5 minutes.

Mr. TONKO. Thank you, Mr. Chair, and thank you to our witnesses. Many of you mentioned the impact that suicide has not only on the victim but the toll it takes on surrounding family, friends, and community. I would venture to say that everyone in this room today has been personally affected by suicide at some point in his or her life. The numbers surrounding this epidemic are astounding. While we are in this hearing today, it is estimated that nine people across this country will complete suicide.

Dr. Moutier, just to ensure that everyone in this room and watching this hearing has access to accurate information, what actions should one take if they or someone they know is expressing risk signs for suicide?

Ms. MOUTIER. Sure. I think the first thing to say, which sounds very basic, but if it is somebody that you know and not yourself is to don't write it off, don't write off that thing that you just observed to the stress of the day because we do a lot of that in our society. So I think just approaching the person in a caring, concerned way and engaging in a caring conversation just like you would normally. Mental health, we need to get all the, you know, mysterious sort of stigma out of it and just start having normal conversations

that express caring, that say if you are in that kind of distress, I want to help you get the help that is going to get you back to your normal baseline way of being, that this is something that can happen to anyone of us. It is part of the human condition, so normalizing that.

If it is a matter of safety, then of course you have to act a little more urgently, and in that case, certainly local emergency departments are available. Also, the National Suicide Prevention Lifeline, 1–800–273–TALK is a number to call 24/7 for yourself or for somebody you are concerned about.

Mr. TONKO. Thank you. And Dr. Moutier, the Affordable Care Act in conjunction with the Mental Health Parity and Addiction Equity Act, all of those have strengthened insurance coverage for mental health benefits for an estimated 60 million people, yet according to a recent New York Times story detailing experiences in Kentucky, many people are still having trouble accessing coverage due to an overwhelmed delivery system. Failure to access services in a timely fashion could be devastating for those contemplating suicide as you just indicated. What more do we need to do to ensure that there will be an adequate supply of providers to handle the mental health needs of our community?

Ms. MOUTIER. I think it starts with both improved training of the existing health care workforce as well as down the pipeline, the medical students and other disciplines who are coming up. People may be shocked to know that in only two States in our country is suicide education a small module on suicide even mandated for mental health clinicians who are in training. So we have so much work to do, and in some ways I would say that should give us hope because we can do that kind of thing. You have already heard that to expand the workforce of mental health clinicians is right now we sort of just tied our own hands behind our back. We are not able to do that when we can't even expand our residency training programs and other disciplines as well. So I think there are a number of things that can be done from a policy standpoint that we should really take a hard look at that are creating the obstruction.

Mr. TONKO. Thank you very much.

Admiral Lushniak, in your testimony you refer to the recent World Health report on suicide. Does this report tell us where the United States stands in comparison to other nations in preventing suicides, and if so, are there lessons to be learned from other countries, other cultures that are doing a better job of preventing suicide?

Mr. LUSHNIAK. Well, in terms of the lessons, where we stand, I will have to get back with you on that data set in terms of how we stand relative to other nations, but certainly when we look at what is going on in the world, right, we know that national-based programs tend to work, and it really goes back to what I have said earlier. We start off small but things that do work ultimately can be put at the national level. We mentioned examples of the United Kingdom, right, where there are access, for example, a 24-hour crisis line, assertive outreach for people with severe mental illness, written policies on follow-up for those patients. Taiwan, I talked about a 63 percent reduction. We also have evidence that means reduction, right, the means of that suicide being reduced, and I will

describe something that sounds very strange but in Australia, as a result of motor vehicle exhaust suicides, there was a link to changes in their carbon monoxide emission standards. So an engineering improvement, an air pollution improvement in fact led to a change, to a decrease in carbon monoxide poisonings. I think we have to look at the world and learn from those aspects, that in fact we haven't talked much about the means of suicide and we talked a little bit about safety, we talked about the idea, but across the board, if we are able to have some control of the means of that death by suicide, we can actually have impacts, and we see that from the international realm.

Mr. TONKO. Thank you. Some very interesting concepts, and with that, Mr. Chair, I yield back.

Mr. MURPHY. The gentleman yields back. I now recognize Ms. Schakowsky for 5 minutes.

Ms. SCHAKOWSKY. You know, Dr. Moutier, I was concerned after Robin Williams' suicide that some people were saying in their tributes to him, he is now finally at peace, that he is in a better place. I am glad to hear that there were more calls to suicide hotlines but were there more suicides?

Ms. MOUTIER. That won't be known for some time because of this problem with surveillance that you have been hearing about, so even when we ask the question, is the program working for preventing suicide, we are operating on the most recent data from the CDC, which is 2011. We are 3 years——

Ms. SCHAKOWSKY. I just think that—and you were talking about language before. I think when someone does take his or her own life that people should be encouraged to say if you are feeling suicidal, get help, you know, rather than oh, finally, you know, like sometimes we will say someone who has been suffering with cancer where they are finally out of their misery and in a better place. That is not applicable, I don't think, here.

The other thing, Dr. Brent, I know you focus on, or you have dealt with adolescents and young adults. I hope all of you actually will check out—I have a bill called the Mental Health on Campus Improvement Act. A friend of mine, her son at Harvard committed suicide, just horribly tragic, and it has a public health component, a campus health component but also authorizes a grant program to give campuses more resources to address mental health, and I know the Association for University and College Counseling Centers directors have been very supportive of this legislation.

So, Dr. Brent, are we doing enough in our educational institutions and on campuses?

Mr. BRENT. Well, obviously, I don't think we can ever say we are doing enough, but I think that the Jed Foundation, which is a foundation focused on college suicide that is based in New York, has done a tremendous job with setting certain standards for what campuses ought to have in terms of availability of mental health and actually certifying campuses as having exemplary programs, and I believe there have even been some evaluations of these interventions that have shown some beneficial effects.

Ms. SCHAKOWSKY. The Jet Foundation?

Mr. BRENT. Jed, J-e-d. It is named for—Phil and Donna Satow, it is named for their son, who committed suicide when he was at Arizona State University.

Ms. SCHAKOWSKY. Dr. Lushniak or Dr. Dvoskin, I wondered if you want to just comment on that.

Mr. LUSHNIAK. Let me go back to sort of the first part of your question and the issue—and it is a flabbergasting issue and the issue of sort of how the media can portray can really affect the public perception of this, and we saw this come on as Robin Williams' suicide. We have goals within our national strategy, and two of them are very particular to this. Goal number two is implement research and foreign communication efforts, and goal number four is promote responsible media reporting, and this framework for successful messaging, it is an initiative designed to advance this national strategy of changing the public conversation about suicide and suicide prevention. The Alliance that I had mentioned, this National Action Alliance for Suicide Prevention, the private-public partnership, in fact has an institute that is now set up to provide journalists with crucial training to effectively communicate to the public about suicide and mental health.

I think there are two aspects to this from a public health perspective, public health communication perspective, one of which is, we can't stigmatize the concepts of severe mental illness, mental health issues nor stigmatize a conversation about suicide. Long gone are the days that these are whispered in hallways—oh, did you hear what happened, this is terrible. We need to bring it front and center as a public health issue with scientific evidence that can solve that public health issue.

At the same time, we have to be able to work with the media, we have to work with public communications aspects of our society that don't portray suicide as an answer to a problem.

Ms. SCHAKOWSKY. Right.

Mr. LUSHNIAK. That somehow it is successful, that somehow it is glorified. We really have to be able to still have that public perception that this is something that has innate and multiple factors associated with it, but it is preventable.

Ms. SCHAKOWSKY. Thank you.

Mr. LUSHNIAK. I will follow up with one last imagery, and that is my daughter last night at dinner, and she asked me, "Dad, what are you doing tomorrow?" I said I was honored to be brought in front of this subcommittee. "What are you talking about, Dad?"—a 17-year-old senior in high school—and I said I am talking about suicide prevention. Her answer was, "It is not preventable, it just happens," and we have to change that. That is the daughter of the Acting Surgeon General. We had a long conversation afterwards.

Ms. SCHAKOWSKY. Doctor, I know Dr. Dvoskin wants to say something.

Mr. DVOSKIN. I just wanted to add, in Vienna, Austria, they had a spate of suicides by people jumping in front of subway trains, and they were all on the front page above the fold of the two newspapers in Vienna. They were owned by families, and the two publishers got together and had a meeting that was occasioned by a social science researcher who said to them, you are making this worse because every time you publicize these suicides in this man-

ner, the rate goes way up. They made a gentlepersons' agreement to stop doing it. They stopped putting the suicide reports on the front page, and the phenomenon stopped immediately. There is a study that is published—I will get it to the chairman——

Ms. SCHAKOWSKY. I would be interested, because in Chicago area, we have had that problem with people jumping in front of trains. It has been in the——

Mr. DVOSKIN. We had the same thing with mass homicide. They put the picture of the perpetrator three times the size of the anchor and it makes the perpetrators of mass homicide the most interesting, fascinating people in America, which is exactly what they wanted, and it makes it seem like a way to be cool and to matter and to no longer be depressed and sad and disconnected and feeling insignificant. All you got to do is kill a bunch of people, and the electronic media is making it worse.

Ms. SCHAKOWSKY. Get us the Hamburg study. I would like to see it. Thank you.

Mr. MURPHY. I thank the members. I thank the panelists.

Just clarifying questions, Dr. Moutier and Dr. Brent. You said substance abuse, that increases risk. Any particular substances?

Ms. MOUTIER. It is across the board but certainly alcohol would be the most common, and just to clarify, there are people with addictions who are at risk for suicide, and then there is the use of substances in the act of dying by suicide, and they are overlapping but sort of separate subsets, and in about half the cases of suicide, a substance was at play.

Mr. MURPHY. Thank you. I just want to clarify too, in the study referred to as the Good Behavior Game that was referenced, my understanding is that the authors of that study said it did reduce suicide ideation but had no impact on suicide acts, but the idea that you are all bringing up is evidence-based is important.

Now, I want to end this with an important note and ask you each a simple question. Can we prevent suicide with proper intervention? Dr. Lushniak?

Mr. LUSHNIAK. Without a doubt, sir.

Mr. MURPHY. Dr. Brent?

Mr. BRENT. Yes.

Mr. MURPHY. Dr. Moutier?

Ms. MOUTIER. Absolutely, yes.

Mr. MURPHY. Dr. Dvoskin?

Mr. DVOSKIN. Yes.

Mr. MURPHY. Does treatment work for people with mental illness? Dr. Lushniak?

Mr. LUSHNIAK. Yes.

Mr. MURPHY. Dr. Brent?

Mr. BRENT. Some of the time, but it is better than no treatment.

Mr. MURPHY. Dr. Moutier?

Ms. MOUTIER. Yes, and it needs to be the right treatment.

Mr. MURPHY. Thank you. And Dr. Dvoskin?

Mr. DVOSKIN. Yes.

Mr. MURPHY. And that is important what you said. The proper treatment will work, and that is why we have to get people to access with the right trained professionals.

Now, one more time, Dr. Moutier, what is that phone number people can call?

Mr. BRENT. 1–800–273–TALK, and that is the National Suicide Prevention Lifeline.

Mr. MURPHY. And there are lifelines in people's communities as well they can look up.

I want to thank this committee. I know that we will be breaking here for the next few weeks and Congress will not be here. This committee is exemplary. I continue to get comments around the Nation as I visit communities to talk about mental health. This is an issue that Congress has not been willing to take up at all, let alone in the depth, so this is exemplary, and my colleagues on both sides of the aisle share the passion for helping people in mental health crisis. I want to thank you all.

I also want to ask unanimous consent. Dr. Burgess asked if we can include articles, one from Health and Science, "When doctors commit suicide, it's often hushed up," and an article from the New York Times, "Why Do Doctors Commit Suicide?" I would also like to submit for the record an article from the American Journal of Psychiatry, "Modifying Resilience Mechanisms in At-Risk Individuals: A Controlled Study of Mindfulness Training in Marines Preparing for Deployment," by Drs. Johnson, Potterat, and others. Without objection, I will include those in the record.

[The information follows:]

The Washington Post
Health & Science

When doctors commit suicide, it's often hushed up

By Pamela Wible July 14, 2014

An obstetrician is found dead in his bathtub; gunshot wound to the head. An anesthesiologist dies of an overdose in a hospital closet. A family doctor is hit by a train. An internist at a medical conference jumps from his hotel balcony to his death. All true stories.

What are patients to do?

When they call for appointments, patients are told they can't see their doctor. Ever. The standard line: "We are sorry, but your doctor died suddenly."

In most towns, news spreads fast no matter how veiled the euphemisms.

About 400 doctors commit suicide each year, according to studies, though researchers have suggested that is probably an underestimation. Given that a typical doctor has about 2,300 patients, under his or her care, that means more than a million Americans will lose a physician to suicide this year.

So what's the proper response if your doctor died by suicide? Would you deliver flowers to the clinic? Send a card to surviving family? What's the proper etiquette for dealing with this issue?

Physician suicide is rarely mentioned — even at the memorial service. We cry and go home, and the suicides continue.

I've been a doctor for 20 years. At 46, I've never lost a patient to suicide. But I've lost friends, colleagues, lovers — all male physicians. Four hundred physicians per year are lost to suicide,

according to a Medscape report, which pointed out that "perhaps in part because of their greater knowledge of and better access to lethal means, physicians have a far higher suicide completion rate than the general public."

What can we do? To start, let's break the taboos that have kept this topic hidden.

Physician suicide is a triple taboo. Americans fear death. And suicide. Your doctor's committing suicide? Even worse. The people trained to help us are dying by their own hands. Unfortunately, nobody is accurately tracking data or really analyzing why doctors may be depressed enough to kill themselves.

I'm a family physician born into a family of physicians. I was practically raised in a morgue, peeking in on autopsies alongside Dad, a hospital pathologist. I don't fear death, and I'm comfortable discussing the issue of suicide. In fact, I spent six weeks as a suicidal physician myself. Like many doctors, at one point I felt trapped in an assembly-line clinic, forced to rush through 45 patients a day, which led to my own despair and suicidal thoughts. Then I opened my own clinic, designed by my patients. I've never been happier.

Despite my own trouble, I was clueless about the issue of physician suicides until one beautiful fall day in Eugene, Ore., when a local pediatrician shot himself in the head. He was our town's third physician suicide in just under a year and a half. At his memorial, people kept asking why. Then it hit me: Two men I dated in med school are dead. Both died by "accidental overdose." Doctors don't accidentally overdose. We dose drugs for a living.

Why are so many healers harming themselves?

During a recent conference, I asked a roomful of physicians two questions: "How many doctors have lost a colleague to suicide?" All hands shot up. "How many have considered suicide?" Except for one woman, all hands remained up, including mine. We take an oath to preserve life at all costs while sometimes secretly plotting our own deaths. Why?

In a TEDx talk I gave to help break the silence on physician suicide, I pointed out why so many doctors and medical students are burning out: We see far too much pain; to ask for help is considered a weakness; to visit a psychiatrist can be professional suicide, meaning that we risk

loss of license and hospital privileges, not to mention wariness from patients if our emotional distress becomes known.

Internist Daniela Drake recently addressed this topic in her article-gone-viral "How being a doctor became the most miserable profession." She identified underfunded government mandates, bullying by employers and the endless insurance hoops we have to jump through as a few of the reasons. "Simply put, being a [primary-care] doctor has become a miserable and humiliating undertaking," she wrote. "It's hard for anyone outside the profession to understand just how rotten the job has become."

In a rebuttal article, "Sorry, being a doctor is still a great gig," pediatrician Aaron Carroll disputed the misery claim: Doctors are well respected, well remunerated, he writes, and they complain far more than they should. He predicts people will soon ignore doctors' "cries of wolf." But to cry wolf is to complain about something when nothing is wrong. Yet studies have found that doctors suffer from depression, post-traumatic stress disorder and the highest suicide rate of any profession.

So what should we do?

Etiquette rule No. 1: Never ignore doctors' cries for help.

Bob Dohery, a senior vice president of the American College of Physicians, downplayed physician misery in a blog post on the ACP Web site this spring. His suggestion was classic: When doctors complain, quickly shift conversations from misery to money: their astronomical salaries. But when a doctor is distressed, how is an income graph by specialty helpful?

I run an informal physician suicide hotline. Never once have I reminded doctors of their salary potential while they're crying. Think doctors are crybabies? Read some of their stories before dismissing doctors as well-paid whiners.

Physician suicide etiquette rule No. 2: Avoid blaming and shaming.

After losing so many colleagues in my town, I sought professional advice from Candice Barr, the chief executive of our county's medical society. Here is her take:

"The usual response is to create a committee, research the issue, gather best practices, decide to have a conference, wordsmith the title of the conference, spend a lot of money on a site, food, honorariums, fly in experts, and have 'a conference.' When nobody registers for the conference, beg, cajole and even mandate that they attend. Some people attend and hear statistics about how pervasive the 'problem' is and how physicians need to have more balance in their lives and take better care of themselves. Everybody calls it good, goes home, and the suicides continue. Or, the people who say they care about physicians do something else."

So what works?

Our Lane County Medical Society established a physician wellness program with free 24/7 access to psychologists skilled in physician mental health. Since April 2012, physicians have been able to access services without fear of breach of privacy, loss of privileges or notification of licensing and credentialing bureaus. With 131 physician calls and no suicides in nearly two years, Barr says, the "program is working." Even doctors from outside the town are coming for support.

It's important to "do something meaningful, anything, keep people talking about it," Barr says. "The worst thing to do is nothing and go on to the next patient."

What's most important is for depressed doctors and those thinking about suicide to know they are not alone. Doctors need permission to cry, to open up, to be emotional. There is a way out of the pain. And it's not death.

Which brings me to physician suicide etiquette rule No. 3: Compassion and empathy work wonders. More than once, a doctor has disclosed that a kind gesture by a patient has made life worth living again. So give your doctor a card, a flower, a hug. The life you save may one day save you.

Wible is an author and board-certified family physician in Eugene, Ore.

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THE OPINION PAGES | OP-ED CONTRIBUTOR

Why Do Doctors Commit Suicide?

By PRANAY SINHA SEPT. 4, 2014

NEW HAVEN — TWO weeks ago, two medical residents, in their second month of residency training in different programs, jumped to their deaths in separate incidents in New York City. I did not know them, and cannot presume to speak for them or their circumstances. But I imagine that they had celebrated their medical school graduation this spring just as my friends and I did. I imagine they began their residencies with the same enthusiasm for healing as we did. And I imagine that they experienced fatigue, emotional exhaustion and crippling self-doubt at the beginning of those residencies — I know I did.

The statistics on physician suicide are frightening: Physicians are more than twice as likely to kill themselves as nonphysicians (and female physicians three times more likely than their male counterparts). Some 400 doctors commit suicide every year. Young physicians at the beginning of their training are particularly vulnerable: In a recent study, 9.4 percent of fourth-year medical students and interns — as first-year residents are called — reported having suicidal thoughts in the previous two weeks.

Hospitals and residency programs recognize the toll residency takes on the mental stability and physical health of new doctors. In 2003, work hours were capped at 80 hours a week for all residency training programs. Residents are provided confidential counseling services to help cope with stress. My residency program offers writing workshops and monthly reflection rounds. We have a wellness committee that organizes social events such as bonfires on the beach and visits from therapy dogs.

But despite these efforts, people still fall through the cracks. While acute stress, social isolation, pre-existing mental illness and substance abuse may be obvious factors to consider, we must also ask if there are aspects of medical culture that might push troubled residents beyond their reserves of emotional resilience.

There is a strange machismo that pervades medicine. Doctors, especially fledgling doctors like me, feel pressure to project intellectual, emotional and physical prowess beyond what we truly possess. In his famous essay "Aequanimitas," Sir William Osler, who founded the first American residency program at Johns Hopkins Hospital in 1889, stressed the importance of equanimity in a physician.

While steadiness in tense situations is an important quality for doctors to have, I believe that the imperturbability that Osler extolled has been misinterpreted to a dangerous degree. We masquerade as strong and untroubled professionals even in our darkest and most self-doubting moments. How, then, are we supposed to identify colleagues in trouble — or admit that we may need help ourselves?

Interns are often bewildered at how rapidly things change for us from May to July. As medical students, while we felt compelled to work hard and excel, our shortfalls were met with reassurances: "It will all come in time." But as soon as that M.D. is appended to our names in May, our self-expectations skyrocket, as if the conferral of the degree were an enchantment of infallibility. The internal pressure to excel is tremendous: After all, we are *real* doctors now.

In fact, very little about us changes, apart from our legal ability to prescribe medications. But meanwhile, our workload increases along with the expectations and demands we place on ourselves. Most fourth-year medical students are expected to take care of four patients at a time. But within a month of graduation, without any additional training or practice, we are required to have a comprehensive understanding of up to 10 patients on any given day.

This drastic increase in responsibility can and does overwhelm most

interns. Despite the support of my supervisors, my first two months were marked by severe fatigue, numerous clinical errors (that were promptly caught by my supervisors), a constant and haunting fear of hurting my patients and an inescapable sense of inadequacy. I kept up a charade of composure and humor to blend in with my talented colleagues, believing that I was struggling alone. Inside, however, I felt as if I would be found out all too soon.

It was over a dinner of Thai food that I finally opened up. One of my most accomplished colleagues in residency had complimented me on my clinical knowledge a couple of times during the meal. Sick of feeling like a charlatan, I told him about the trouble I was having with collecting clinical data and presenting it in an organized way on rounds. I confessed that I did not think I belonged in the program. He listened thoughtfully, and then uttered the three most beautiful words I had ever heard: "Dude, me too!"

We need to be able to voice these doubts and fears. We need to be able to talk about the sadness of that first death certificate we signed, the mortification at the first incorrect prescription we ordered, the embarrassment of not knowing an answer on rounds that a medical student knew. A medical culture that encourages us to share these vulnerabilities could help us realize that we are not alone and find comfort and increased connection with our peers. It could also make it easier for residents who are at risk to ask for help. And I believe it would make us all better doctors.

Some stoics may invoke Osler's creed to argue that physicians must push aside our personal burdens to care for the sick. But a tired and depressed doctor who is an island of self-doubt simply isn't as likely to improve the outcomes of his or her patients — or ever truly care for them.

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Article

Modifying Resilience Mechanisms in At-Risk Individuals: A Controlled Study of Mindfulness Training in Marines Preparing for Deployment

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Objective: Military deployment can have profound effects on physical and mental health. Few studies have examined whether interventions prior to deployment can improve mechanisms underlying resilience. Mindfulness-based techniques have been shown to aid recovery from stress and may affect brain-behavior relationships prior to deployment. The authors examined the effect of mindfulness training on resilience mechanisms in active-duty Marines preparing for deployment.

Method: Eight Marine infantry platoons (N=281) were randomly selected. Four platoons were assigned to receive mindfulness training (N=147) and four were assigned to a training-as-usual control condition (N=134). Platoons were assessed at baseline, 8 weeks after baseline, and during and after a stressful combat training session approximately 9 weeks after baseline. The mindfulness training condition was delivered in the form of 8 weeks of Mindfulness-Based Mind Fitness Training (MMFT), a program comprising 20 hours of classroom instruction plus daily homework exercises. MMFT emphasizes interoceptive awareness, attentional control, and tolerance of present-moment experiences. The main outcome measures were heart rate, breathing rate, plasma neuropeptide Y concentration, score on the Response to Stressful Experiences Scale, and brain activation as measured by functional MRI.

Results: Marines who received MMFT showed greater reactivity (heart rate [d=0.43]) and enhanced recovery (heart rate [d=0.67], breathing rate [d=0.93]) after stressful training; lower plasma neuropeptide Y concentration after stressful training (d=0.38); and attenuated blood-oxygen-level-dependent signal in the right insula and anterior cingulate.

Conclusions: The results show that mechanisms related to stress recovery can be modified in healthy individuals prior to stress exposure, with important implications for evidence-based mental health research and treatment.

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The ability to quickly anticipate, respond to, and recover from recurrent stressors is fundamental to a healthy homeostatic system and essential for long-term behavioral and psychological health. In particular, stress recovery is critical to the optimal functioning of military personnel during deployment and integral to their postdeployment reintegration. Population-based studies of military personnel serving in combat indicate prevalences of stress-related mental health disorders between 11.3% and 19.1% (1). Military operations in Iraq and Afghanistan now span a decade, marking America's longest sustained combat operations. Studies of trauma-related pathology and resilience highlight the fact that while intense stress chronically perturbs homeostatic mechanisms for some individuals, others are able to recover (2–4). Available neuroscientific evidence suggests that maladaptation to stress is associated with disruption of neural networks that communicate and integrate information about the response to stress (5). However, our understanding of these mechanisms is incomplete, and a translational knowledge gap remains regarding whether brain-behavior relationships can be reliably modified prior to stressful experiences in a way that confers an enhanced ability to recover.

Successful recovery from stress is multifaceted, with complex interactions between brain, behavior, and environment. The brain is the central organ of stress response and recovery, and essential to these processes is an individual's awareness of his or her internal physiological state, also known as interoception (6, 7). Interoception, which is functionally and neuroanatomically distinct from the traditional "five senses" (8), is a process through which the brain monitors and updates the body about its overall physical state, including its ability to recognize bodily sensations, be aware of emotional states, and maintain physiologic homeostasis. Inefficient interoceptive function has

This article is featured in this month's AJP Audio, is an article that provides Clinical Guidance (p. 853), is the subject of a CME course (p. 893), and is discussed in an Editorial by Dr. Brewer (p. 803) and Video by Dr. Pine.

been shown to play a critical role in the development of mood and anxiety disorders (9–12). Conversely, interoceptive exposure, the intentional induction of symptoms of sympathetic arousal, has been shown to be effective in treating anxiety disorders (13), panic disorder (14, 15), posttraumatic stress disorder (16), chronic pain (17), and irritable bowel syndrome (18, 19).

Functional neuroimaging studies have identified the insular cortex as a critical brain structure for modulating interoceptive function (20, 21). A series of neuroimaging studies by our group has shown that altered insula activation differentiates individuals known to perform well under severe stress (e.g., "exceptional performers") from healthy control subjects (22–25). In other words, more efficient functioning in the insular cortex and enhanced interoceptive processing distinguishes those who perform well under high-magnitude stress from those who do not.

Growing evidence suggests that deliberate modification of interoceptive function can be achieved through mindfulness training (MT). Mindfulness is a mental mode characterized by full attention to present-moment experience without elaboration, judgment, or emotional reactivity. It includes the ability to pay attention to, describe, and act with full awareness of sensations, perceptions, thoughts, and emotions (26). MT programs that offer exercises and didactic instruction to help participants cultivate this mental mode.

Modification of insula activation has been reported in experienced practitioners of meditation compared with nonpractitioners (27), as well as in healthy participants in an 8-week MT course compared with control subjects (28, 29). Other studies have shown that MT practice corresponds to "more efficient" functional activity profiles within prefrontal regions during attention-demanding tasks (30). These results suggest that alteration of insula function may be associated with mindfulness-based improvements in the capacity to appraise emotion as "innocuous sensory information rather than as affect-laden threat to self requiring a regulatory response" (29, p. 31).

Our primary aim in this study was to examine the capacity of a mindfulness-based intervention called Mindfulness-Based Mind Fitness Training (MMFT) (31) to modulate mechanisms underlying recovery from stress in active-duty military personnel prior to deployment. We obtained evidence in multiple domains (physiological measures, biomarkers, fMRI, and self-report clinical measures), consistent with the multiple levels of investigation mandated by the Research Domain Criteria, to further elucidate the capacity for MT to modulate brain-behavior mechanisms involved in recovery from stress. We hypothesized that an MT program emphasizing interoceptive awareness, as MMFT does, could create desirable changes across several functional domains implicated in response to, and recovery from, stressful training.

Method

Study Participants

We conducted this study during the summer of 2011 at Marine Corps Base Camp Pendleton, Calif., and at the University of California, San Diego (UCSD) Center for Functional MRI. The institutional review boards of the Naval Health Research Center and UCSD approved the study protocol. Participants were recruited from a convenience sample of two Marine infantry battalions scheduled to undergo predeployment training. Within those battalions, eight platoons (N=287) were randomly selected for study assignment; four platoons were assigned to the MT group (N=153) and four to a training-as-usual control condition (N=134). Five Marines from each of the eight platoons (N=40) comprised the functional MRI (fMRI) subsample.

Study Design

Written informed consent was obtained from all participants prior to the baseline assessment. Additional written consent for the subsample of participants undergoing fMRI was obtained prior to the baseline scan. Participants were assigned a unique study participant identification number for use throughout the study. A second assessment was conducted 8 weeks after baseline, and a third assessment was conducted 5–10 days after that (at approximately 9 weeks), at the Infantry Immersion Trainer (IIT) facility, during and after stressful combat training. Participants in the fMRI subsample underwent a second scan within 2 weeks of completing training exercises at the IIT facility (at approximately 10 weeks).

IIT facility. The primary platform for evaluating recovery from stress was the IIT facility. Marine units preparing for deployment spend 1 day training at this facility as part of the standard predeployment training cycle. The IIT facility is a 32,000 square-foot compound located at Camp Pendleton. It comprises several one- and two-story huts, a religious center, a marketplace, and numerous walls, gates, and alleyways modeled on those typically found in a rural Middle East village. The IIT facility exposes Marines to close-quarters combat scenarios with the aid of foreign-national role players and realistic sensory (e.g., smells, sounds) and environmental (e.g., interpreters, pyrotechnics) stimuli. Real-time scenarios include a variety of operational challenges that vary in intensity and duration. For the present study, participants were exposed to three specified scenarios, each increasing in complexity. The first scenario involved a passive village patrol; the second focused on meeting village leadership ("a key leader engagement"); and the third required responding to a complex ambush.

MT Intervention

MMFT is a 20-hour course taught over 8 weeks, including eight 2-hour sessions of classroom instruction, an individual practice interview in week 3, and a 4-hour workshop with a longer session of silent practice to refine mindfulness skills in week 6. Outside of class sessions, participants are asked to complete at least 30 minutes of daily mindfulness and self-regulation exercises, divided into several practice periods each day. MMFT provides a novel approach to MT designed for individuals with prior exposure to prolonged significant stress. The program emphasizes interoceptive awareness by cultivating attentional control and tolerance for challenging experience, both external (i.e., harsh environmental conditions) and internal (e.g., physical pain, intense emotions, distressing thoughts). It also focuses on enhancing stress resilience, with didactic content and concrete skills for supporting self-regulation of the stress response and its effects. These skills and information incorporate and extend concepts from sensorimotor psychotherapy and somatic experiencing,

and they inform the model of resilience taught in MMFT. The program was designed for the high-stress organizational context, with ways to integrate practices into the work setting, and with didactic content focused on the relationship between mindfulness, military stress inoculation, and complex decision making.

Measures

The primary physiological measures were heart rate and breathing rate. These were measured at the IIT facility and included continuous monitoring through the following sequence of periods: rest (45 minutes), anticipatory (10 minutes), stress (30 minutes), recovery (10 minutes), and rest (45 minutes). The primary biomarkers of interest were plasma concentrations of neuropeptide Y and norepinephrine. Neuropeptide Y is co-released with norepinephrine and at low concentrations is a secondary indicator of sympathetic activation. It is also released at high concentrations during intense or prolonged sympathetic activation and is a well-known stress modulator (32).

For the fMRI component of the study, an emotion face processing task (33) was used to assess quantitatively the functional status of the neural circuitry that has been implicated in emotion processing and interoception. This task examines brain activation when individuals process emotional faces when compared with simple geometric shapes and reliably produces insula activation. Previous studies of exceptional performers have shown altered activation patterns in this circuitry consistent with more efficient interoceptive processing (22, 25). Behavioral characteristics of resilience were assessed with the Response to Stressful Experiences Scale, a self-report measure that was developed and validated in a large active-duty military and veteran sample (34).

Procedures

Physiological monitoring (heart rate and breathing rate), blood draw, and self-report measures (including the Response to Stressful Experiences Scale) were completed at baseline, at 8 weeks, and during and after the stressful IIT session at approximately 9 weeks. A mobile lab was established at the study site, and samples were spun in a refrigerated centrifuge within 20 minutes of being drawn. Plasma was aliquoted and immediately placed on dry ice until transfer to a −80 freezer at the end of the training day. A subset of participants (N=40) underwent fMRI scanning at baseline and again within 2 weeks after the stressful IIT session, at approximately 10 weeks.

Analysis

Groups were contrasted on demographic variables. The interaction of group and time was analyzed for physiological, neuroendocrine, fMRI, and self-report data. The threshold for statistical significance was set at 0.05, with adjustments made for multiple comparisons. Main effects and interactions were analyzed using a general linear model for repeated measures and mixed-factorial designs. Brain imaging was analyzed using the AFNI software package (http://afni.nimh.nih.gov/afni/). fMRI is predicated on cerebral blood flow and hemodynamic properties of deoxygenated hemoglobin, known as the blood-oxygen-level-dependent signal (35). Based on our own and other studies with elite performers and anxious individuals and on pharmacological studies, we used a priori brain regions of interest (i.e., entire regions of the insula, the dorsal anterior cingulate cortex, and the medial prefrontal cortex) and restricted our analyses to those regions. Robust (Huber) regression analyses were performed between fMRI data and key variables to establish relationships between changes in brain activation patterns and neuroendocrine and physiological variables.

Results

Participant Flow

U.S. Marine Corps predeployment training requirements are intensive, and Marines' training schedules are generally full and complex, and as a result, not all participants were able to attend each of the assessments. The scheduling conflicts cited below were related to training schedules, medical appointments, and temporary assigned duty to other locations. In addition, a few Marines declined the blood draw or the questionnaire containing the Pittsburgh Sleep Quality Index and the Response to Stressful Experiences Scale. The participant flow through the study is summarized below, as well in Figure S1 in the data supplement that accompanies the online edition of this article.

MT group. From the four platoons assigned to the MT group (N=153), 151 Marines were present at the baseline assessment (two had scheduling conflicts). Of these, four declined questionnaires and nine declined blood draw. Because of time constraints, 22 Marines in the MT group were unable to participate in the heart and breathing rate assessments. A total of 147 Marines consented to participate in the MT intervention, and all of them completed the intervention.

At the 8-week assessment, 134 Marines in the MT intervention group were present (13 had scheduling conflicts). Of these, 10 declined blood draw and eight were unable to participate in the heart and breathing rate assessments because of time constraints. For eight Marines, questionnaire data were lost by unintentional overwriting.

At the IIT assessment, 118 of the 147 Marines in the MT intervention group were present (29 had scheduling conflicts). Of these, three declined questionnaires and 10 declined blood draw. During the IIT session, heart and breathing rate data could be collected for only 54 Marines in the MT group because of the time constraints of the training and the time required to download data from sensors and transfer the monitoring harnesses to Marines in the next training group.

Control group. From the four platoons assigned to the control group (N=134), 113 Marines were present at the baseline assessment (21 had scheduling conflicts). Of these, four declined questionnaires, six declined blood draw, and 22 were unable to participate in heart and breathing rate assessments because of time constraints.

At the 8-week assessment, 121 Marines from the control group were present (13 had scheduling conflicts). Of these, two declined blood draw, and 12 were unable to participate in the heart and breathing rate assessments because of time constraints.

At the IIT assessment, 95 of the 134 Marines in the control group were present (39 had scheduling conflicts). Of these, three declined blood draw. During the IIT session, heart and breathing rate data could be collected for

TABLE 1. Baseline Characteristics of Marines Receiving Mindfulness Training (MT Group) or Training as Usual (Control Group)

Variable	Main Sample				fMRI Subsample[a]			
	MT Group (N=147)		Control Group (N=134)		MT Group (N=19)		Control Group (N=16)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Age (years)	21.7	2.6	21.4	2.5	22.4	3.1	20.9	1.1
Military service (years)	2.7	2.0	2.9	2.2	3.8	3.0	2.5	1.1
Height (inches)	69.8	3.1	69.5	2.8	69.7	3.1	71.3	2.3
Weight (lb)	171.5	19.8	171.8	18.7	168.4	19.3	173.8	16.6
Physical fitness test								
Pull-ups (number completed)	16.3	4.9	16.0	3.9	17.2	4.6	15.1	2.8
Sit-ups (number completed)	101.3	15.7	99.7	8.0	99.3	2.9	100.0	0
3-mile run (minutes)[b]	20.5	1.9	21.2	1.8	20.3	2.0	21.0	1.8
Combat Experiences Scale score	2.7	4.7	2.6	3.7	3.4	5.4	3.9	4.4
Pittsburgh Sleep Quality Index score[c]	8.4	4.0	7.0	3.6	9.8	4.3	6.7	3.6
Response to Stressful Experiences Scale score	65.5	13.5	68.0	12.2	60.1	11.9	66.1	12.7
	N	%	N	%	N	%	N	%
White	103	70	77	61	12	63	11	69
Married[d]	20	14	37	29	1	5	7	44
Associate's degree or higher	13	9	5	4	1	5	0	0
Military occupational specialty: rifleman	139	95	126	96	16	94	16	100
Previous IIT exposure[e]	56	36	68	53	8	47	10	63
Combat experience	49	34	61	47	7	37	10	63
Taking medication	8	5	13	10	3	18	2	13

[a] From the original fMRI subsample of 20 Marines in each group, data from one Marine in the MT group and four in the control group were excluded from analyses because of excessive head-motion artifact at either the baseline or the follow-up assessment (at approximately 10 weeks).
[b] Significant difference between MT and control groups (p=0.003).
[c] Significant difference between MT and control groups (p=0.007) and between fMRI subgroups (p=0.03).
[d] Significant difference between MT and control groups (p=0.002) and between fMRI subgroups (p=0.01).
[e] IIT=Infantry Immersion Trainer facility. Significant difference between MT and control groups (p=0.02).

only 53 Marines in the control group because of competing demands of training and time required to download data and transfer harnesses.

fMRI subgroup. A total of 40 Marines—20 from the MT group and 20 from the control group (five from each of the eight platoons)—were randomly selected for fMRI assessments. All 40 Marines in the fMRI subgroup underwent scanning at baseline. At the follow-up fMRI assessment at approximately 10 weeks, one Marine from the control group was absent because of a scheduling conflict.

Sample Characteristics

The baseline characteristics of study participants are summarized in Table 1. The MT and control groups did not differ significantly in age, duration of military service, race, education, height, or weight. The MT group had a smaller proportion of Marines who were married. Physical fitness did not differ significantly between the groups, except that the MT group had a slightly faster 3-mile run time. There were no differences between the groups regarding military operational specialty, number of combat deployments, combat exposure, or proportion taking prescribed medication. Self-report of resilience characteristics (based on the Response to Stressful Experiences Scale) did not differ between the groups at baseline. In both the overall study sample and the fMRI subsample, Marines in the MT group reported significantly worse quality of sleep at baseline compared with those in the control group. The fMRI subsample did not differ from the larger sample in age, duration of military service, combat exposure, height, weight, or physical fitness.

MT Intervention

Attendance was recorded for each platoon at each of the eight MT classroom sessions and the 4-hour workshop. The mean attendance rate for all sessions was 92.6% (SD=8.1, range=68–100). The mean practice time in excess of the 20 hours of classroom instruction was 205.1 minutes (SD=243.5, range=0–1750). Attendance rate and practice time did not differ significantly between platoons.

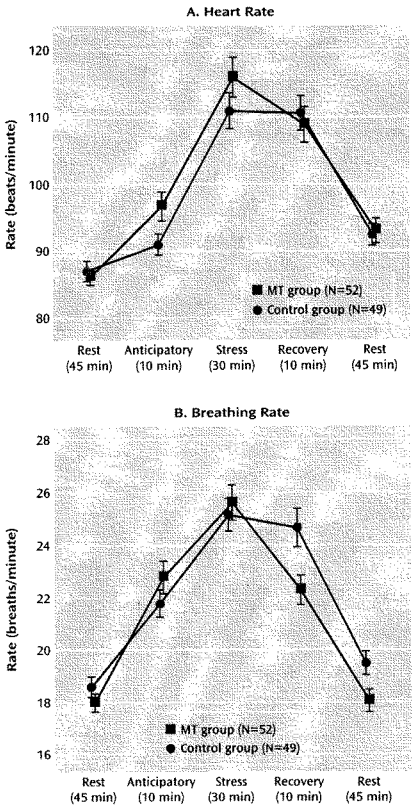
Stress Exposure

IIT scenario duration did not differ significantly between groups; the mean duration was 30.9 minutes (SD=10.3) for the MT group and 29.2 minutes (SD=11.1) for the control group.

Autonomic Physiology

Heart rate. Using data collected at the IIT facility, we tested for group differences during the anticipation (t=2.13, df=99, p=0.036), response (n.s.), and recovery phases (n.s.), with results suggesting that the groups were significantly different only during anticipation (Figure 1A).

FIGURE 1. Heart and Breathing Rates Before, During, and After a Stressful Immersive Training Session in Marines Receiving Mindfulness Training (MT) or Training as Usual (Control)[a]



[a] The stressful immersive training session took place at the Infantry Immersion Trainer facility approximately 9 weeks after baseline. In panel A, heart rate during the 10-minute anticipatory period prior to immersive training was higher for the MT group. Although peak heart rate did not differ between groups during the training, the MT group also showed quicker heart rate recovery during the 10-minute period immediately following stressful training. In panel B, there were no differences between groups in breathing rate during the anticipatory or stress periods. During the 10-minute recovery period, the mean breathing rate for the control group did not significantly differ from peak response; however, the mean breathing rate for the MT group decreased significantly from peak during the stress period and was significantly lower than the rate for the control group during both the 10-minute recovery and the 45-minute rest period.

However, we also separately tested the rate of recovery (recovery heart rate minus response heart rate) within each group. The rate of recovery differed significantly between the groups, with the MT group showing a sharper reduction in heart rate (mean=−7.1, SD=14.5; t=3.52, df=51, $p<0.001$) than the control group (mean=−0.3, SD=10.6; n.s.).

Breathing rate. We tested for group differences during the anticipation (n.s.), response (n.s.), and recovery phases (t=−2.59, df=99, p=0.011), with results suggesting that the groups were different only during recovery (Figure 1B). We also separately tested the rate of recovery (recovery breathing rate minus response breathing rate) within each group. As with heart rate, the rate of recovery for breathing rate differed significantly between the groups, with the MT group showing a sharper reduction (mean=−3.3, SD=0.6; t=5.18, df=51, $p<0.001$) than the control group (mean=−0.5, SD=0.6; n.s.).

Biomarkers

Group-by-time interaction analysis revealed that plasma concentrations of neuropeptide Y did not differ significantly between the MT and control groups at baseline or at 8 weeks; however, after the stressful IIT session, the MT group had lower concentrations of neuropeptide Y than the control group (Figure 2). The mean elapsed time from cessation of IIT scenario to plasma extraction did not differ significantly between the MT group (mean=48.2 minutes, SD=20.9) and the control group (mean=45.8 minutes, SD=11.6).

Relationships Between Physiology and Biomarkers

Heart rate was positively correlated with plasma neuropeptide Y concentration during the response (r=0.49, $p<0.001$) and recovery periods (r=0.50, $p<0.001$). Breathing rate was negatively correlated with epinephrine concentration during the anticipatory period (r=−0.23, $p<0.01$).

fMRI

Group differences. Participants in the MT group showed significant attenuation of brain activation, whereas those in the control group did not (Figure 3). The MT group showed less activation to emotional faces in the right insula (F=7.88, df=1, 150, p=0.015; d=0.92) and the dorsal anterior cingulate (F=6.83, df=1, 150, p=0.02; d=0.86), which are regions that have been implicated in cognitive control, emotion regulation, reward monitoring, and interoception. Region-specific differences in the group-by-time interaction during the emotion recognition task are summarized in Table 2.

Individual differences. Interestingly, those individuals who reported greater resilience improvements after MT (as measured by the Response to Stressful Experiences Scale) also showed the greatest reduction of brain activation in the right anterior insula (r=−0.42, $p<0.05$) (Figure 4).

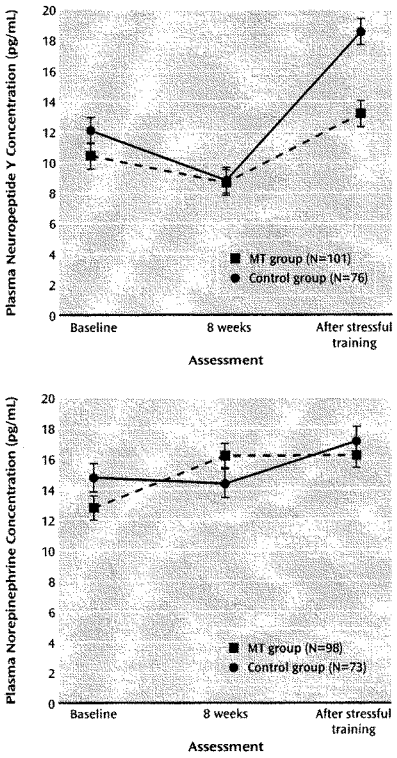
Discussion

To our knowledge, this is the first study of the effect of MT utilizing multiple domains of measurement to examine mechanisms underlying recovery from stress in active-duty military personnel prior to deployment. We used a multidimensional approach assessing brain-behavior relationships in a stressful military training environment (Infantry Immersion Training) with high ecological validity (see Table 3 for a summary of results). Our investigation yielded three main results. First, MT altered heart rate and breathing rate recovery following stressful training. Second, MT modulated a strongly correlated set of peripheral biomarkers before, during, and after exposure to a stressful training session. Third, the neuroimaging results support the hypothesis that MT affects brain structures that are important in integrating information about the internal physiological state and the body's response to stress. Thus, MT demonstrated beneficial effects across multiple domains indicating enhanced recovery from stress. Moreover, these effects were observed in a nonclinical sample and suggest that responses to stress may be improved through training prior to stress exposure, even in individuals without a mental health condition. Given these results, it is reasonable to speculate that even stronger treatment effects may be observed in treatment-seeking clinical populations. Taken together, these findings constitute evidence for the prevention and treatment of stress-related pathology. In addition, using measures in multiple domains, this study is an important step toward the application of Research Domain Criteria and neuroscience-based diagnoses. The results also have important implications for stress-related mental health research and evidence-based foundations for nonpharmacological prevention and treatment options.

The profile of heart and breathing rate reactivity with MT indicates a more potent response to stress followed by quicker recovery, an effect that remained after controlling for baseline differences in self-reported aerobic fitness as indicated by 3-mile run time. This result is consistent with evidence indicating that cardiorespiratory fitness is associated with greater reactivity to stress followed by enhanced recovery (36). Furthermore, physiological results from this study directly support the idea that flexibility within a system facilitates adaptive response to stress.

Heart rate and breathing rate are controlled via regions of the brainstem under the influence of higher-order brain regions like the insula. That we found changes in insula function suggests that MT alters function in higher-order brain regions that in turn modulates autonomic outflow to heart rate and breathing rate control centers. This, too, is consistent with evidence suggesting that individuals who adapt well to stress have more efficient deployment of neural processing resources and autonomic responses to stress (37). Relative to Marines in the control group, those who received MT showed lower sympathetic activation during recovery from stressful immersive training.

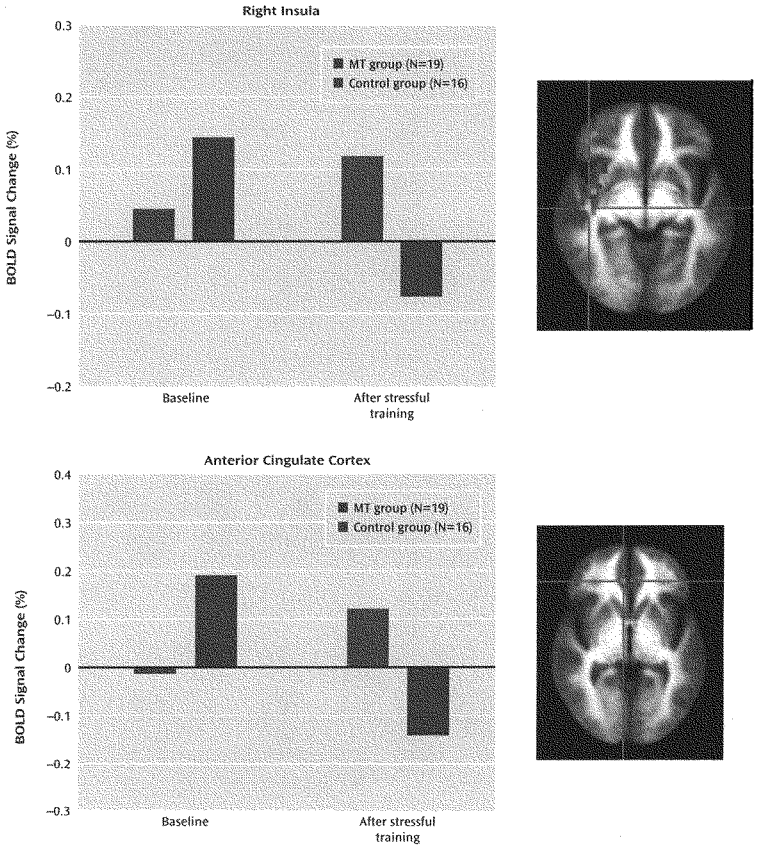
FIGURE 2. Mean Plasma Neuropeptide Y and Norepinephrine Concentrations in Marines Receiving Mindfulness Training (MT) or Training as Usual (Control)[a]



[a] Neuropeptide Y and norepinephrine levels are shown for baseline, after 8 weeks, and after a stressful immersive training session at the Infantry Immersion Trainer facility approximately 9 weeks after baseline. For neuropeptide Y, there were no group differences at baseline or at 8 weeks. There was a significant interaction in response to stressful training ($F=4.67$, $df=2, 350$, $p<0.01$; $d=0.33$), with the control group showing significantly higher levels of neuropeptide Y 45 minutes after stressful training, whereas the MT group had recovered to near baseline levels.

Brain activity changes on fMRI in the MT group are consistent with studies identifying a key role for interoceptive networks in responding to affective perturbation. Evidence indicates that higher self-report of mindfulness is associated with reduced activation in the right anterior insula while viewing negative affect images

FIGURE 3. Activation of the Right Insula and Anterior Cingulate Cortex During Emotion Recognition in Marines Receiving Mindfulness Training (MT) or Training as Usual (Control)[a]



[a] From the original fMRI subsample of 20 Marines in each group, data from one Marine in the MT group and four in the control group were excluded from analyses because of excessive head-motion artifact at either the baseline or the follow-up assessment (at approximately 10 weeks). Analyses adjusted for baseline differences in sleep quality, combat exposure, and previous training at the Infantry Immersion Trainer facility. Compared with Marines in the control group, those in the MT group showed significantly decreased activation in the right insula and anterior cingulate cortex.

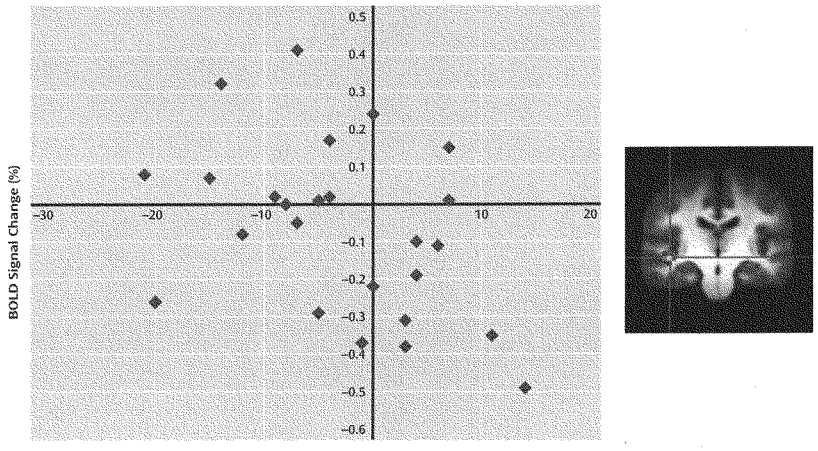
(38). Similarly, Brefczynski-Lewis et al. (30) found that relative to nonmeditators, experienced meditators showed attenuated posterior insula activation during a task of attentional control. There is also evidence for an inverse dose-response relationship between insula activation and benzodiazepine administration, suggesting that decreased insula function is associated with reduced perturbation of the interoceptive system (39). Our findings were similar, with the MT group showing decreased activation in the right insula while responding to emotional faces. Taken together, these findings suggest that a mindful approach to affective perturbation requires fewer cognitive resources. However, such an interpretation regarding the directionality of insula function is incomplete. For example, Farb

TABLE 2. Group-by-Time Interaction of Emotion Recognition on Brain Activation in 35 Marines Receiving Mindfulness Training (N=19) or Training as Usual (N=16)[a]

Brain Area	Volume (mm^3)	Coordinates			Brodmann's Area	F (maximum)	p (maximum)
		x	y	z			
Right anterior insula	320	−34	−11	−4	13	6.34	0.03
Right posterior insula	2,178	−41	−10	−4	13	21.33	0.05
Ventral anterior cingulate	704	−6	−35	0	24	14.48	0.02
Dorsal anterior cingulate	832	−6	−27	20	32	13.29	0.04

[a] Marines underwent functional MRI (fMRI) scanning at baseline and again approximately 10 weeks later. From the original fMRI subsample of 20 Marines in each group, data from one Marine in the MT group and four in the control group were excluded from analyses because of excessive head-motion artifact at either the baseline or the follow-up assessment. The table summarizes results of fMRI analysis of the linear mixed effects for group-by-time interaction of mindfulness training in Marines during an emotion recognition task. Coordinates are normalized to Talairach space. Analyses controlled for individual differences in baseline sleep quality (as assessed by the Pittsburgh Sleep Quality Index) and combat exposure.

FIGURE 4. Relationship Between Change Score From Baseline to Follow-Up on the Response to Stressful Experiences Scale and Changes in Activation in the Right Anterior Insula (N=25)[a]



[a] fMRI scanning took place at baseline and again approximately 10 weeks later, within 2 weeks after a stressful immersive training session at the Infantry Immersion Trainer. As insula activation decreased from baseline to follow-up, resilience characteristics increased (r=−0.42). BOLD=blood-oxygen-level-dependent.

TABLE 3. Summary of Results of Mindfulness Training Compared With Training as Usual in Marines

Domain	Unit of Analysis	Result	Effect Size
Stress physiology	Heart rate	Increased reactivity; greater recovery	d=0.43; d=0.67
	Breathing rate	Greater recovery	d=0.93
Sympathoadrenomedullary	Neuropeptide Y	Decreased	d=0.38
Interoception	fMRI percent signal change	Decreased activation in insula and anterior cingulate gyrus	d=0.92; d=0.86
Resilience	Response to Stressful Experiences Scale	As resilience increased, insula activation decreased	r=−0.42

et al. (28) found increased functional connectivity between the insula and the medial prefrontal cortex during tasks that demanded self-referencing. Differences in the directionality of activation may speak to functional differences between anterior and posterior insula. Evidence suggests that functional differences between anterior and posterior may correspond to distinctions in awareness of the internal self versus awareness and regulation of affective states (40).

It remains unclear whether self-referential states perturb homeostasis or are different from regulatory modes of interoception.

Relative to the control group, the MT group showed a pattern of altered activation in the right anterior insula and dorsal anterior cingulate cortex after the stressful training session similar to that observed in previous studies by our group in "elite performers" (in both military and civilian samples) relative to healthy subjects (22–25). These results suggest that MT may directly modulate interoceptive function toward more efficient processing of cues signaling perturbation of homeostasis and further facilitates improved response to stress.

A limitation of this study was the lack of an active control group. Predeployment training preparation was identical for the MT and control groups with the exception of the MT intervention. Thus, it is possible that some group differences had more to do with the extra time and attention spent on a focused task, not just with the MT content. However, the moderate interaction effect sizes for fMRI, neuropeptide Y, physiology, and sleep quality measures make this explanation less plausible and underscore the value of multidimensional outcome measures in mindfulness research. Moreover, these findings are consistent with independent fMRI studies showing mindfulness-based meditation effects on the anterior insula and anterior cingulate cortex. The extent to which these brain-behavior relationships remain modified as a result of MT and affect behavioral health remains unknown and is worthy of study.

Received April 15, 2013; revisions received Sept. 13, 2013, and March 4, 2014; accepted March 13, 2014 (doi: 10.1176/appi.ajp.2014.13040502). From the Warfighter Performance Department, Naval Health Research Center, San Diego; the Department of Psychiatry, School of Medicine, University of California, San Diego, La Jolla; Department of Applied Health Science, Wheaton College, Wheaton, Ill.; the Edmund A. Walsh School of Foreign Service, Georgetown University, Washington, D.C.; the Mind Fitness Training Institute, Alexandria, Va.; the Department of Psychology, University of California, Los Angeles; and Naval Special Warfare Command, San Diego. Address correspondence to Dr. Johnson (douglas.c.johnson@med.navy.mil).

Dr. Stanley is the creator of the Mindfulness-Based Mind Fitness Training intervention and founder of the Mind Fitness Training Institute, a nonprofit organization established to support the delivery of the intervention; she serves as a volunteer member of the board of directors and receives consulting income from teaching the intervention. The other authors report no financial relationships with commercial interests.

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The views expressed in this article are those of the authors and do not reflect the official policy or position of the Navy, the Department of Defense, or the U.S. Government.

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Clinical Guidance: Mindfulness Training in the Military

Mindfulness training of Marines enhanced their physiological recovery after stress-inducing predeployment training episodes. Johnson et al. demonstrated that after 8 weeks of Mindfulness-Based Mind Fitness Training, 147 Marines had faster recovery of heart and breathing rates, lower neuropeptide Y concentrations after stressful training, and less brain activation in regions related to interoception, the awareness of one's own physiological state. The focus on recovery from stress, states Brewer in an editorial (p. 803), fills a gap left by the traditional emphasis on precombat exposure experiences to inoculate soldiers against the stressful experience itself.

Mr. MURPHY. Let me also say, I ask unanimous consent that the members' opening statements be introduced in the record. Without objection, those will be there.

I would like to thank all the witnesses and members that participated in today's hearing. I remind members they have 10 business days to submit questions to the record, and I ask that all the witnesses agree to respond promptly to the questions.

Thank you so much for your dedication and passion, and with that, I adjourn this hearing.

[Whereupon, at 1:16 p.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

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Rep. Bruce Braley
Statement for the Record
Subcommittee on Oversight and Investigations, Energy and Commerce
Hearing on Suicide Prevention and Treatment: Helping Loved Ones in Mental Health Crisis

Thank you, Mr. Chairman for holding this important hearing on a topic that is very important to my family and me. In 2010, my niece Kayla Thomas took her life after struggling with depression. Kayla was a wonderful person who was compassionate and kind-hearted. She was active on her school speech team and enjoyed writing poetry and shopping. We miss Kayla every day.

Like tens of thousands of Americans each year, Kayla was a victim of suicide. In 2010, suicide claimed the lives of over 38 thousand Americans, including Kayla's. This equated to an average of 105 suicides each day. Amongst 15-24 year olds, suicide accounts for 20% of all deaths and is the second leading cause of death. These statistics make it evident that more must be done to prevent teen suicide.

Suicide rates amongst veterans are also extremely troubling. Between 2009 and 2011, the suicide rate of veterans under the age of 30 increased by 44 percent. According to the Department of Veterans Affairs, an average of 22 veterans take their lives each day. Native American suicide rates are also unacceptably high. According to the Centers for Disease Control, between 2005 and 2009 the highest suicide rates were amongst Native Americans. This issue does not get enough attention here in Congress, and we should be working to address this tragic problem.

I've co-sponsored two pieces of legislation that address suicide among veterans and Native Americans. I'm a co-sponsor of the *Clay Hunt SAV Act* which is a comprehensive bill to prevent suicide amongst veterans and help them get the care that they need. I'm also a co-sponsor of the *Native American Suicide Prevention Act* which would require states to consult with Native American tribes and tribal organizations in creating and implementing their suicide prevention and intervention strategies.

I'll continue to work with my colleagues to pass these important bills and work to find more ways in which we can prevent suicide. Thank you again, Mr. Chairman for holding this important hearing.

The Committee on Energy and Commerce

Memorandum

September 16, 2014

TO: Members, Subcommittee on Oversight and Investigations

FROM: Committee Majority Staff

RE: Hearing on "Suicide Prevention and Treatment: Helping Loved Ones in Mental Health Crisis"

On Thursday, September 18, 2014, at 11:30 a.m. in 2123 Rayburn House Office Building, the Subcommittee on Oversight and Investigations will hold a hearing entitled "Suicide Prevention and Treatment: Helping Loved Ones in Mental Health Crisis." This hearing is part of the Subcommittee's ongoing examination of mental health programs and resources with the aim of ensuring that Federal dollars devoted to mental health are reaching those individuals with serious mental illness (SMI) and helping them to obtain the most effective care. In particular, this hearing will examine the connection between SMI and suicidal behavior and ideation, with a view towards dispelling harmful, commonly-held myths and identifying promising evidence-based treatments as well as effective strategies for suicide prevention targeting the most vulnerable populations.

I. WITNESSES

Statement by:

- The Honorable Lincoln Diaz-Balart, former Member of Congress.

Panel:

- Rear Admiral Boris D. Lushniak, M.D., U.S. Acting Surgeon General;
- David A. Brent, M.D., Endowed Chair in Suicide Studies and Professor of Psychiatry, Pediatrics, Epidemiology, and Clinical and Translational Science, University of Pittsburgh;
- Christine Moutier, M.D., Chief Medical Officer, American Foundation for Suicide Prevention; and
- Joel A. Dvoskin, Ph.D., Assistant Professor of Psychiatry, University of Arizona.

II. BACKGROUND

Suicide takes an enormous number of lives and devastates the family, friends, and communities of those who fall victim to it, both in the U.S. and globally. Approximately 40,000

Americans commit suicide annually, making it a more likely cause of death than motor vehicle crashes, homicide, or drug use.[1] For over 90% of suicides, the victim had been diagnosed with a mental illness.[2] Efforts to reduce this startling number of suicides must therefore involve serious attention to the nation's provision of mental health services.

Suicide is a particularly significant threat for certain demographics. It is the third leading cause of death for young people ages 15-24 (a rate that has nearly tripled during the past 40 years),[3] and the second leading cause of death for adults ages 25 to 34.[4] Suicide was the tenth leading cause of death for all ages in 2010.[5] Suicide rates among elderly white men are increasing at a significant rate.[6] America's veterans also are experiencing increased losses of life due to suicide. A Federal study found that veterans under the age of 24 are more than three times more likely than civilian males in the same age group to commit suicide.[7] Across gender and age groups, veterans comprised 22.2% of suicides in the past two years, while they comprise only 13% of the U.S. population.[8]

These alarming statistics still do not convey the extent of the suffering brought on by suicide. For every person who commits suicide, 25 attempt suicide (or approximately 1 million Americans) annually. A full 1% of the U.S. adult population (or 2.2 million adults) have reported making suicide plans in the past year, and 3.7% of the U.S. adult population (or 8.3 million adults) have reported having suicidal thoughts in the past year.[9] In fact, these numbers underestimate the problem. Many people who have suicidal thoughts or make suicide attempts never seek services.[10] Furthermore, suicides affect the families, friends, and communities of its victims. As conveyed to the Director of the National Institute for Mental Health by a father who lost his son to suicide, "suicide has at least 11 victims: the person who dies and at least ten others who will never be the same."[11]

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[1] *Deaths: Final Data for 2011*, CENTER FOR DISEASE CONTROL AND PREVENTION, Tables 9-13 (2011), *available at:* http://www.cdc.gov/nchs/data/nvsr/nvsr63/nvsr63_03.pdf.

[2] *Suicide Fact Sheet*, NATIONAL ALLIANCE ON MENTAL ILLNESS (reviewed January 2013), *available at: http://www.nami.org/factsheets/suicide_factsheet.pdf;* This percentage is comparable in countries other than the U.S. *Preventing Suicide: A Global Imperative*, WORLD HEALTH ORGANIZATION 40, *available at:* http://apps.who.int/iris/bitstream/10665/131056/1/9789241564779_eng.pdf?ua=1&ua=1.

[3] *Suicide Fact Sheet*, NATIONAL MCH CENTER FOR CHILD DEATH REVIEW, *available at:* http://childdeathreview.org/causesSUI.htm.

[4] *Suicide: Facts at a Glance*, CENTER FOR DISEASE CONTROL AND PREVENTION (2012), *available at:* http://www.cdc.gov/violenceprevention/pdf/Suicide_DataSheet-a.pdf.

[5] Id.

[6] Matthew Nock et al, *Suicide and Suicide Behavior*, 30 EPIDEMIOL. REV. 133-154 (2008), 134-35.

[7] Bill Briggs, "Young Male Vets Have Triple the Suicide Risk of Other U.S. Men, Study Shows," NBC NEWS (Jan. 10, 2014), *available at*: http://usnews.nbcnews.com/_news/2014/01/10/22257614-young-male-vets-have-triple-the-suicide-risk-of-other-us-men-study-shows.

[8] Janet Kempt and Robert Bossarte, *Suicide Data Report, 2012*, DEPARTMENT OF VETERANS AFFAIRS, MENTAL HEALTH SERVICES- SUICIDE PREVENTION PROGRAM 15 (2012), *available at:* http://www.va.gov/opa/docs/Suicide-Data-Report-2012-final.pdf.

[9] See supra n. 4.

[10] *Understanding Suicide: Fact Sheet*, CENTER FOR DISEASE CONTROL AND PREVENTION (2012), *available at:* http://www.cdc.gov/violenceprevention/pdf/suicide_factsheet_2012-a.pdf.

[11] Thomas Insel, *Director's Blog: A New Research Agenda for Suicide Prevention*, NATIONAL INSTITUTE OF MENTAL HEALTH (Feb. 5, 2014), *available at:* http://www.nimh.nih.gov/about/director/2014/a-new-research-agenda-for-suicide-prevention.shtml.

Nonetheless, popular myths and misconceptions about suicide remain widely held, including that those who begin thinking or speaking about suicide are merely seeking attention, will always be suicidal, can never again be healthy, and cannot benefit from – or will not be willing to seek – treatment. Public awareness about suicide is crucial to strengthening the social and familial bonds of potential victims and bringing them out of their sense of isolation.

Achieving reductions in both attempts at, and thoughts of, suicide also requires the improved delivery of mental health services. The Subcommittee has heard how effective care continues to elude many of the 11.4 million American adults suffering from SMI.[12] The Substance Abuse and Mental Health Services Administration estimated that in 2009, 40% of adults with SMI reported not receiving any treatment.[13] This needs to be corrected, whether these adults are not receiving treatment due to lack of awareness of their condition, the stigma associated with receiving SMI treatment, or a feeling that that treatment will not improve their condition.

In 1997, Congress passed two resolutions that recognized suicide as a national problem and suicide prevention as a national priority.[14] In 1999, then-U.S. Surgeon General David Satcher released a *Call to Action to Prevent Suicide*, which emphasized the need to improve the quality and quantity of treatment programs through, among other efforts, the creation of a National Strategy for Suicide Prevention.[15] The National Strategy, released in 2001, called for the establishment of a public-private partnership, which was launched in September 2010 as the National Action Alliance for Suicide Prevention (NAASP).[16]

Despite increased awareness and improved programming, these initiatives have not reduced the number of suicides committed or attempted, which have remained relatively constant since the 1950s.[17] In 2012, the U.S. Surgeon General, in collaboration with the NAASP, released an updated National Strategy. The 2012 National Strategy describes goals and objectives for advancing four different but "interconnected strategic directions" for preventing suicide: (1) healthy and empowered individuals, families, and communities; (2) clinical and community preventive services; (3) treatment and support services, and (4) surveillance,

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[12] *Committee's Investigation of Federal Programs Addressing Severe Mental Illness*, SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS MAJORITY STAFF 2 (May 15, 2014), *available at*: http://energycommerce.house.gov/sites/republicans.energycommerce.house.gov/files/letters/MentalHealth/051514MH-Staff-Memo.pdf.

[13] Id. Although the vast majority of Americans with SMI are nonviolent (and themselves are often the targets of violence) lack of treatment can put those with SMI, and those with whom they interact, at risk. The Director of NIMH informed the Subcommittee that treatment can reduce the risk of violent behavior 15-fold in persons with SMI. Id.

[14] *2012 National Strategy for Suicide Prevention: Goals and Objectives for Action*, U.S. SURGEON GENERAL, NATIONAL ACTION ALLIANCE FOR SUICIDE PREVENTION 96 (Sept. 2012), *available at*: http://www.surgeongeneral.gov/library/reports/national-strategy-suicide-prevention/full-report.pdf.

[15] *The Surgeon General's Call to Action to Prevent Suicide*, DEP'T OF HEALTH AND HUMAN SERVICES, U.S. PUBLIC HEALTH SERVICES 6-7, *available at:* http://profiles.nlm.nih.gov/ps/access/NNBBBH.pdf.

[16] *National Strategy for Suicide Prevention: Goals and Objectives for Action*, U.S. DEP'T OF HEALTH AND HUMAN SERVICES 1, 22 (2001), *available at:* http://www.sprc.org/sites/sprc.org/files/library/nssp.pdf.

[17] For a graph of the rate of suicides over the past sixty years, see supra n. 12, *2012 National Strategy for Suicide Prevention* at 16.

research, and evaluation.[18] Aligned with the various objectives are "priority areas" of the NAASP, meant to complement and further advance the strategic directions described by the National Strategy.[19]

In 2014, the NAASP's Research Prioritization Task Force (RPTF) released an action plan with the aim of reducing suicides by at least 20% over 5 years and at least 40% over 10 years.[20]

III. ISSUES

The following issues may be examined at the hearing:

- Why do people become suicidal?
- How can we better predict risk?
- What prevents individuals from engaging in suicidal behavior? What interventions or services are most effective for treating the suicidal person and preventing suicidal behavior?
- Would greater dissemination of evidence-based treatments lead to significant decreases in suicides or suicidal behavior? How would such dissemination be achieved?
- Are Federal resources targeting the treatment of SMI properly allocated to reach individuals at greatest risk of suicidal ideas or behavior?
- Since the suicide rate has not decreased over the last 60 years, why does HHS believe the RPTF action plan will achieve significant decreases in suicide rates over the next 10 years?

IV. STAFF CONTACTS

If you have any questions regarding this hearing, please contact Sam Spector or Alan Slobodin of the Committee staff at (202) 225-2927.

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[18] See supra n. 14, *2012 National Strategy for Suicide Prevention* at 24. Four "interconnected strategic directions" marks a slight departure from the framework adopted by the 2001 National Strategy: "AIM" (Awareness, Intervention, Methodology). Id.

[19] Id. at 25-26.

[20] *A Prioritized Research Agenda for Suicide Prevention: An Action Plan to Save Lives*, NATIONAL ACTION ALLIANCE FOR SUICIDE PREVENTION- RESEARCH PRIORITIZATION TASK FORCE 7 (2014), *available at:* http://actionallianceforsuicideprevention.org/sites/actionallianceforsuicideprevention.org/files/Agenda.pdf.

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ONE HUNDRED THIRTEENTH CONGRESS

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October 6, 2014

Rear Admiral Boris Lushniak, M.D.
Acting Surgeon General
U.S. Department of Health and Human Services
200 Independence Avenue, S.W.
Washington, D.C. 20201

Dear Admiral Lushniak:

Thank you for appearing before the Subcommittee on Oversight and Investigations on Thursday, September 18, 2014, to testify at the hearing entitled "Suicide Prevention and Treatment: Helping Loved Ones in Mental Health Crisis."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

Also attached are Member requests made during the hearing. The format of your responses to these requests should follow the same format as your responses to the additional questions for the record.

To facilitate the printing of the hearing record, please respond to these questions and requests with a transmittal letter by the close of business on Monday, October 20, 2014. Your responses should be mailed to Brittany Havens, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515 and e-mailed in Word format to brittany.havens@mail.house.gov.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

Tim Murphy
Chairman
Subcommittee on Oversight and Investigations

cc: Diana DeGette, Ranking Member, Subcommittee on Oversight and Investigations

Attachments

Admiral Lushniak Responses to Energy and Commerce Subcommittee on Oversight and Investigations Questions for the Record pertaining to the hearing entitled, "Suicide Prevention and Treatment: Helping Loved Ones in Mental Health Crisis"

Chairman Tim Murphy

1. What do you believe is the proper role for evidence-based psychotherapies in countering the public health crisis of suicide? Do you believe that a gap exists between the state of suicide prevention research and clinical practice?

Answer: Evidence-based psychotherapies have an important role in countering the public health crisis of suicide. Evidence-based psychotherapies are important both to target the underlying behavioral health conditions that are significant risk factors for suicide, such as depression and substance use disorders, as well as to target suicidal behavior directly.

A recent systematic evidence review generated by the Department of Health and Human Services' (HHS) Agency for Healthcare Research and Quality (AHRQ) Evidence Based Practice System (O'Connor et al., 2013) estimated that the effect for all adult psychotherapy trials reporting suicide attempts demonstrated a 32 percent reduction in suicide attempts (relative risk [RR] = 0.68, 95 percent CI, 0.56 to 0.83). Because the studies observed few deaths, the report could not assess whether or not psychotherapeutic interventions reduced the risk of suicide deaths. However, there were some additional benefits of psychotherapy beyond reducing suicide attempts that included a reduction in depression symptoms, and reductions in the use of emergency services and inpatient care.[1]

An example of one of the best-researched approaches is Dialectical Behavior Therapy (DBT) which has been shown in several randomized controlled trials to reduce suicidal behavior. The Substance Abuse and Mental Health Services Administration (SAMHSA) has promoted treatments such as DBT through the National Registry of Evidenced-based Programs and Practices and through webinars and podcasts. In addition, the SAMHSA-funded National Action Alliance for Suicide Prevention has identified the use of evidence-based treatments focused on suicide as one of the core components necessary for health care systems to prioritize suicide prevention.

At the same time, there is still a gap between the state of suicide-prevention research and practice. There are evidence-based approaches to suicide risk-assessment, management, and treatment, but recent data suggest that only slightly more than half (57.2 percent) of mental health programs are utilizing them (SAMHSA, N-MHSS Report, 2014).

[1] See http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0056019/.

2. While the efforts of the federal government over the past decade may have increased public awareness about suicide in general, would you agree that it is difficult to evaluate their effectiveness or understand their specific impact?

Answer: Over the past decade there have been efforts not only to increase public awareness of suicide, but also to train both the public and healthcare professionals to recognize the warning signs of suicide and actions to take in response. Evaluation of some of these efforts has made clear that they are having a positive impact, but their scope and magnitude have been insufficient to reduce suicide nationally. For example, an evaluation of the Garrett Lee Smith State and Tribal Youth Suicide Prevention grant program has shown that counties that implement grant-sponsored suicide-prevention activities have lower suicide rates than matched counties that do not implement such activities (Report to Congress 2013). However, this reduction in mortality is not maintained past the first year of the activities being implemented highlighting the importance of finding more effective ways of sustaining suicide prevention activities over time in both states and Indian Country. An evaluation of the SAMHSA-funded National Suicide Prevention Lifeline found that compared to the beginning of a hotline call, at the end callers express significantly reduced hopelessness, psychological pain, and intent to die (Gould et al 2013). While there are clearly examples of Federally-supported suicide-prevention efforts that have made a measurable impact, with funding to date, activities have been insufficient in scope and magnitude to reduce the national suicide rate.

3. The 2012 National Strategy identifies changing the tone of the current public conversation about suicide and suicide prevention as one of its priority areas for 2012-2014.
a. Is there any correlation between reductions in stigma surrounding mental illness and an actual reduction in suicides?

Answer: There are many components to stigma surrounding mental illness, including institutional stigma and self-stigma. Stigma is a prejudice that often results in discrimination. There are studies showing anti-stigma campaigns can be successful in changing attitudes and behavioral intentions toward those with mental illness (Corrigan et al., Psychiatric Services 2012). There is limited research on the effects of reducing self-stigma and whether that leads to lower risk of suicide. However, multilevel approaches using individual-level strategies, such as gatekeeper training, to complement a campaign using media as a tool to distribute information to a smaller, well-defined audience, has been used frequently in recent years, and some evaluations show promising results. A Germany-based awareness campaign focusing on depression has involved: physician training; an information and awareness campaign for the broad public (*e.g.*, movie spots, flyers); educational training for gatekeepers including teachers, priests, or geriatric care staff; as well as support of self-help-activities. There was a significant reduction in suicide attempts and suicide deaths combined following the program (Niederkrotenthaler, Reidenberg, Till, & Gould, 2014).

However, with regard to reduced institutional stigma, where it is operationalized as more equal coverage of mental health care compared to physical health insurance coverage, there are some important findings. Research in 2014 that examined the effect enactment of the Mental Health Parity and Addiction Equity Act found that state mental-health-parity laws were associated with

changes in state suicide rates, at least initially. Dr. Matthew Lang of Xavier University noted that "[t]he results show that mental health parity laws significantly decrease suicide rates when analyzed between 1990 and 2010. Suicide rates decrease significantly the year after the parity law is enacted, but return to pre-enactment levels in the following years. The findings suggest that access to mental health care can play an important role in mental health outcomes such as suicide."[2]

b. In your view, what is the proper role of the federal government in changing the tone or national narratives involved in this public conversation, including combatting the stigma surrounding serious mental illness?

Answer: On January 16, 2013, President Obama called for "a national conversation to increas understanding about mental health." Since then, private and public partners have conducted these community conversations across the country. Over 151 conversations in more than 30 states have occurred to discuss youth and mental illness.

From Maine to Florida and across to California and Oregon, HHS has engaged parents, peers, teachers, business leaders and policy makers to address and reduce negative attitudes towards mental health disorders, to educate them about recognizing the signs of a potential problem, an to enhance access to treatment for those in need. HHS has been working to ensure that the country engages in frank, open conversations that will bring mental illness out of the shadows and into the light.

The national dialogue on mental health has specifically focused on the social barriers preventir individuals from getting the help they need for mental health issues. These barriers include negative perceptions of individuals with mental illness, shame and fear that may prevent peopl from reaching out for assistance, and the lack of awareness and understanding that mental illnesses are treatable and that people can and do recover.

This dialogue is a joint effort of groups from many sectors of society – including colleges and universities, high schools, health care providers, the faith community, and civic organizations - all working together to reduce the social barriers that create obstacles to obtaining the treatmen necessary to help people gain resilience and recover.

The dialogues have promoted understanding of the importance of mental health in the positive development of children, and prevent, recognize, get treatment for, and cope with mental illnes and other behavioral health issues that impact our Nation's youth.

In addition, HHS has supported efforts initiated by the Action Alliance for Suicide Prevention help change the public conversation around suicide. The Action Alliance is working to leverag the media and national leaders to change the national narratives around suicide and suicide prevention to ones that promote hope, connectedness, social support, resilience, treatment and recovery. This initiative aims to transform attitudes and behaviors relating to suicide and suicic prevention. Messages that promote hope, connectedness, social support, resilience, treatment and recovery have the potential to change the course for those who are struggling with thought

[2] Lang, 2014, pp. 131-137, www.suicide-research-agenda.org.

of suicide. This effort promotes stories of those who have struggled, yet were resilient, found help or treatment, and established a stronger will to go on living. It also promotes the cultural norm of providing social support and connectedness for vulnerable individuals struggling with thoughts of suicide.

4. The 2012 National Strategy addresses suicide prevention surveillance, research, and evaluation activities as areas where improvement is needed.

a. As a public health matter, why is the collection and integration of surveillance data so important - how does it help you do your job?

Answer: Public health surveillance may be defined as the collection of information that is used for action and is needed at the national, state, and local (community) levels. According to the Institute of Medicine's report, *Reducing the Burden of Injury*, surveillance serves at least four practical uses. First, surveillance describes the magnitude of a health problem relative to other health conditions. Thus surveillance data may direct the priorities for areas in greatest need of attention. Second, surveillance is used to monitor trends in specific areas of injury. Third, surveillance is used to identify new problems. For example, a new at-risk population is identified or a new mechanism being used. Fourth, surveillance is used as one way to evaluate injury prevention or intervention efforts (IOM, 1999). For example, surveillance has shown that the time after discharge from inpatient units and emergency rooms is a time of high risk for suicide (Valenstein et al, 2009), that alcohol is frequently involved in suicide deaths and attempts (Conner et al, 2014), and that American Indian/Alaska Native youth are at heightened risk of suicide.[3] The Action Alliance has emphasized the importance of surveillance within healthcare systems, with findings to be used to improve the quality of care.

5. A stated goal of the Prioritized Research Agenda is to reduce suicides by 20% in five years and 40% in the next ten years, assuming all recommendations are fully implemented.

a. How were these targets arrived at?

b. In your view, how realistic are these targets, particularly in light of our record of performance until this time?

Answer: The Research Prioritization Task Force (RPTF) developed its agenda for research with the stated goal to reduce morbidity (attempts) and mortality (deaths), each by at least 20 percent in five years and by 40 percent or greater in 10 years, if implemented fully and successfully. This approach is consistent with the Action Alliance goal to save 20,000 lives in five years. Asking Action Alliance members, and the RPTF stakeholders in suicide research, to consider these aspirational targets in their efforts has never been tried at a national level before. While such reductions are ambitious, the intent of these targets is to inspire new ways of thinking of how the many suicide prevention efforts can all be a part of the solution. A research document alone cannot reduce suicide deaths or attempts; rather, its intent is to identify the research needed

[3] See http://www.cdc.gov/ncipc/pub-res/American_Indian_Injury_Atlas/11d-Allmaps-suicide.htm.

to guide practice and inform policy decisions across many areas—for example, health care, criminal justice, education, and social media—which will cumulatively contribute to the 20-percent and 40-percent reduction goals.[4] Of course, full and successful implementation requires the necessary private and public resources to undertake the research and bring the science to service sectors.

6. Will HHS commit to examining a list of recommendations for service system changes that reduced suicide in the UK, and report back to the Committee on whether the recommendations will be implemented? These recommendations can be found in: While D, Bickley H, Roscoe A, et al. Implementation of mental health service recommendations in England and Wales and suicide rates,1997-2006: a cross-sectional and before-and-after observational study. *Lancet.* Mar 17 20 12;379(9820): I 005-1012.

Answer: These recommendations were carefully reviewed by SAMHSA, NIMH, and other public and private partners and many were incorporated into the National Strategy for Suicide Prevention (NSSP, p. 51). The components of systematic integration of suicide prevention into the delivery of mental health services are summarized in Goal 8 (Promote suicide prevention as a core component of healthcare services) and Goal 9 (Promote and implement effective clinical and professional practices for assessing and treating those identified as being at risk for suicidal behaviors) of the National Strategy for Suicide Prevention. These goals have now been incorporated as a requirement in SAMHSA's suicide prevention grant portfolio and a learning collaborative has been established to promote implementation in states and healthcare systems. It should also be noted that one of the recommendations in the UK study that had the strongest relationship to reduced suicide deaths is the availability of 24 hour crisis teams. In section 223 of the Protecting Access to Medicare Act, which was enacted earlier this year, 24-hour crisis teams were included as a service of the Certified Community Behavioral Health Clinics to be established by the legislation. HHS is actively engaged in the implementation of this program.

7. In your view, what is the role of primary care clinicians in identifying and responding to suicidal patients? Do they have the training they need to respond effectively in a gatekeeping role and refer patients to a mental healthcare professional? If not, what do propose the Public Health Service do to correct this?

Answer: Primary care physicians have a vital role to play in suicide prevention. In a major study of health plan members who died by suicide, nearly all received healthcare in the year prior to their death, but half did not have a mental health diagnosis, indicating that underlying risk factors for suicide such as depression, anxiety, or substance use disorders were not recognized and treated (Ahmedani et al, 2013). Unfortunately, many physicians and other healthcare professionals, including behavioral healthcare professionals, have never been trained in screening and assessing for suicide risk.

[4] See *A Prioritized Research Agenda for Suicide Prevention*, 2014, www.suicide-research-agenda.org, at p. 7.

The Department of Veterans Affairs has focused major efforts in training primary care physicians in suicide prevention, as well as integrating screening, suicide-risk evaluation, and collaborative treatment into care.

Tools for use in primary care have been developed and disseminated by the SAMHSA-funded Suicide Prevention Resource Center. In addition, the Center for Integrated Health Solutions (CIHS), on which SAMHSA partners with the Health Resources and Services Administration (HRSA), promotes the development of integrated primary and behavioral health services to better address the needs of individuals with mental health and substance use conditions, whether seen in behavioral health or primary care provider settings.

8. Are you concerned that there are not enough mental healthcare professionals to adequately treat the population at large? If so, as Acting Surgeon General, what do you recommend be done?

Answer: The behavioral health workforce functions in a wide range of prevention, healthcare and social service settings. They include public and private prevention programs, community-based and inpatient treatment programs, primary care health delivery offices, systems and hospitals, emergency rooms, communities, and the housing, criminal justice, research and education fields, including elementary or secondary schools or higher education institutions.

This workforce includes, but is not limited to: psychiatrists and other physicians, counselors, psychologists, social workers, advanced practice psychiatric nurses, marriage and family therapists, certified prevention specialists, addiction and substance use disorder counselors, mental health counselors, psychiatric rehabilitation specialists, psychiatric aides and technicians, paraprofessionals in psychiatric rehabilitation and addiction recovery fields (such as case managers, homeless outreach specialists, parent aides, etc.), and peer support specialists and recovery coaches, as well as school psychologists and school counselors

Recognizing mental health professionals' and paraprofessionals' needs across the United States, in Fiscal Year (FY) 2014, the President proposed and the Congress appropriated approximately $40 million in new funding to SAMHSA to help train additional professionals to work with students and young adults with mental illnesses and other behavioral health problems. SAMHSA is collaborating with HRSA on the Behavioral Health Workforce Education and Training grant program which received $35 million in FY 2014. The purpose of this program is to increase the clinical service capacity of the behavioral health workforce by supporting training for Master's level social workers, psychologists, marriage and family therapists, psychology doctoral interns, as well as behavioral health paraprofessionals. In FY 2014, the grant program provided approximately 111 awards to organizations nationwide and SAMHSA's FY 2015 budget request includes $35 million in continued funding to maintain this effort. This program would help increase the behavioral health workforce by 3,500 individuals trained per year. SAMHSA also was able to expand its Minority Fellowship Program (MFP) in FY 2014 due to an increase of $5 million which allowed for the creation of the MFP-Youth program that expanded the current MFP program to support master's level trained behavioral health providers in the fields of psychology, social work, professional counseling, marriage and family therapy and

nursing. SAMHSA provided grants to five organizations to reduce health disparities and improve behavioral health outcomes for racially and ethnically diverse populations. In addition, with the increased funding SAMHSA provided grants to two organizations to expand the focus of the current MFP program to support Master's level addiction counselors as requested by the Congress.

To support an ongoing focus and discussion on addressing these challenges, SAMHSA is planning the development of regionally-based workforce workgroups to allow states and stakeholders to share strategies for enhancing, developing and financing the behavioral health workforce. These workgroups will allow for the dissemination of information, state-to-state sharing, and linkages to resources between federal, state, tribal and local partners. To address the challenges in recruiting, training, and retaining a diverse behavioral health workforce, SAMHSA has funded a number of programs, initiatives, and technical assistance centers.

The behavioral health workforce is one of the fastest growing workforces in the country. Employment projections for 2020 based on the U.S. Bureau of Labor Statistics show a rise in employment for Substance Abuse and Mental Health Counselors with a 36.3 percent increase from 2010 to 2020—greater than the 11 percent projected average for all occupations.

9. In your testimony you reference the "Good Behavior Game" and cite the Wilcox study which found that "Good Behavior Game" did not have a significant impact on the number of suicide attempts. And, the effects on suicidal ideation could not be replicated. Specifically, the Wilcox study says: "A GBG-associated reduced risk for suicide attempt was found, though in some covariate-adjusted models the effect was not statistically robust."
"The impact of the GBG on suicide ideation and attempts was greatly reduced in the replication trial involving the second cohort."
"In Cohort I ... those individuals assigned to the GBG intervention were half as likely to have experienced SI, as compared to those in the control classrooms." But, they could not replicate that in the second cohort: "In the Cohort 2 sample ... approximately, 9% of those who had received the GBG intervention had experienced SI compared to 12% of those in the control classrooms, but the relative risk estimate did not reach statistical significance."
In your testimony, however, you claim: "The testing and implementation of a first grade prevention program, the "Good Behavior Game" (GBG) supported by NIH and SAMHSA, was found to yield benefits not only in reducing aggressive behavior and substance abuse in youth, but also in reducing suicidal thoughts and attempts in young adults (Wilcox, et al., 2008)"
Please provide additional information that supports your statement on the effectiveness of the "Good Behavior Game."

Answer: In the research article itself, Figure 4. illustrates the lower probability of attempts among the Cohort 1 youth exposed to the Good Behavior Game (GBG; Wilcox et al., 2008, p. S66). Table 3 shows the odds ratios for the impact of GBG- across various models ranging from 0.3 to 0.6. This translates to a reduction of one third, to two thirds the number of attempts among youth exposed to the GBG, compared to the youth in the control condition.

With regard to the question about the findings for Cohort 2, (p. S69), the difference in prevention effects between cohorts was attributed to Cohort 2 having less consistent training and monitoring for teachers, that, in turn likely reduced the potency of the intervention. In addition, there was more variability in the Cohort 2 control conditions. It is not unusual for interventions, when moved out to the field, to have less precision, and therefore less impact. Researchers in the prevention field are fully aware of this, and there are efforts to build in support for sufficient implementation of proven programs.[5]

[5] For example, see http://www.colorado.edu/cspv/blueprints/.

The Honorable Gene Green

One way to address this very serious issue of suicide in the population that is suffering from serious mental illness is to ensure access to all FDA-approved, proven treatment options. And especially treatment options supported by peer-reviewed published evidence that demonstrates efficacy in study populations with severe, chronic depression accompanied by high levels of suicide attempts, numerous unsuccessful treatments, and depression-related hospitalizations.

I'm aware of at least one option, Vagus Nerve Stimulation, that was FDA approved in 2005 for severe, chronic treatment-resistant depression and yet - nine years later - is not generally available because CMS denies coverage. This lack of coverage continues despite published evidence from studies conducted by experts in the treatment of serious mental illness that show efficacy in patient populations exactly like the ones we are most concerned about. These studies also show reductions in all-cause mortality and reductions in suicidality for patients treated with this treatment.

Dr. Lushniak, How can we have one branch of our government approving a treatment as "safe and effective" and another refusing access to the most vulnerable people experiencing debilitating, crippling, and even lethal, mental illness?

Answer: HHS shares your commitment to ensuring access to services for persons with serious mental illnesses including treatment-resistant depression. We are also committed to providing timely access to new technology that meets the statutory criteria for coverage under Medicare.

Medicare's National Coverage Determination (NCD) on Vagus Nerve Stimulation (VNS) for treatment of resistant depression is currently the subject of a Departmental Appeals Board (DAB) review within HHS. The ongoing litigation precludes us from discussing the VNS coverage policy in detail. However, the policy and its rationale are described in the NCD Decision Memorandum.[6]

[6] Available at: http://www.cms.gov/medicare-coverage-database/details/nca-decision-memo.aspx?NCAId=195&bc=AiAAAAAAAgAAAA%3d%3d&

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CHAIRMAN

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ONE HUNDRED THIRTEENTH CONGRESS

Congress of the United States

House of Representatives

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October 6, 2014

Dr. David A. Brent
Endowed Chair, Suicide Studies
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and Clinical and Translational Science
University of Pittsburgh
3811 O'Hara Street
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Dear Dr. Brent:

Thank you for appearing before the Subcommittee on Oversight and Investigations on Thursday, September 18, 2014, to testify at the hearing entitled "Suicide Prevention and Treatment: Helping Loved Ones in Mental Health Crisis."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

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Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

Tim Murphy
Chairman
Subcommittee on Oversight and Investigations

cc: Diana DeGette, Ranking Member, Subcommittee on Oversight and Investigations

Attachments

UPMC | University of Pittsburgh Medical Center
Western Psychiatric Institute and Clinic

3811 O'Hara St.
Pittsburgh, PA 15213

October 8, 2013

Dear Ms. Havens,

Thanks for the opportunity to provide backup material to support my testimony. Below please find the p. and line numbers and the citations that go with them. With regard to college interventions (p. 95), there have been programs developed, and good identification of barriers but not large scale test of a prevention program. Please let me know if I can provide any further clarification or be helpful as you and Congressman Murphy go about this very important work.

Best Regards,

[redacted]

David A. Brent, M.D.
Academic Chief, Child and Adolescent Psychiatry
UPMC Endowed Chair in Suicide Studies
Professor of Psychiatry, Pediatrics, and Epidemiology
University of Pittsburgh School of Medicine
Director, Services for Teens at Risk

Attachment 1—Additional Questions for the Record

The Honorable Tim Murphy

1. The 2012 National Strategy identifies changing the tone of the current public conversation about suicide and suicide prevention as one of its priority areas for 2012-2014.

a. Is there any correlation between reductions in stigma surrounding mental illness and an actual reduction in suicides?

Stigma, according to Rusch et al. (2014), can take 3 forms: social discrimination, which leads to marginalization and social isolation, structural discrimination, such as difficulty accessing care or employment, and internalized stigma, in which the person with mental illness becomes demoralized and hopeless.[1] There is not a lot of research on the relationship between stigma and suicide.

However, at a population level, regions with lower levels of shame and self-stigma have lower suicide rates.[2] There is at least one study showing that higher internalized self-stigma is related to higher suicidal risk in schizophrenics.[3] Furthermore, Professor Aaron Beck's group adapted cognitive therapy for low-functioning chronic schizophrenics to deal with their hopelessness that presumably was the result of internalized self-stigma, and in a small randomized clinical trial was able to demonstrate improvement in function relative to treatment as usual.[4,5] In addition, stigma may be related to poorer adherence to treatment, which in turn could put a patient at greater risk for suicide.[6]

Of particular interest to your sub-committee may be the work of Link et al. (2008) that looked at the impact of court ordered outpatient treatment for patients with serious persistent mental illness and found that while court ordered treatment improved function, it also negatively affected at least one component of perceived stigma.[7]

b. In your view, what is the proper role of the federal government in changing the tone or national narratives involved in the public conversation, including combating the stigma surrounding serious mental illness?

Stigma is not unique to mental illness. In the 1950's, people mentioned that someone had cancer in a whisper, and we have seen transformations in people's attitude towards HIV/AIDS.

To deal with structural stigma, there are probably anti-discrimination laws that are already on the books that can be at least evaluated and properly enforced. In addition, provision of parity for coverage of mental illness is critical. Collaborative care, by co-locating mental health treatment embedded in primary care also reduces stigma and improves access. Patients with persistent and serious mental illness have a much greater burden of physical illness, so that the provision of integrated physical and mental health care for these patients is especially indicated.

To deal with social marginalization, education is key and part of the message has to be one of measured hope. Most people with mental illness can lead rewarding and productive lives and the treatments that we have, while imperfect (like the treatments for "physical" illnesses) can lead to significant improvement. The promotion of the understanding of mental disorder as biologically based illnesses

may help to reduce stigma and blaming of patients and families, as long as the view of the importance of social context on recovery is not lost. There is evidence that education about self-identification and identification of depression in others can actually reduce the suicide attempt rate in high schools, so education needs to take place for students, their parents, and professionals. Institutions that care for patients with mental illness need to create environments that are welcoming and professional. There are almost no mental health facilities that offer environments as bright, carefully designed, and welcoming as cancer centers for example. (There are exceptions like the Rachel Upjohn Depression Treatment Center at the University of Michigan). To some extent this is a vicious circle because donations for cancer treatment are easier to solicit than donations for mental health treatment. Research dollars for mental disorders also should have parity with physical disorders in order for progress to occur. The dollar allocation for disability and lives lost due to mental disorder is a small fraction of what has been allocated for cardiac disease or cancer. The new BRAIN initiative is a good step in this direction, as has been the Army STARRS study, which has been likened to the Framingham study for heart disease.

Finally, professionals who take care of patients with mental illness should be aware of the corrosive effects of internalized stigma, should assess for it, and use current therapeutic tools, like Beck's cognitive therapy and other forms of psychotherapy to help patients overcome a sense of helplessness and demoralization that leads to non-adherence, and is the end-product of internalized stigma.[4,5]

2. In 2011, you published an article in the Journal of the American Academy of Child & Adolescent Psychiatry (JAACAP), "Preventing Youth Suicide: Time to Ask How," describing the bulk of research and program designs related to suicide as emphasizing risk factors and intervention rather than protective factors and prevention.

a. What would be the benefit of a transition by mental health specialists to the kind of outlook you described in the article?

The overall benefit of a protective/preventive focus is that there is overwhelming evidence that programs that enhance protective factors like parenting have long-term benefits on interpersonal, occupational, and educational outcomes. A focus primarily on symptoms is necessary to result in symptom relief, so this is not an either/or proposition. However, since the goal of mental health specialists should be to help their patients attain optimal function, some element of a focus on prevention and protective factors is necessary.

Every intervention has an element of prevention if the clinician takes a developmental and longitudinal view of the patient's outcome. For example, Chorpita and colleagues (2013) have developed a logical algorithm of sequential treatment that takes into account not just child symptoms, but family context as well and the outcomes are better using this system than with simply sequentially applying evidence-based treatments.[8,9]

The goal is not simply to relieve symptoms but to restore function and allow the person to be able to capitalize on the "protective" elements in his or her environment that may come from friendships, participations in sports or other extracurricular activities, and academic and vocational achievement. There is good evidence for what is known as the "developmental cascade," which is an inter-play between psychopathology and social competence. For example, young children with disruptive

disorders often have difficulties in problem-solving and interpersonal competence.[10,11] If the disruptive disorder is untreated, the social problems become worse, and eventually the only social group that that young person can belong to is one with strong antisocial tendencies. Therefore, for clinicians dealing with patients with a particular disorder, it is important to assess the social context that will help reinforce the patient's recovery: improvement in the parent-child relationship, including time spent together, warmth, appropriate social monitoring and discipline, facilitating a connection with school, and connecting to a peer group that will reinforce mental health. By tying treatment to academic, social, and vocational goals, rather than just symptom relief, treatment incorporates a preventive focus and will be more likely to promote recovery and prevent recurrences.

b. Do you have any recommendations for advancing programs with protective and preventive emphases?

At a policy level, we allocate too many resources to the downstream effects of illnesses, and not enough to either prevention of illness, or promotion of recovery. This is not only true for mental health, but the overall American health system. With regard to problems of disruptive disorders and substance abuse, there have been careful cost-benefit analyses that recommend allocating more resources to the primary or selective prevention of delinquency and substance abuse and fewer to incarceration, and more to the prevention of child maltreatment rather than to our massive child welfare system that tries to deal with the aftermath of child maltreatment .[12] Some prevention scientists have recommended the need for a central figure or body who would rationally allocate resources across juvenile justice, child welfare, and substance abuse prevention, with ongoing cost-benefit analyses to monitor if the projected cost-offsets actually come to fruition.[13]

We need to be looking at our overall mental health, child welfare, and substance abuse portfolios to make sure that we have a balanced allocation to evidence based treatments.

We need to train clinicians in evidence-based treatments that incorporate protective and preventive elements and provide cost incentives for keeping people well and functioning rather than based on the amount of treatment provided.

Finally, our research portfolio should focus on dissemination and implementation of evidence based preventive programs, and on the integration of preventive/protective elements into current, symptom-focused models of treatment.

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Attachment 2—Member Request for the Record

During the hearing, Members asked you to provide additional information for the record, and you indicated that you would provide that information. For your convenience, descriptions of the requested information are provided below.

The Honorable Tim Murphy

1. Please provide the Committee with any studies, reports, or data that you referenced during the hearing.

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ONE HUNDRED THIRTEENTH CONGRESS

Congress of the United States

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COMMITTEE ON ENERGY AND COMMERCE

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October 6, 2014

Dr. Christine Moutier
Chief Medical Officer
American Foundation for Suicide Prevention
120 Wall Street
29th Floor
New York, NY 10005

Dear Dr. Moutier:

Thank you for appearing before the Subcommittee on Oversight and Investigations on Thursday, September 18, 2014, to testify at the hearing entitled "Suicide Prevention and Treatment: Helping Loved Ones in Mental Health Crisis."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

Also attached are Member requests made during the hearing. The format of your responses to these requests should follow the same format as your responses to the additional questions for the record.

To facilitate the printing of the hearing record, please respond to these questions and requests with a transmittal letter by the close of business on Monday, October 20, 2014. Your responses should be mailed to Brittany Havens, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515 and e-mailed in Word format to brittany.havens@mail.house.gov.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

Tim Murphy
Chairman
Subcommittee on Oversight and Investigations

cc: Diana DeGette, Ranking Member, Subcommittee on Oversight and Investigations

Attachments

AMERICAN FOUNDATION FOR
Suicide Prevention

October 17, 2014

The Honorable Tim Murphy
Chairman, Subcommittee on Oversight and Investigations
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20515-6115

Dear Dr. Murphy,

Thank you very much for the opportunity to testify before the Subcommittee on Oversight and Investigations on September 18, 2014 for the hearing entitled "Suicide Prevention and Treatment: Helping Loved Ones in Mental Health Crisis." In response to your letter of October 6, 2014 and questions regarding my testimony, enclosed please find my replies to each of your questions.

Please don't hesitate to let me know if you or any of the Subcommittee Members have any further questions or concerns which I may address.

Sincerely yours,

[redacted]

Christine Moutier, MD
Chief Medical Officer

Dr. Christine Moutier's Replies to Questions by the Honorable Tim Murphy

1. The 2012 National Strategy identifies changing the tone of the current public conversation about suicide and suicide prevention as one of its priority areas for 2012-2014.

a. Is there any correlation between reductions in stigma surrounding mental illness and an actual reduction in suicides?

While there are methodological challenges to studying the impact of stigma reduction on suicide reduction, there is very strong evidence that stigma reduction for both mental illness and help seeking correlates with reducing suicides. The methodological challenges for research in this area include the following: stigma reduction as an isolated factor is very difficult to study in population-based studies because programs that include stigma reduction also tend to include a number of other potentially important prevention tactics; suicide prevention research has the challenge of needing large populations followed over years in order to have the statistical power to detect statistically significant changes in suicide rates. Therefore in order to link suicide reduction to stigma reduction, there are alternate methods to link the two through research, which I will outline here.

Using the transitive property to link stigma reduction to suicide reduction:
There is very strong evidence that improvements in knowledge, beliefs and attitudes toward mental illness and treatment, lead to greater help seeking, increased and improved proactive preventive illness management and crisis prevention (Stafford 2013, Garcia-Soriano 2014). There is also moderately strong evidence that key protective factors in one's suicide risk are access to care and receiving effective mental health treatment, and ongoing communication and support from a healthcare provider (Nock 2013). Therefore with **professional mental healthcare help seeking as the intermediary link**, there is reason to believe that reducing stigma leads to increased help seeking, which in turn lowers suicide rates. Other important by-products of stigma reduction include improved self-care and illness management, and the ability to obtain family and community support when an individual is open, aware and communicating about his/her mental illness.

Stigma reduction as a core tenant of effective suicide prevention strategy:
Prevention programs that have demonstrated impact on suicide rates or proxies such as suicidal behavior include stigma reduction. For example, in the US Air Force suicide prevention program, stigma reduction was a prominent theme in many of its 11 tactics. From 1996 through 2002, a 33% reduction in suicides was accomplished (Knox 2003). By reducing stigma and raising awareness among all levels of the force, this program took an early population-based intervention approach and taught members how to intervene at the first signs of distress or dysfunction, possibly long before the risk of suicide was imminent; while also recognizing more critical acute signs of suicide risk. Stigma was addressed in the leadership, throughout the ranks, and was also given the backing of policy changes that protected the privacy and professional reputation of those who were referred for help. (Knox 2003) In this approach, stigma reduction is a prominent and central tenant around which many educational efforts, policy change, individual and group behavior is shaped in order to become a safety net to recognize suicide risk and prevent suicides. This is very similar to the approach toward suicide prevention in a physician population I co-led at the University of California, San Diego School of Medicine (Moutier 2012), which I'm delighted to say is still going strong.

Studies of stigma and suicide rates in different geographical regions:
Methodologically less rigorous than prospective study design, are the retrospective and cross sectional analyses that look for associations between factors. By using a statistical approach called multiple logistic regression analysis, the odds that particular factors relate to each other can be calculated. In a Dutch study of stigma and help seeking, Reynders et al compared various regions of high and low suicide rates within the Netherlands, and found that in regions with low suicide rates, people have more positive attitudes toward help seeking and experience less self stigma and shame about mental health problems. Conversely, in the region with a higher suicide rate, sense of stigma and shame about mental health problems were much higher, and help seeking lower. They also found that stigma was strongly inversely correlated with help seeking- so the higher the stigmatized beliefs, the lower the likelihood of seeking help. The authors conclude that the promotion of positive attitudes and knowledge about mental health issues has a critical role to play in suicide prevention (Reynders 2014).

b. In your view, what is the proper role of the federal government in changing the tone or national narratives involved in this public conversation, including combatting the stigma surrounding serious mental illness?

There are a variety of ways the federal government could take a leadership role in the public conversation to combat stigma surrounding mental illness.

Public education as a way to combat stigma:
In my testimony I referred to the serious problem of mental health illiteracy in our nation, which prevents individuals and families from treating mental health problems in a similar fashion they would for any other kind of health issue. Until the awareness of mental illness is improved, Americans will continue to make decisions under a cloak of ignorance that leads to poor recognition of the roots of one's disability, misunderstanding of mental illness as character weakness, and denial of the existence of mental illness in 1 in 4 Americans. The government can help provide citizens with a basic understanding of mental health along its full continuum, which includes the ability to optimize mental health, prevent crises and some mental health problems, and recognize and seek treatment for serious mental illness. This could be accomplished through public health education strategies such as PSAs, mental health literacy campaigns, and the use of trained peer health educators in order to bridge cultural barriers in particular racial, cultural, occupational, and geographical communities.

Funding of research to reduce stigma:
While many aspects of suicide risk have been established through the research field, the areas that need further clarification include the identification of suicide risk in the near term, the use of screening, protective factors, effective prevention strategies, and we need more suicide reduction-specific interventions for people at risk. If support for research in these areas were increased in the coming decade, the advances that would come from these discoveries would combat stigma. When science elucidated the causes and treatments for other major public health problems such as cancer and HIV Disease, then the facts based in science enlightened lay understanding, addressing fear of the unknown and leading individuals' and families' choices to be based in facts. People can then make healthy choices about everything from diet, exercise, sleep, stress management, substance use, and sexual practices, to treatment, which can all impact the prognosis of disease. But without a solid critical mass of knowledge based in research, public understanding to combat stigma is compromised.

Legislative and policy measures that improve awareness and access to appropriate care:

A number of key changes would lead to improvement in connecting those at risk for suicide with appropriate interventions and support. These include:
-Mandated education, such as Mental Health First Aid, for citizens in key frontline roles- such as teachers, law enforcement, healthcare professionals, and clergy- so that those at risk can be identified, supported, and referred to mental health professional help.
-Increased number of mental healthcare professionals in the workforce
-Improved suicide prevention training of mental healthcare professionals (including psychiatrists, psychologists, social workers, therapists, and psychiatric nurses)
-Improved suicide prevention training of primary care and emergency medicine (ER) professionals (again, including physicians, nurses, nurse practitioners, social workers, and physician assistants)
-Full implementation and enforcement of the intent of the MHPAEA Parity Act for mental health conditions on par with other disorders
-Surveillance of the data for suicide must improve, in terms of timeliness and accuracy, for effective approaches to be identified. Expansion of the NVDRS to all 50 states is imperative. This would combat stigma because the true cause and effect change would highlight the problem as addressable.

The Honorable Tim Murphy

2. A stated goal of the Prioritized Research Agenda is to reduce suicides by 20% in five years and 40% in the next ten years, assuming all recommendations are fully implemented.

    a. How were the targets arrived at?

The Research Prioritization Task Force of the National Action Alliance for Suicide Prevention worked together over a period of three years to consider the evidence for effective prevention strategies, particularly with the concept of *burden* of the problem in mind. This means that the total number of suicides in the U.S. was broken down into categories of demographic, occupational, means, and situational opportunity in order to determine the most impactful strategies that could drive down the rate of suicide. For example, referencing Figure 1 of the Research Prioritization report, with 17,000 of the 38,000 people who died by suicide in 2010 visiting a healthcare provider within the month before their death, this presents an opportunity for detection and intervention for those at risk if research could shine a light on the way to accomplish that. If a certain percentage of these deaths could be prevented through accurate identification and intervention, then this would represent one portion of the reduction in the overall goal. The Research Prioritization Task Force organized the key questions that research must answer in order to accomplish the goal.

    b. In your view, how realistic are these targets, particularly in light of our record of performance until this time?

At the American Foundation for Suicide Prevention, we have similarly set an overarching goal for reducing the national rate of suicide; ours is a goal of 20% reduction by 2025. So we do believe it can be accomplished. But not by continuing the status quo approach, since suicide rates have indeed been rising steadily over the past decade. It will require a strategic approach in which public and private groups come together to address the critical questions that remain unstudied or unanswered and represent gaps in necessary knowledge (such as the identification of individuals who are at near term suicide risk), and implement programs in key areas of society to produce the critical changes necessary to drive down the rate of suicide.

The key approaches to ensuring the success of the goal of reducing the national rate of suicide include:

1. Increase federal funding of suicide prevention research- As the largest private funder of suicide prevention research, AFSP urges members of congress to prioritize an appropriate amount of funding toward research on suicide, commensurate to its morbidity and mortality toll. If the level of funding toward suicide research increases significantly, we can expect to see a similar reduction in mortality, just as with other major public health problems like heart disease, HIV/AIDS, prostate, breast, and colorectal cancer. When the government invested $12 billion in HIV research from 2009-2012, HIV-related deaths declined by 42% from 2000-2011. Today our government only spends $40 million in direct suicide prevention research (see Addendum A, AFSP Research Funding and Mortality Rates).

2. The healthcare field- We need improved access to care, coordination of care, and more and better trained healthcare providers, specifically educated with an eye toward suicide prevention. Thinking of the *burden* concept again, if we change the systems of care in Emergency Departments and Primary Care settings to be effectively equipped for identifying and treating suicidal people, suicides will be prevented. Most people who go on to die by suicide are seen in health care settings in the period of time prior to death (Luoma 2002). Currently our healthcare system is generally not equipped to effectively care for people at risk for suicide. Additionally the U.S. needs more mental health specialists who are trained in suicide prevention. For those at risk individuals who do receive a referral to a mental health professional, we need to improve the quality of specialty care they receive by ensuring that mental health professionals are appropriately trained in suicide prevention.

3. Frontline citizens- By training teachers, first responders, healthcare providers and clergy- any citizens in frontline roles who have contact with the most people in our communities- these citizens can become a safety net, similar to the concept of the widespread knowledge of CPR or infection control measures as safety nets for other health conditions which can lead to death (Kitchener 2002).

4. The media- The media can play a powerful role in suicide prevention by delivering the news and public service education about suicide, framed in a public health and prevention framework, and always including the fact that help is available to change a person's state of desperation (Niederkrotenthaler 2014).

5. Crisis lines- There is a clear role for crisis lines in suicide prevention. When the number of crisis calls goes up, it generally indicates a greater proportion of those who are struggling reaching out and getting connected to help (Draper 2007). One study following the suicide death of Kurt Cobain found that the number of suicide deaths were lower than expected for that region and time of year, and it is hypothesized that the reduced number of suicides was linked to the great increase in crisis calls and community mental health clinic visits that followed Cobain's death and positive messaging for help seeking (Jobes 1996).

6. Legislative changes- By backing these efforts with the appropriate legislative changes, we will ensure that healthcare professionals, frontline citizens and systems are equipped, that people who seek help are not inappropriately or punitively treated in work places or

academic settings, and that healthcare is covered for the health conditions that drive suicidal behavior.

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National Action Alliance Research Prioritization Task Force. A Prioritized Research Agenda for Suicide Prevention: An Action Plan to Save Lives 2014. http://actionallianceforsuicideprevention.org/sites/actionallianceforsuicideprevention.org/files/Agenda.pdf

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October 6, 2014

Dr. Joel A. Dvoskin
Assistant Professor of Psychiatry
University of Arizona
568 E. Weckl Place
Tucson, AZ 85704

Dear Dr. Dvoskin:

Thank you for appearing before the Subcommittee on Oversight and Investigations on Thursday, September 18, 2014, to testify at the hearing entitled "Suicide Prevention and Treatment: Helping Loved Ones in Mental Health Crisis."

During the hearing, Members asked you to provide additional information for the record, and you indicated that you would provide that information. For your convenience, descriptions of the requested information are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these requests with a transmittal letter by the close of business on Monday, October 20, 2014. Your responses should be mailed to Brittany Havens, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515 and e-mailed in Word format to brittany.havens@mail.house.gov.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

Tim Murphy
Chairman
Subcommittee on Oversight and Investigations

cc: Diana DeGette, Ranking Member, Subcommittee on Oversight and Investigations

Attachment

Joel Dvoskin, PhD Response to questions: "Suicide Prevention and Treatment: Helping Loved Ones in Mental Health Crisis," (September 18, 2014)

The Honorable Tim Murphy

Question

1. **Please provide the Committee with any studies, reports, or data that you referenced during the hearing.**

Response

The following articles listed below were the main sources of Dr. Dvoskin's testimony. The links are listed with the articles to facilitate locating the information. We have provided hard copies of some of the articles to be delivered separately.

American Psychological Association Task Force Report on Gun Violence http://www.apa.org/pubs/info/reports/gun-violence-prevention.aspx and APA Resolution on Gun Violence. Retrieved from: http://www.apa.org/about/policy/firearms.aspx.

Murphy, S.L., Xu, J.Q., & Kochanek, K.D. (2013). Deaths: Final data for 2010. *National vital statistics reports, 61*(4). Hyattsville, MD: National Center for Health Statistics. Retrieved from: http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61_04.pdf

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The Honorable Jan Schakowsky

Question:

1. **Please provide the Committee with a copy of the study that you referenced during the hearing regarding the newspapers in Vienna, Austria.**

Response:

The following articles reference the issues mentioned in the testimony:

Sonneck, G., & Nagel-Kuess, S. (1994). Imitative suicide on the Viennese subway. *Social Science & Medicine, 38*(3), 453-457.

Etzersdorfer, E., & Sonneck, G. (1998). Preventing suicide by influencing mass-media reporting: The Viennese experience 1980-1996. *Archives of Suicide Research, 4*(1), 67-74.

Etzersdorfer, E., Sonneck, G., & Nagel-Kuess, S. (1992). Newspaper reports and suicide. *The New England Journal of Medicine, 327*(7), 502-503.