



REDUCING MORTALITY AND MORBIDITY FROM SUICIDE: HOW CAN WE GET THERE?

JANE PEARSON, PhD
SHERRY MOLOCK, PhD

MARGARET WARNER, PhD
LISA COLPE, PhD, MPH
JOEL SHERRILL, PhD
BELINDA SIMS, PhD

NATIONAL INSTITUTE OF MENTAL HEALTH
NATIONAL INSTITUTE OF MENTAL HEALTH & DEPARTMENT OF
PSYCHOLOGY, GEORGE WASHINGTON UNIVERSITY
CENTERS FOR DISEASE CONTROL & PREVENTION
NATIONAL INSTITUTE OF MENTAL HEALTH
NATIONAL INSTITUTE OF MENTAL HEALTH
NATIONAL INSTITUTE ON DRUG ABUSE

for the

**RESEARCH PRIORITIZATION TASK FORCE, NATIONAL ACTION ALLIANCE FOR
SUICIDE PREVENTION**



REDUCING MORTALITY AND MORBIDITY FROM SUICIDE: HOW CAN WE GET THERE?

JANE PEARSON OVERVIEW OF RESEARCH AGENDA PROCESS

SHERRY MOLOCK STAKEHOLDER SURVEY: ASPIRATIONAL GOALS

MARGARET WARNER

& LISA COLPE ESTIMATING BURDEN OF SUICIDE

JOEL SHERRILL CHALLENGES IN ESTIMATING INTERVENTION EFFECTS

BELINDA SIMS COMMUNITY PREVENTION EXAMPLE

Presentation One:

OVERVIEW OF THE RESEARCH AGENDA DEVELOPMENT PROCESS & RESEARCH PRIORITIZATION TASK FORCE GOAL

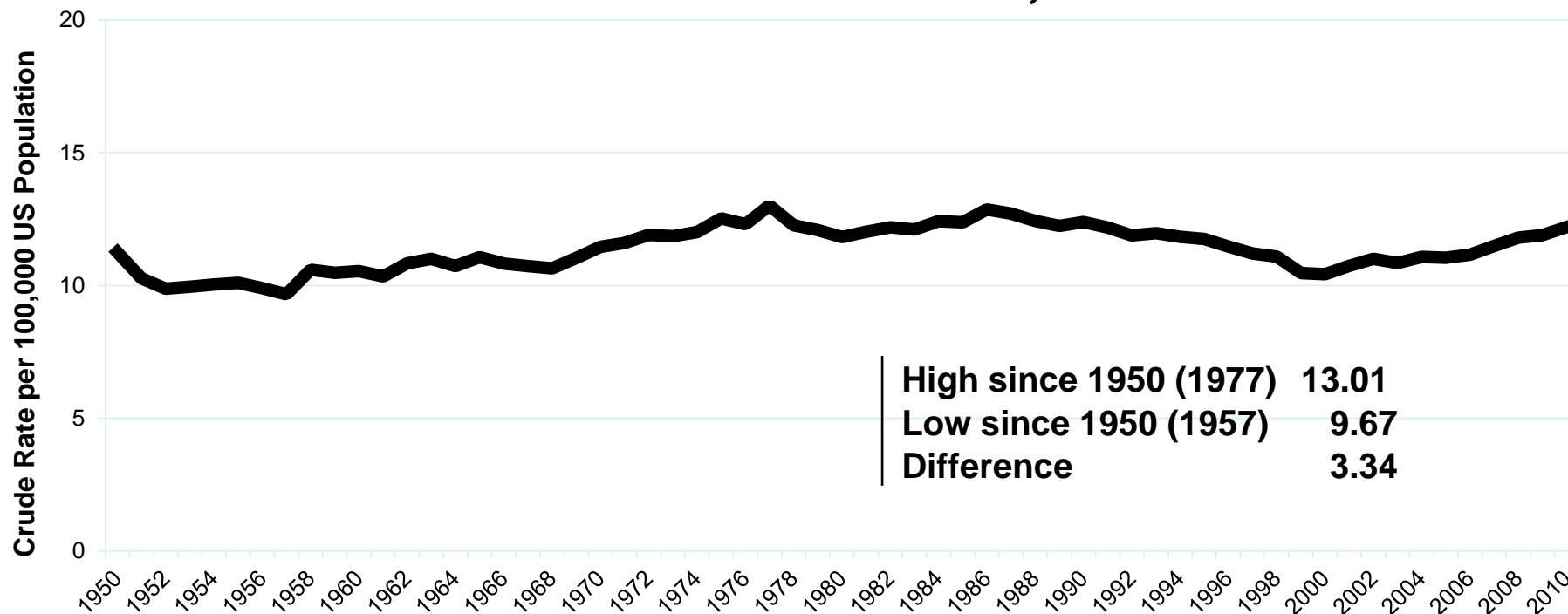
JANE PEARSON

NATIONAL INSTITUTE OF MENTAL HEALTH



A Difficult Public Health Problem

Annual U.S. Suicide Rates, 1950 - 2010



Relatively Intractable Suicide Rates

Sources: (1950-1980) US Census Bureau, Statistical Abstracts of the United States, US Census Bureau: Washington, D.C.; (1981-2007) CDC. Web-based Injury Statistics Query and Reporting System (WISQARS) [Online].



National Action Alliance for Suicide Prevention



Established September 2010 by HHS
Secretary Kathleen Sebelius and Defense
Secretary Robert Gates

Leadership:

Public Sector Co-Chair, The Honorable John McHugh,
Secretary of the Army

Private Sector Co-Chair, The Honorable Gordon H. Smith,
President and CEO, National Association of Broadcasters



What is the National Action Alliance for Suicide Prevention?

A public-private partnership established to help guide implementation of the goals and objectives in the National Strategy for Suicide Prevention (NSSP, 2001)

Mission-

To advance the NSSP by:

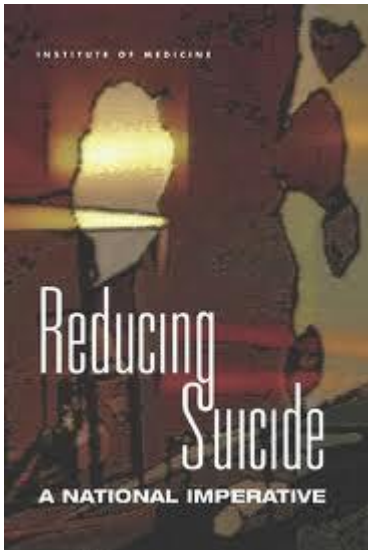
- Championing suicide prevention as a national priority
- Catalyzing efforts to implement high priority objectives of the NSSP
- Cultivating the resources needed to sustain progress



How Do We Make Progress in Suicide Research?

National Strategy for Suicide Prevention 2001 GOAL 10. PROMOTE AND SUPPORT RESEARCH ON SUICIDE AND SUICIDE PREVENTION

Objective 10.1: By 2002, develop a national suicide research agenda with input from survivors, practitioners, researchers, and advocates.

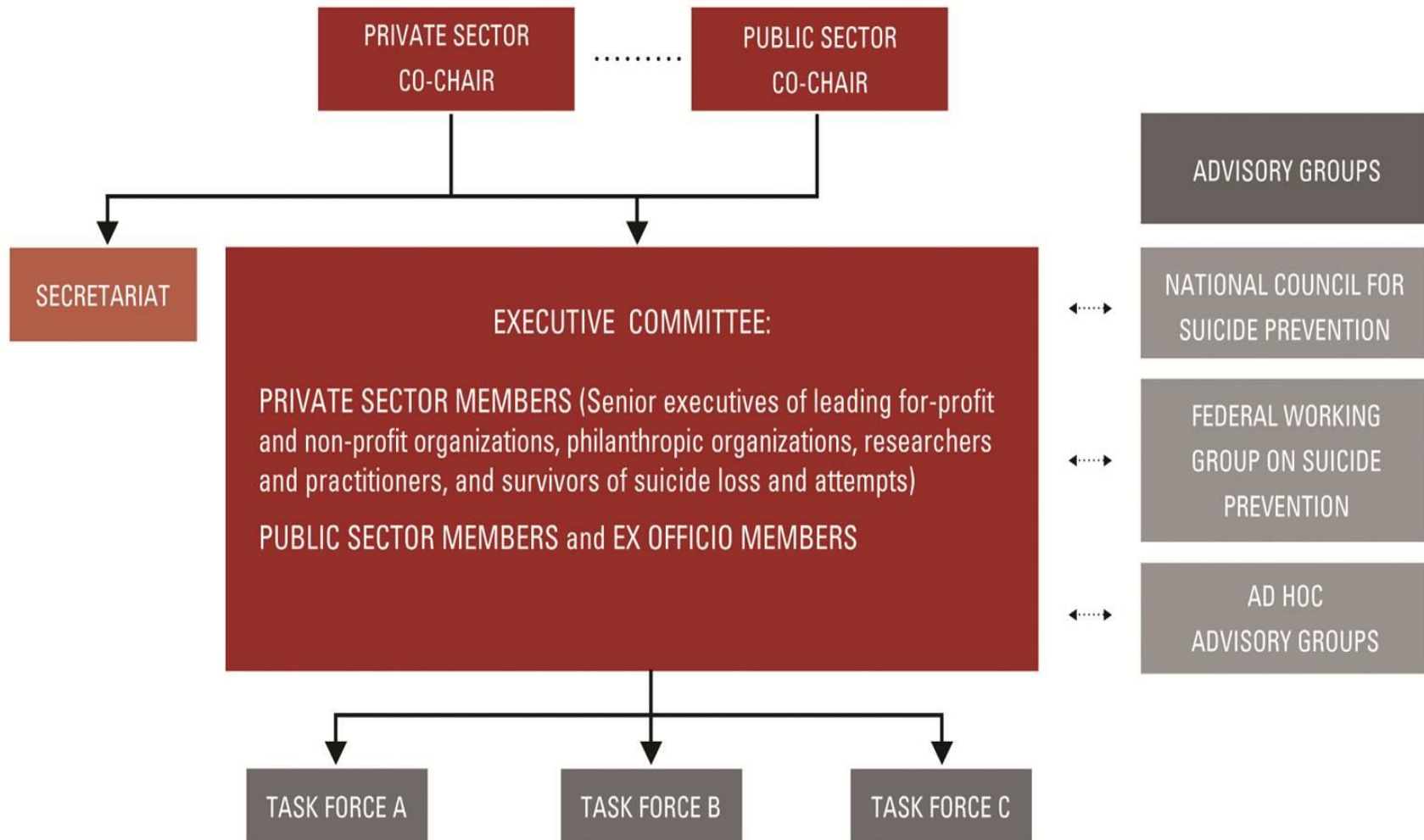


INSTITUTE OF MEDICINE REPORT, 2002

Since 2002, overall suicide rates have not decreased. Rather, suicide has increased from the 11th to 10th leading cause of death in 2009.



Action Alliance for Suicide Prevention





Task Forces of the National Action Alliance for Suicide Prevention





A New Paradigm for Suicide Prevention Research

FACT: Approximately \$40,000,000 is expended for suicide prevention research each year in the USA.

Priorities for the future?



How Do We Make Progress in Suicide Research?

Overall U.S. rates of suicide deaths have not decreased appreciably in 50 years. Each year, over 678,000 individuals report that they received medical attention for a suicide attempt; each year, more than 30,000 individuals die by suicide.

RTF Goal: To develop an agenda for research that has the potential to reduce morbidity (attempts) and mortality (deaths) each, by at least 20% in 5 years, and 40% or greater in 10 years, if fully implemented.



Research Prioritization Task Force Members

PHILLIP SATOW, MA—CO-LEAD PRIVATE SECTOR; EXCOM REPRESENTATIVE FROM NATIONAL COUNCIL ON SUICIDE PREVENTION; CO-FOUNDER AND BOARD PRESIDENT, JED FOUNDATION

THOMAS INSEL, MD—CO-LEAD PUBLIC SECTOR; DIRECTOR, NATIONAL INSTITUTE OF MENTAL HEALTH

ALAN (LANNY) BERMAN, Executive Director, American Association of Suicidology (AAS); President, International Association for Suicide Prevention (IASP)

MARY DURHAM, Vice-President, The Center for Health Research, Kaiser Permanente

SAUL FELDMAN, Chairman Emeritus, United Behavioral Health

THOMAS FRIEDEN, Director, U.S. Centers for Disease Control and Prevention (CDC)

ROBERT GEBBIA, Executive Director, American Foundation for Suicide Prevention (AFSP)

MICHAEL HOGAN, Commissioner, New York State Office of Mental Health

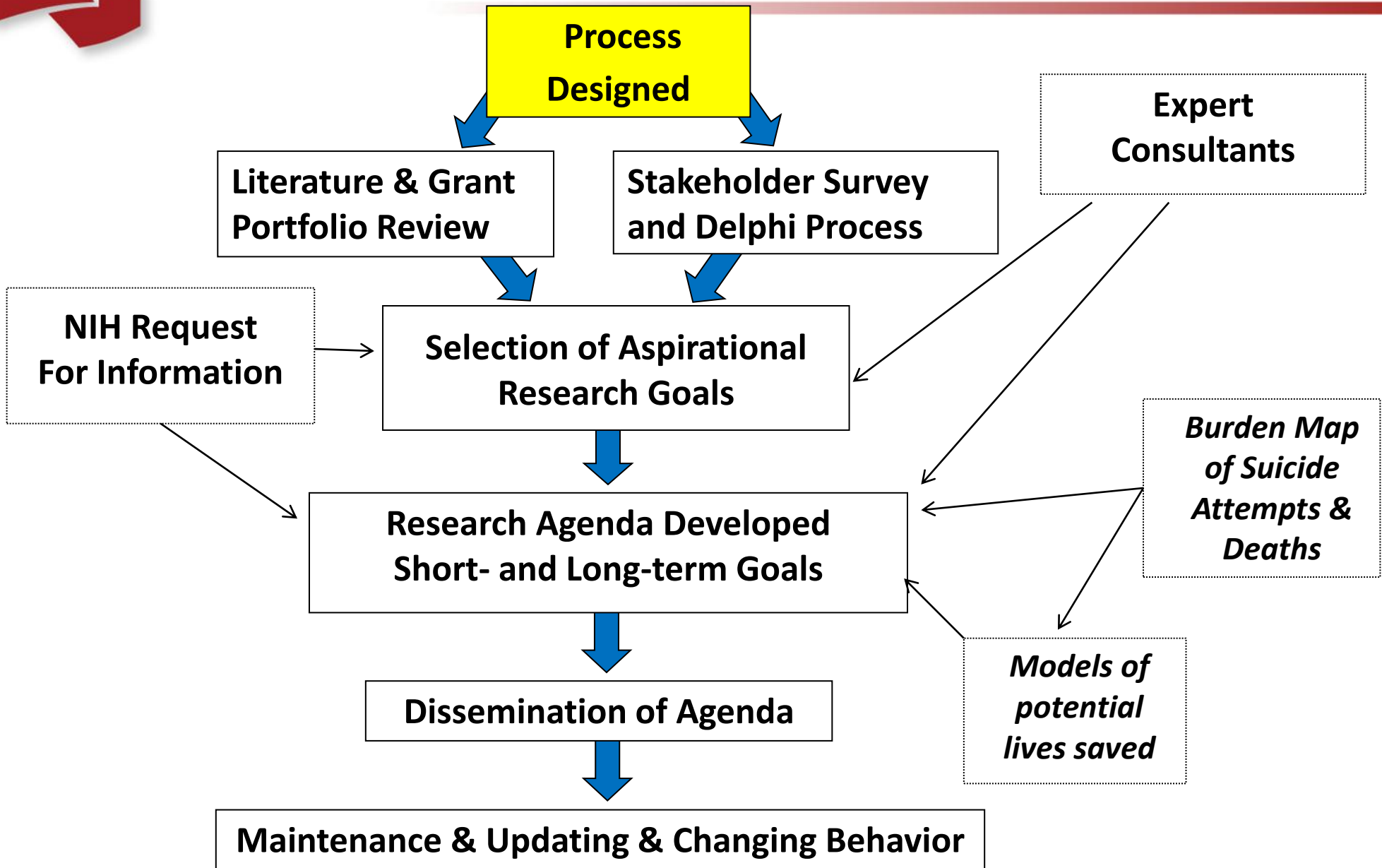
DAVID GROSSMAN, Medical Director, Preventive Care, Group Health Research Institute

DANIEL J. REIDENBERG, Executive Director, Suicide Awareness Voices of Education (SAVE); Managing Director, National Council for Suicide Prevention

Over 20 NIMH, NIDA, CDC, VA, and DOJ, staff and contractors help support the Research Task Force, and serve as liaisons with other task forces



Research Prioritization Task Force Agenda Development Process





LITERATURE & GRANT PORTFOLIO REVIEW PROCESSES

Literature Reviews: The quality of systematic reviews will be evaluated using Cochrane protocols, and newer studies will be evaluated for the following factors:

- a) evidence level/study design strength (e.g., randomized controlled trial, case study, observational),
- b) type of prevention approach,
- c) measurement of outcome (odds ratio, incidence) and effect size,
- d) duration of follow up,
- e) characteristics of research subjects (demographic, geographic), and
- f) type of suicidal behavior studied (ideation, attempts, deaths).

Grant Portfolios: Online tool that uses a common language and a common classification system to classify and systematically organize information about the research portfolios of over twenty-five organizations that fund suicide prevention research in the United States to identify funding priorities over time.



NIH REQUEST FOR INFORMATION

Request for Information (RFI): A Call to Identify Key Methodological Roadblocks and Propose New Paradigms in Suicide Prevention Research

Notice Number: **NOT-MH-12-017**

Key Dates

Release Date: February 17, 2012

Response Date: April 27, 2012

Issued by

National Institute of Mental Health ([NIMH](#))

National Institute on Drug Abuse ([NIDA](#))

National Institute of Alcohol Abuse and Alcoholism ([NIAAA](#))

Purpose

The National Institute of Mental Health (NIMH), National Institute on Drug Abuse (NIDA), and National Institute on Alcohol Abuse and Alcoholism (NIAAA) are seeking input to identify the types of research tools needed to support rapid advancement in suicide prevention research. Specifically, this request asks interested parties to provide input on the following topics: a) the key methodological roadblocks that currently exist in suicide prevention research, and b) new paradigms and theoretical models with the potential to spark innovative research. A methodological roadblock is defined as a critical, unresolved challenge that is clearly limiting progress along an important suicide prevention research pathway. New research paradigms and theoretical models are novel ways of thinking about suicidal behavior and avenues for its prevention.

This Request for Information (RFI) is issued as an invitation to interested parties to contribute these specific methodological challenges and new conceptual paradigms for inclusion in a compendium of ways to facilitate suicide prevention research progress.



Developing Research Objectives for Each Aspirational Goal

1. *Systematically **identify empirically-validated interventions and prevention initiatives** (e.g., universal, selected and indicated) for various subpopulations.*
2. ***Develop a grant portfolio data extraction tool** that classifies and systematically organizes information about the research targets being addressed by currently-funded suicide prevention scientists.*
3. ***Prioritize research goals that are practical and widely recognized by diverse groups of stakeholders** as important to burden reduction.*
4. ***Identify and solve the most important “methodological roadblocks”** hindering intervention and prevention research and **support the most promising new conceptual models** in suicide prevention science.*

Bring this Information to the Aspiration Goals and

1. ***Quantify burden** within boundaried populations for each research goal.*
2. ***Characterize the state of intervention development** for each goal with logic models.*
3. ***Quantify the potential burden reduction associated with specific classes of interventions** by relative accessibility of boundaried population group.*



PROJECTED TIMELINE FOR AGENDA DEVELOPMENT

Feb 2012

Stakeholder analyses and brief summary completed

Aspirational goals prioritized

RFI [Request for Information] issued

Mar 2012

Portfolio analyses web platform built; portfolio data collected

Qualitative analyses of stakeholder survey

Literature review begins

April 2012

Burden maps / populations and surveillance resources refined

May 2012

Drafts of logic models and format of agenda develop

RFI input reviewed and summarized

June 2012

Experts invited to consultation/writing tasks

July 2012

Portfolio analyses completed; targeted literature review completed
materials assembled for experts

Sept 2012

Experts initial in person meeting

Experts multiple webinars to review logic models, evidence, identify gaps, draft short and long-term research objectives

Dec 2012

Experts final meeting to review draft agenda

Feb 2013

Final Research Prioritization Report completed



FINAL AGENDA PROTOTYPE

Overview Question: EX: What interventions prevent individuals from suicidal behavior?

- Specific Question #1
- Specific Question #1

What Do We Know?

- (2 – 3 paragraph summary, written in non-technical language)

What Do We Need?

- (2 – 3 paragraph summary, written in non-technical language)

Aspirational Goal:

Research Opportunities:

- Bulleted, specific research targets

Short-Term Objectives:

Long-Term Objectives:



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SHERRY MOLOCK STAKEHOLDER SURVEY: ASPIRATIONAL GOALS

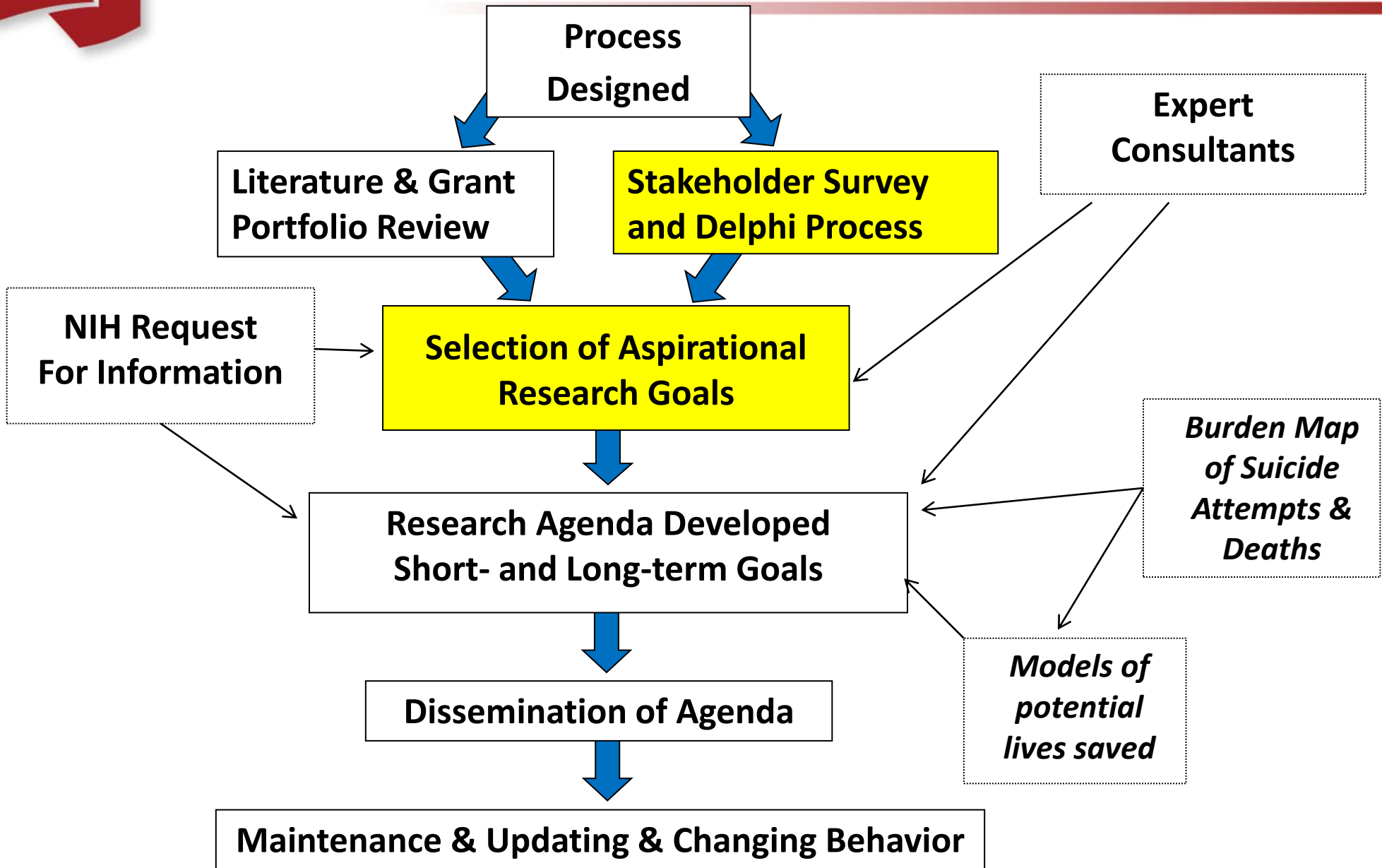
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Research Prioritization Task Force Agenda Development Process



Presentation Two:
STAKEHOLDER SURVEY :
ASPIRATIONAL GOALS

SHERRY MOLOCK NATIONAL INSTITUTE OF MENTAL HEALTH
GEORGE WASHINGTON UNIVERSITY



Does this Look Familiar?

From: Society for Prevention Research [<mailto:info@preventionresearch.mmsend.com>] **On Behalf Of** Society for Prevention Research

Sent: Thursday, August 25, 2011 11:56 AM

To: dj@preventionresearch.org

Subject: [SPR News List] NIH Invitation to Participate in a Conversation about Suicide Prevention Research

NIH Invitation to Participate in a Conversation about Suicide Prevention Research. Deadline: 8/31/2011

Dear Society for Prevention Researchers:

Every year in this country, approximately 35,000 Americans are dying by suicide and another 648,000 receive medical attention for nonfatal self injuries. The National Action Alliance for Suicide Prevention Research Task Force (RTF; http://actionallianceforsuicideprevention.org/?page_id=359), believes it is possible to do something about this important national problem. I am writing to request your participation in a process designed to help reduce this unacceptable number of annual suicides and suicide attempts in the United States.



PURPOSES:

- a) Using open-ended questions, to conduct opinion polls among a broad-based sample of stakeholders in order to assess each group's thoughts about priorities in suicide prevention research.
- b) To identify those criteria considered to be the most important in choosing suicide prevention research priorities by a sample of stakeholders representing diverse interest groups.
- b) Using a Delphi-type format, to narrow lists of suicide prevention research priorities to those considered most important by a sample of stakeholders representing diverse interest groups.



STAKEHOLDER SURVEY- PURPOSE

The Stakeholder Survey asked survey participants to help select Aspirational Research Goals for the final research agenda.

- **An Aspirational Research Goal (AG)** was defined as

an important goal for researchers to achieve to reduce the number of people who die by suicide or attempt suicide. It was understood to be a “big idea,” rather than a single research study—that is, a goal or end-point in a line of research rather than a research method or strategy leading toward such a goal.



ASPIRATIONAL GOALS- Examples

Examples offered in the survey: an Aspirational Goal related to

Children and adolescents at risk of suicide might be:

- *To identify youth at risk of suicidal behavior before that behavior emerges, through reliable and validated methods.*

A goal related to treating suicidal persons might be:

- *To be able to reverse suicidal thought processes through the use of existing medications. This will in turn reduce the risk of suicide in these individuals.*



STAKEHOLDER SURVEY- Target Respondents

The Survey recruited four groups of suicide prevention stakeholders including:

- individuals who had attempted suicide or who those had experienced the suicide of a close friend or relative— 30%
- healthcare providers -30%
- researchers – 30%
- policy-makers/administrators -10%



SURVEY QUESTION 2: IDENTIFYING AND RATING SELECTION CRITERIA

Next, please tell us what factors we ought to take into consideration when selecting the final list of research goals.

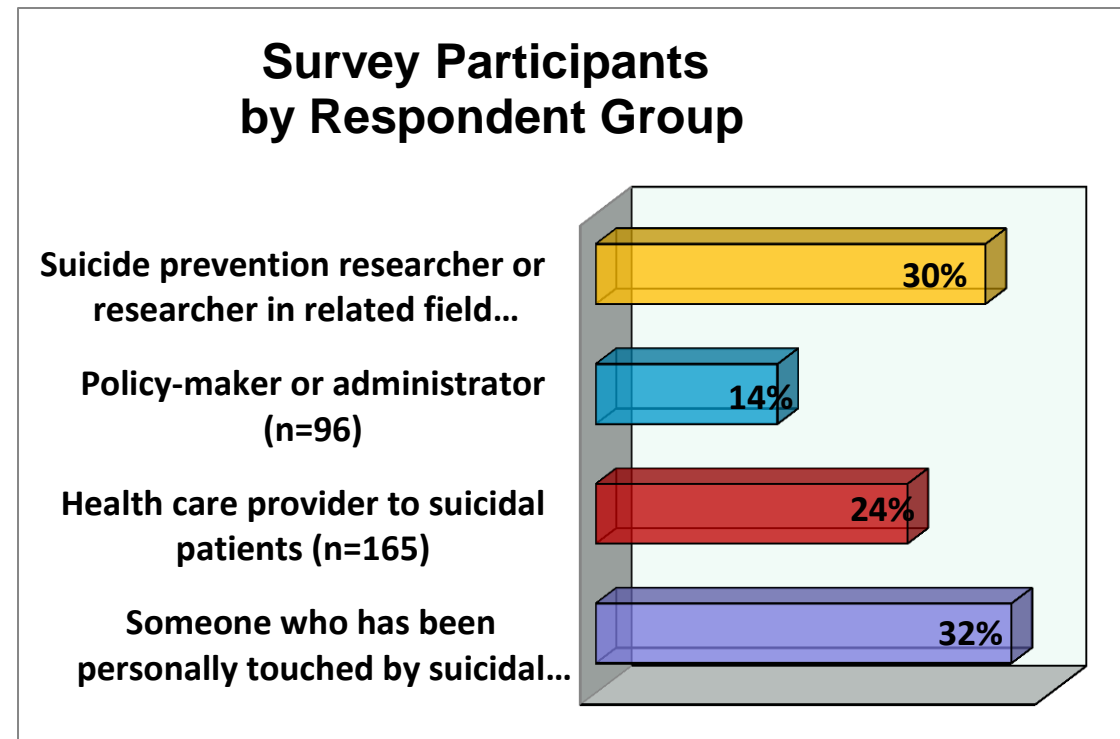
For instance, is the cost of a research project more important than *the number of lives that might be saved?*

Is *how long it takes to finish the research* more important than *how easy it would be to apply the research findings in real-world settings?*



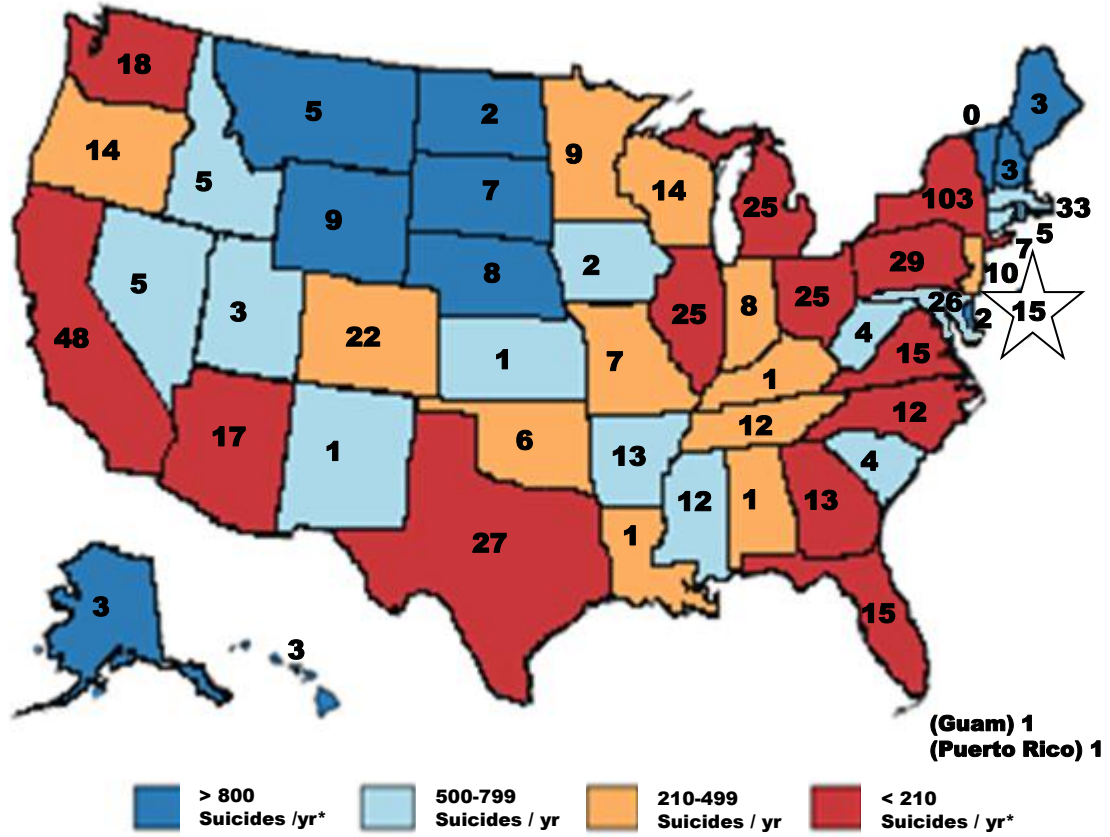
Description of Survey Registrants

- Survey Recruitment was done entirely by email, and took place between August 9, 2011 and September 1, 2011
- Potential Survey participants were identified from a variety of membership lists maintained by organizations and institutions as well as publicly-available databases
- **700 individuals registered for the survey**
- **Registrants are from 49 U.S. states**
- **18 foreign countries**





Stakeholder Survey – Registrants by State & Suicide Count



Suicide Counts & Number Registrants by State Quartile

	% Deaths	% Survey Registrants
Quartile 1 (> 800 Suicides / yr)	57.38%	57.85%
Quartile 2 (500-799 Suicides / yr)	23.16%	18.04%
Quartile 3 (210-499 Suicides / yr)	14.70%	16.33%
Quartile 4 (< 210 Suicides / yr)	4.66%	7.78%

Average Annual Suicide Counts by State in Quartiles,¹ 1999-2007 & Number of Survey Registrants by State

¹ Source: CDC. Web-based Injury Statistics Query and Reporting System (WISQARS) [Online Database]. Available from: Available from: URL: www.cdc.gov/ncipc/wisqars.



Survey Results: Aspirational Goals & Criteria for Rating

- In the **Idea Generating Round**, more than 1,400 Aspirational Goals were suggested
- Respondents were also asked to select the most important criteria for later rating aspirational goals
- Aspirational goals were reviewed and coded by 2 raters (S Molock and team) into prevention research domains; sets of aspirational goals were developed and again reviewed by the RTF, resulting in 12 Aspirational Goals
- The 12 Aspiration Goals were sent out to stakeholder survey respondents for ranking and rating, using the RAND ExpertLens software survey.



The Resulting 12 Aspirational Goals (see handout)

- Goal 1 - Population-based risk-reduction/resilience-building**
- Goal 2 - Reduction in access to lethal means**
- Goal 3 - Provider and gatekeeper training**
- Goal 4 - Affordable, accessible and effective care**
- Goal 5 - Population-based screening**
- Goal 6 - Prediction of imminent risk**
- Goal 7 - Psychosocial interventions for those at risk**
- Goal 8 - Improved biological interventions**
- Goal 9 - Prevention of reattempts**
- Goal 10 - Enhanced continuity of care**
- Goal 11 - Risk and protective factor interactions**
- Goal 12 - Stigma reduction**



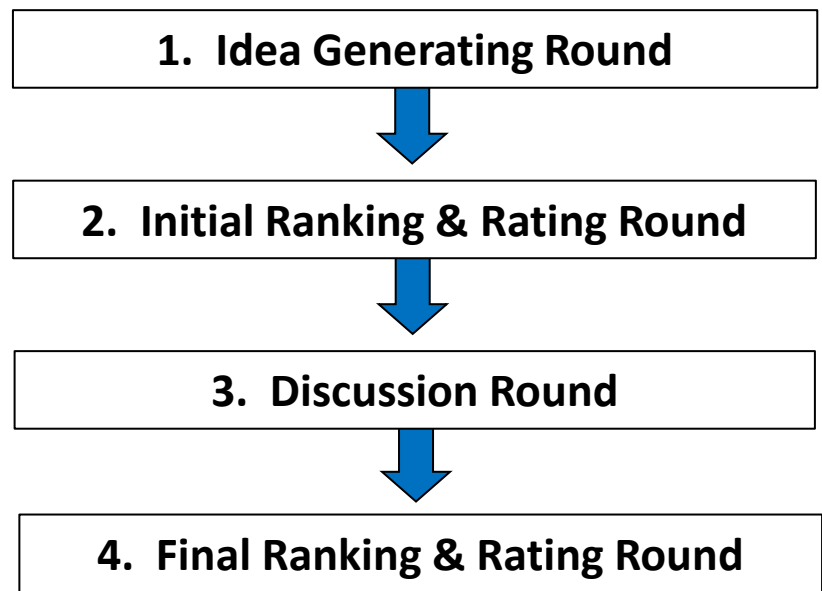
4 Top Criteria for Rating Aspirational Goals

- **Criterion 1:** Potential to prevent fatal and nonfatal suicide attempts.
- **Criterion 2:** How easily and rapidly findings from this line of research could be widely implemented in real-world settings.
- **Criterion 3:** How many of the population groups most vulnerable to suicidal behavior would be impacted.
- **Criterion 4:** How acceptable this type of suicide prevention strategy would be to suicidal persons and their families.



STAKEHOLDER SURVEY Rating Results

Stakeholder Survey process



TIER	GOALS
1	AG9 - Prevent Re-attempts
1	AG10 - Continuity of Care
1	AG3 - Provider Training
1	AG4 - Affordable Care
2	AG7 - Ideator Treatment
2	AG11 - Risk & Protective Factors
2	AG12 - Reduce Stigma
2	AG1 - Community-Level Interventions
2	AG6 - Predict Imminent Risk
>2	AG8 - Improved Biological Treatments
>2	AG2 - Access to Lethal Means
>2	AG5 - Assess Lifetime Risk



STAKEHOLDER SURVEY Rating Results, cont.

Certain stakeholder groups rated some goals in distinct ways, demonstrating the group's unique perspective on the impact of those suicide prevention goals.

Survivor group thought that **AG12** (Increase help seeking and referrals for at-risk individuals by decreasing the stigma associated with suicide) would be **more acceptable (Criterion #4)** to suicidal persons and their families (Criterion 4) than did other Stakeholder groups.

On **Criterion #1** (Impact of a line of research on overall societal burden from suicidal acts), healthcare providers were more enthusiastic about the possible impact of research related to healthcare system enhancements and treatment than were others. The enhancements viewed positively by providers included research on: **AG 4** (Affordable and effective care); **AG 5** (Population- and setting-based screening); **AG 6** (Prediction of imminent risk); **AG 7** (Psychosocial interventions for those at risk); and **AG 11** (Risk and protective factor interactions).



STAKEHOLDER SURVEY- Available on RTF Website (see handout for web-link)

BRIEF SUMMARY OF FINDINGS

NATIONAL ACTION ALLIANCE FOR SUICIDE PREVENTION RESEARCH PRIORITIZATION TASK FORCE

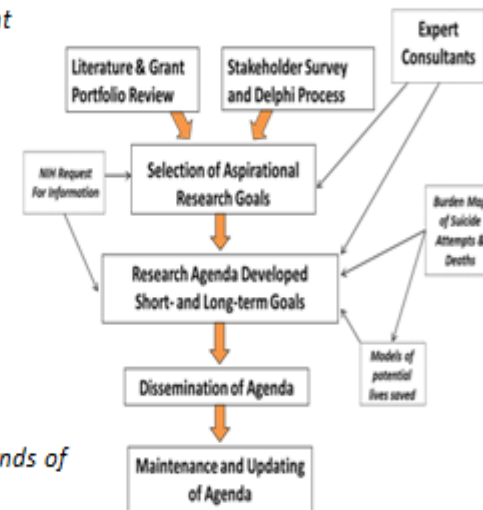
STAKEHOLDER SURVEY RESULTS¹

BACKGROUND: The goal of the National Action Alliance Research Task Force (RTF) is to develop a research agenda that reduces suicidal attempts and suicides by 20 percent each within five years, and by 40 percent or greater within 10 years if the research agenda is fully implemented.

Three types of information-gathering processes will be used to provide input into the RTF suicide prevention research agenda:

- **Ongoing Studies Grant Portfolio Review.** A review of the scientific studies currently underway will be used to develop a working knowledge of the research targets being addressed by suicide prevention scientists
- **Critical review of the scientific literature:** Literature reviews will be used to identify empirically-validated interventions and prevention strategies for various subpopulations.
- **Constituent Input:** Feedback from suicide attempters, relatives and close friends of individuals who have died by suicide, healthcare providers, policy-makers/administrators and suicide prevention researchers in the form of a "Stakeholder Survey" will be used to identify the biggest scientific challenges in doing suicide research. The final results from the Stakeholder Survey will be used to understand the perspectives of many different stakeholder groups about the most important goals for suicide research. In addition, input through a Request for Information

FIG. 1: RTF AGENDA DEVELOPMENT PROCESS





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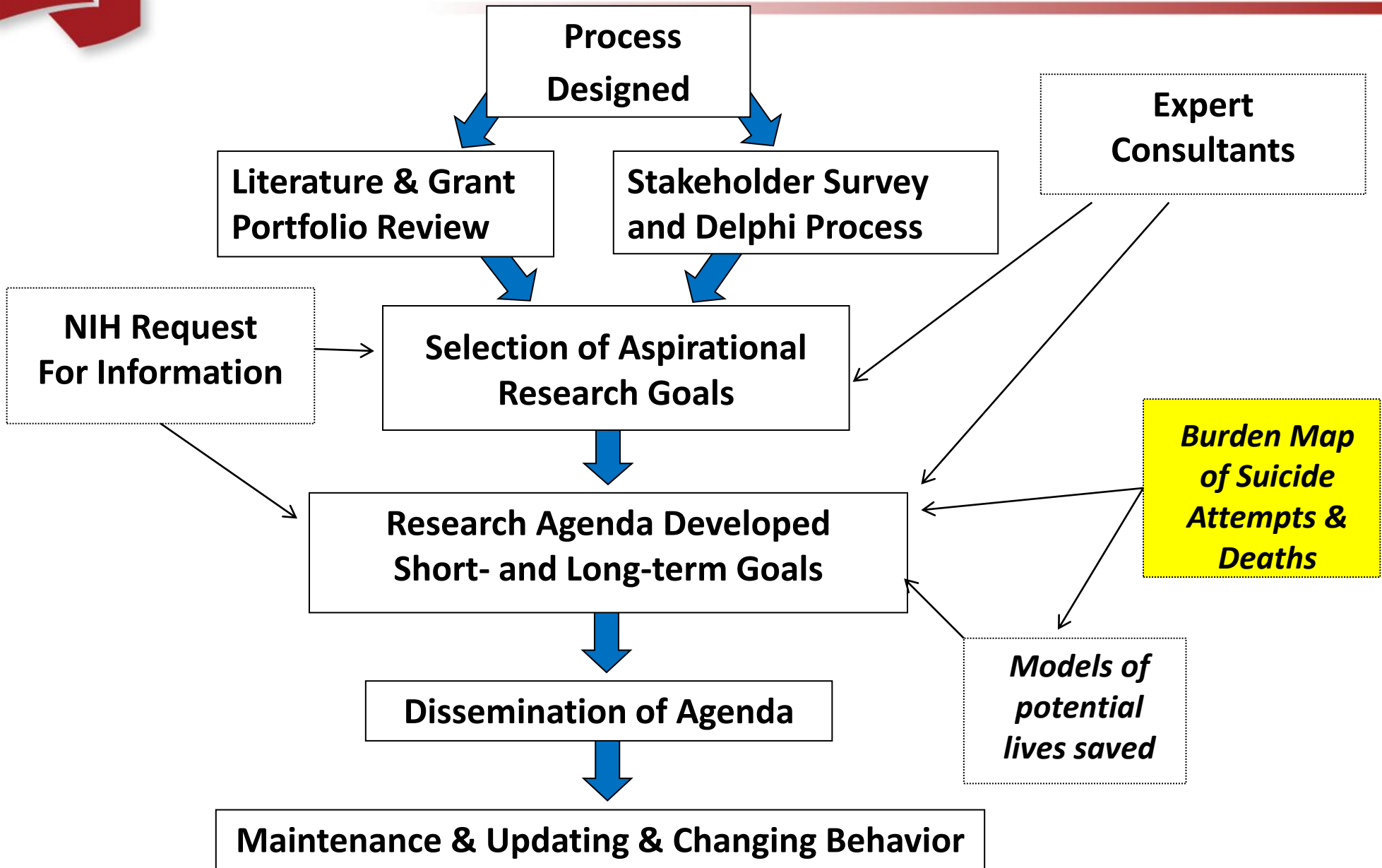
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Research Prioritization Task Force Agenda Development Process



Presentation Three:
**ESTIMATED BURDEN OF SUICIDE
ATTEMPTS AND DEATHS**

MARGARET WARNER
LISA COLPE

CENTERS FOR DISEASE CONTROL AND PREVENTION
NATIONAL INSTITUTE OF MENTAL HEALTH



Overview – Surveillance data systems

- How data are gathered
- Types of data systems
- Examples of existing data systems and how they can be utilized



Types of data collection systems

System type	How are data collected	Example system
Population based surveys	<ul style="list-style-type: none">• Probability sample of persons (households or families)• Data collected through personal interview	National Survey on Drug Use and Health (NSDUH)
Health Care Provider based surveys	<ul style="list-style-type: none">• Probability sample of visits (providers)• Data abstracted from medical records	National Electronic Injury Surveillance System – All Injury Program (NEISS-AIP)
Registry/Census	<ul style="list-style-type: none">• Data collected on all cases of a health condition in a defined population, often through registration	National Vital Statistics System, Mortality data (NVSS-MCOD)
Multiple sources	<ul style="list-style-type: none">• Data from multiple source documents	National Violent Death Reporting System (NVDRS)



National Survey on Drug Use and Health (NSDUH)

- Computerized interview administered to selected household respondent (maximizes confidentiality)
- Sample allows national, state, and sub-state estimation
- Focus on substance use and mental health
- Questions regarding medical attention for substance use and mental health
- Lots of demographic information (not in medical records)



National Survey on Drug Use and Health (NSDUH)

Questions on suicidal thoughts / behaviors:

- 2008 – Present: All adults (18 yrs and older) are asked if they experienced suicidal thoughts / behaviors in the past year
- 2004 – Present: Adults (18 yrs and older) and youth (12 – 17) are asked if they experienced suicidal thoughts / behaviors in the context of a major depressive episode assessment module



National Survey on Drug Use and Health (NSDUH)

Number of adults aged 18 or older (in millions) with suicidal thoughts and behavior in the past year : 2010

Suicidal Thoughts and Behavior	Number (in Millions)
<i>Serious Thoughts of Suicide</i>	8.7
Made a Suicide Plan	2.5
Made a Suicide Attempt (with or without a Suicide Plan)	1.1



- **Adults in 2010 who were unemployed in the past year were more likely than those who were employed full time to**
 - Have serious thoughts of suicide (6.7 vs. 3.0 percent)
 - Make suicide plans (2.6 vs. 0.6 percent)
 - Attempt suicide (0.9 vs. 0.2 percent)
- **Among the 1.1 million adults who attempted suicide in the past year,**
 - 752,000 (67.2 percent) received medical attention for their suicide attempt in the past year
 - 572,000 (51.1 percent) stayed overnight or longer in a hospital as a result of their suicide attempt in the past year.

Source: SAMHSA , *Results from the 2010 National Survey on Drug use and Health: Mental Health Findings*, NSDUH Series H-42, HHS Publication No. (SMA) 11-4667, Rockville, MD, SAMHSA, 2012

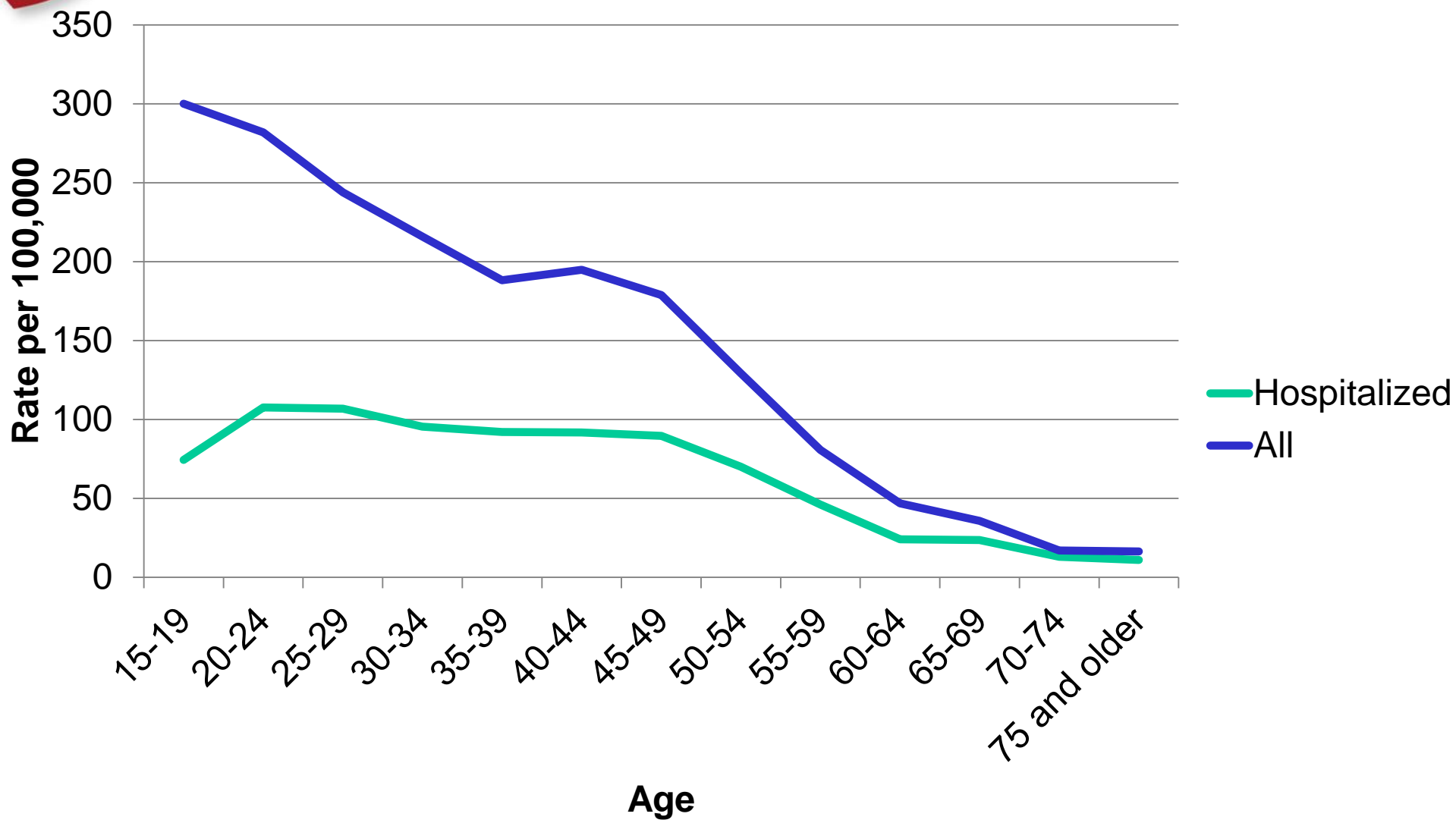


National Electronic Injury Surveillance System – All Injury Program (NEISS – AIP)

- Emergency department medical record abstraction
- Collects data on all injuries, including self-inflicted injuries.
- Includes intent of injury (unintentional / undetermined, assault, intentional self-harm, legal intervention), major cause of injury, principal diagnosis, primary body part afflicted, up to two consumer products used, place of occurrence, ED discharge disposition.
- Age and sex; race and ethnicity are also available, but are missing for about 20 % of cases.



Self-harm injuries seen in the ED, US 2009



Source: CDC, National Electronic Injury Surveillance system – All Injury Program (NEISS – AIP), 2010.



National Vital Statistics System, Mortality data (NVSS – MCOD)

- Data are compiled from information recorded on death certificates and include all resident deaths in the US.
- Death certificate includes section to describe the causal chain of events leading to death.
- Causes of death coded using the International Classification of Diseases, Tenth Revision (ICD – 10).
- Includes age, sex, Hispanic origin, marital status, and others.

10 Leading Causes of Death by Age Group, United States – 2009

Rank	Age Groups										Total
	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	
1	Congenital Anomalies 5,319	Unintentional Injury 1,466	Unintentional Injury 773	Unintentional Injury 916	Unintentional Injury 12,458	Unintentional Injury 14,062	Unintentional Injury 15,102	Malignant Neoplasms 50,616	Malignant Neoplasms 106,829	Heart Disease 479,150	Heart Disease 599,413
2	Short Gestation 4,538	Congenital Anomalies 464	Malignant Neoplasms 477	Malignant Neoplasms 419	Homicide 4,862	Suicide 5,320	Malignant Neoplasms 12,519	Heart Disease 36,927	Heart Disease 67,261	Malignant Neoplasms 391,035	Malignant Neoplasms 567,628
3	SIDS 2,226	Homicide 376	Congenital Anomalies 195	Suicide 259	Suicide 4,371	Homicide 4,222	Heart Disease 11,081	Unintentional Injury 19,974	Chronic Low. Respiratory Disease 14,160	Chronic Low. Respiratory Disease 117,098	Chronic Low. Respiratory Disease 137,353
4	Maternal Pregnancy Comp. 1,608	Malignant Neoplasms 350	Homicide 119	Homicide 186	Malignant Neoplasms 1,636	Malignant Neoplasms 3,659	Suicide 6,677	Suicide 8,598	Unintentional Injury 12,933	Cerebrovascular 109,238	Cerebrovascular 128,842
5	Unintentional Injury 1,181	Heart Disease 154	Influenza & Pneumonia 106	Congenital Anomalies 169	Heart Disease 1,035	Heart Disease 3,174	Homicide 2,762	Liver Disease 8,377	Diabetes Mellitus 11,361	Alzheimer's Disease 78,168	Unintentional Injury 118,021
6	Placenta Cord. Membranes 1,064	Influenza & Pneumonia 146	Heart Disease 97	Influenza & Pneumonia 122	Congenital Anomalies 457	HIV 881	Liver Disease 2,481	Cerebrovascular 6,163	Cerebrovascular 10,523	Diabetes Mellitus 48,944	Alzheimer's Disease 79,003
7	Bacterial Sepsis 652	Septicemia 71	Chronic Low. Respiratory Disease 64	Heart Disease 120	Influenza & Pneumonia 418	Influenza & Pneumonia 807	HIV 2,425	Diabetes Mellitus 5,725	Liver Disease 9,154	Influenza & Pneumonia 43,469	Diabetes Mellitus 68,705
8	Respiratory Distress 595	Chronic Low. Respiratory Disease 66	Benign Neoplasms 40	Chronic Low. Respiratory Disease 59	Complicated Pregnancy 227	Diabetes Mellitus 604	Cerebrovascular 1,916	Chronic Low. Respiratory Disease 4,664	Suicide 5,808	Nephritis 40,465	Influenza & Pneumonia 53,692
9	Circulatory System Disease 581	Perinatal Period 58	Septicemia 33	Benign Neoplasms 45	Cerebrovascular 193	Cerebrovascular 537	Diabetes Mellitus 1,872	HIV 3,388	Nephritis 4,792	Unintentional Injury 39,111	Nephritis 48,935
10	Neonatal Hemorrhage 517	Benign Neoplasms 53	Cerebrovascular 32	Cerebrovascular 42	Chronic Low. Respiratory Disease 187	Liver Disease 459	Influenza & Pneumonia 1,314	Influenza & Pneumonia 2,918	Septicemia 4,628	Septicemia 26,763	Suicide 36,909

Data Source: National Vital Statistics System, National Center for Health Statistics, CDC.

Produced by: Office of Statistics and Programming, National Center for Injury Prevention and Control, CDC using WISQARS™.



Centers for Disease Control and Prevention
National Center for Injury Prevention and Control



National Violent Death Reporting System

- Multiple sources including death certificates, medical examiner / coroner files, law enforcement records and crime laboratories
- 2003 – 7 states; 2004 – 13 states; 2005 – 16 states; 2009 – 18 states.
- Collects characteristics and circumstances on deaths due to violence and injuries of undetermined intent, including self-directed violence.
- Includes information on such variables as mental illness, recent crises, mechanism, and toxicology.



National Violent Death Reporting System

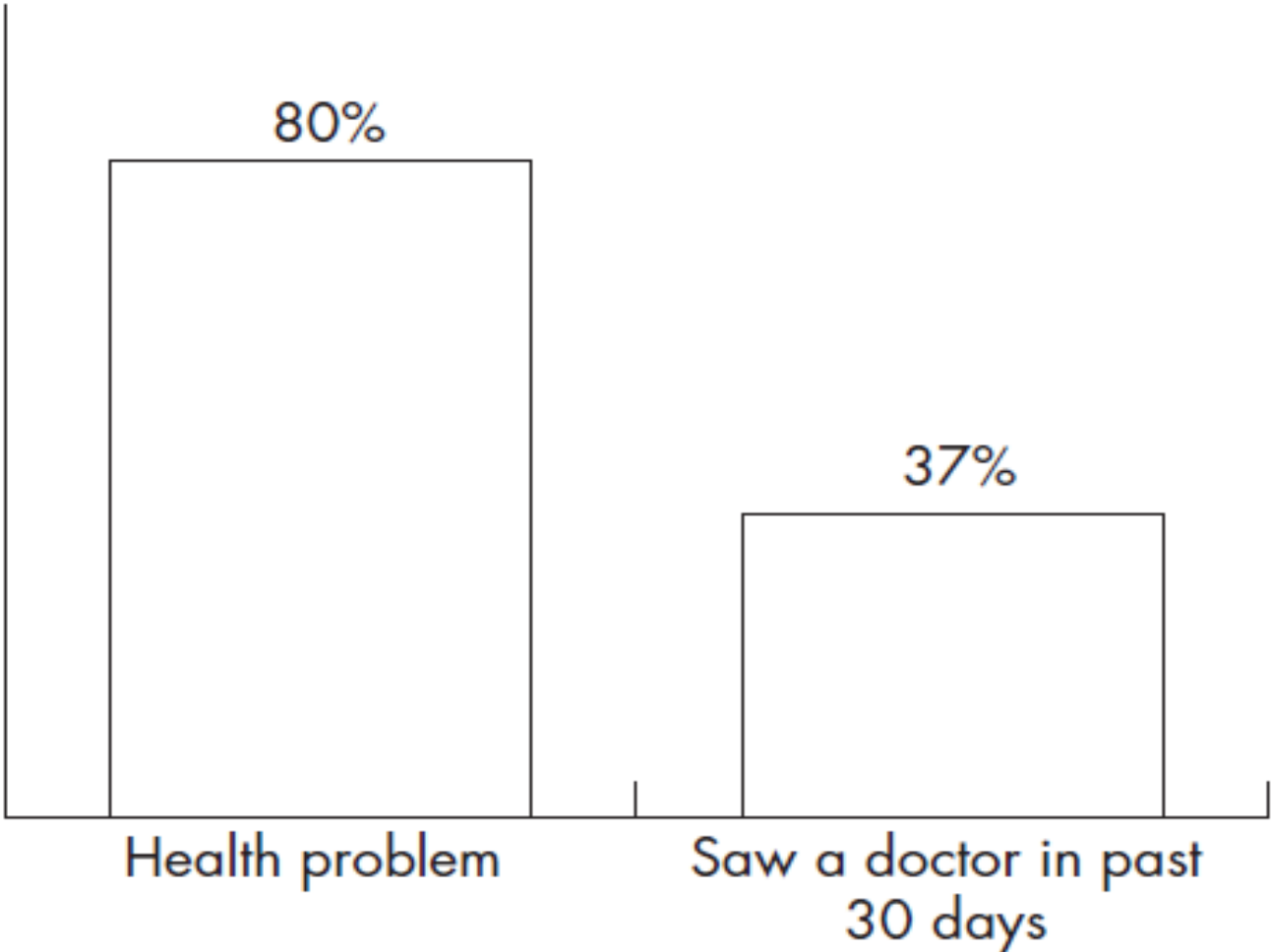


Figure 1 Proportion of male suicide victims ages 65 or over whose death investigation report noted a health problem or a recent physician visit, Oregon, 2003.

Source: CDC/NVDRS, 2003



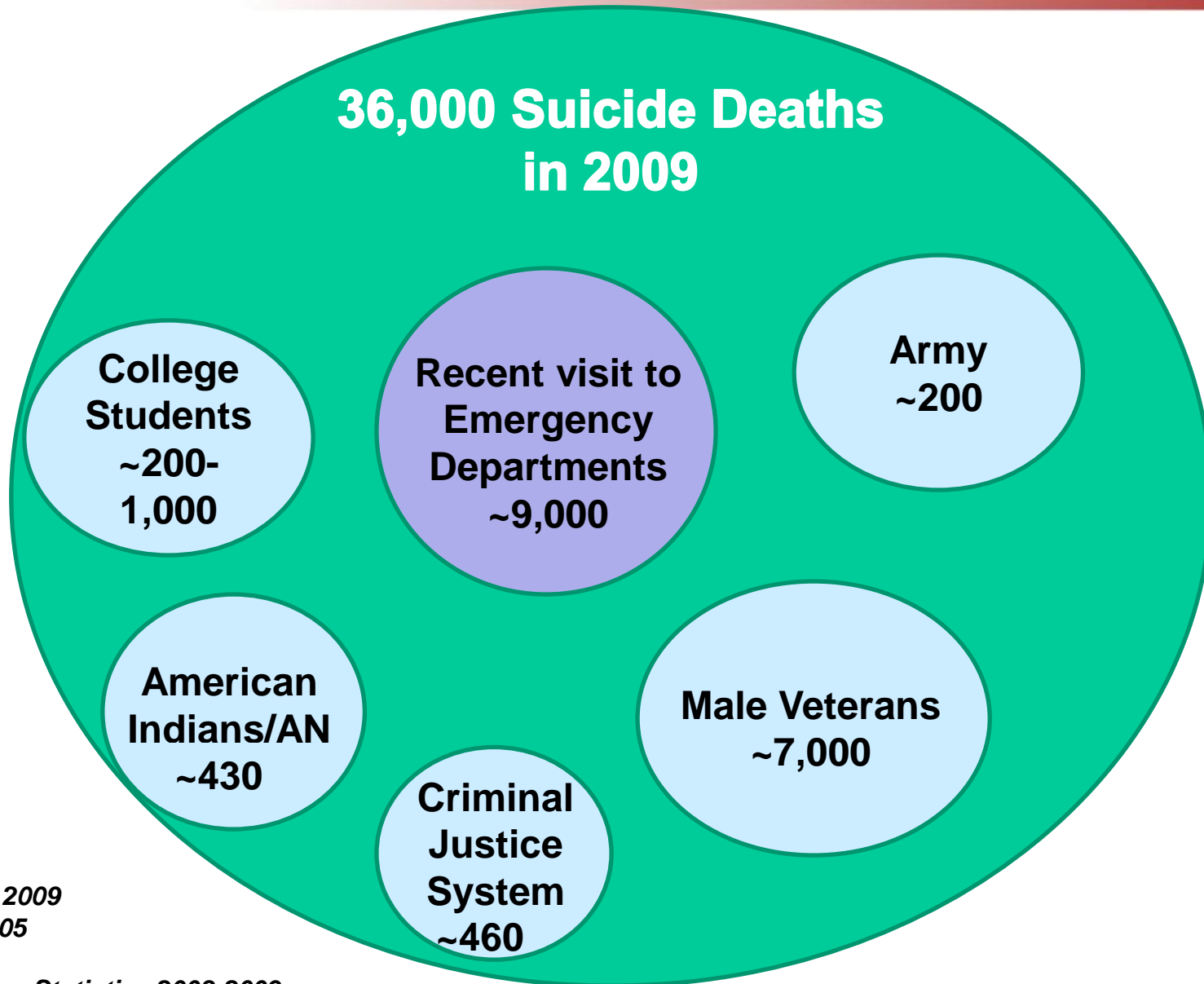
Develop a Deployment-Focused Taxonomy of Subgroups for Suicide Prevention in the U.S.

36,000 suicide deaths

- ✓ Definable subgroups
- ✓ Substantial numbers
- ✓ Concentrated risk
- ✓ Service system setting
- ? Evidence-based practice



Definable Subgroups with Suicide Burden

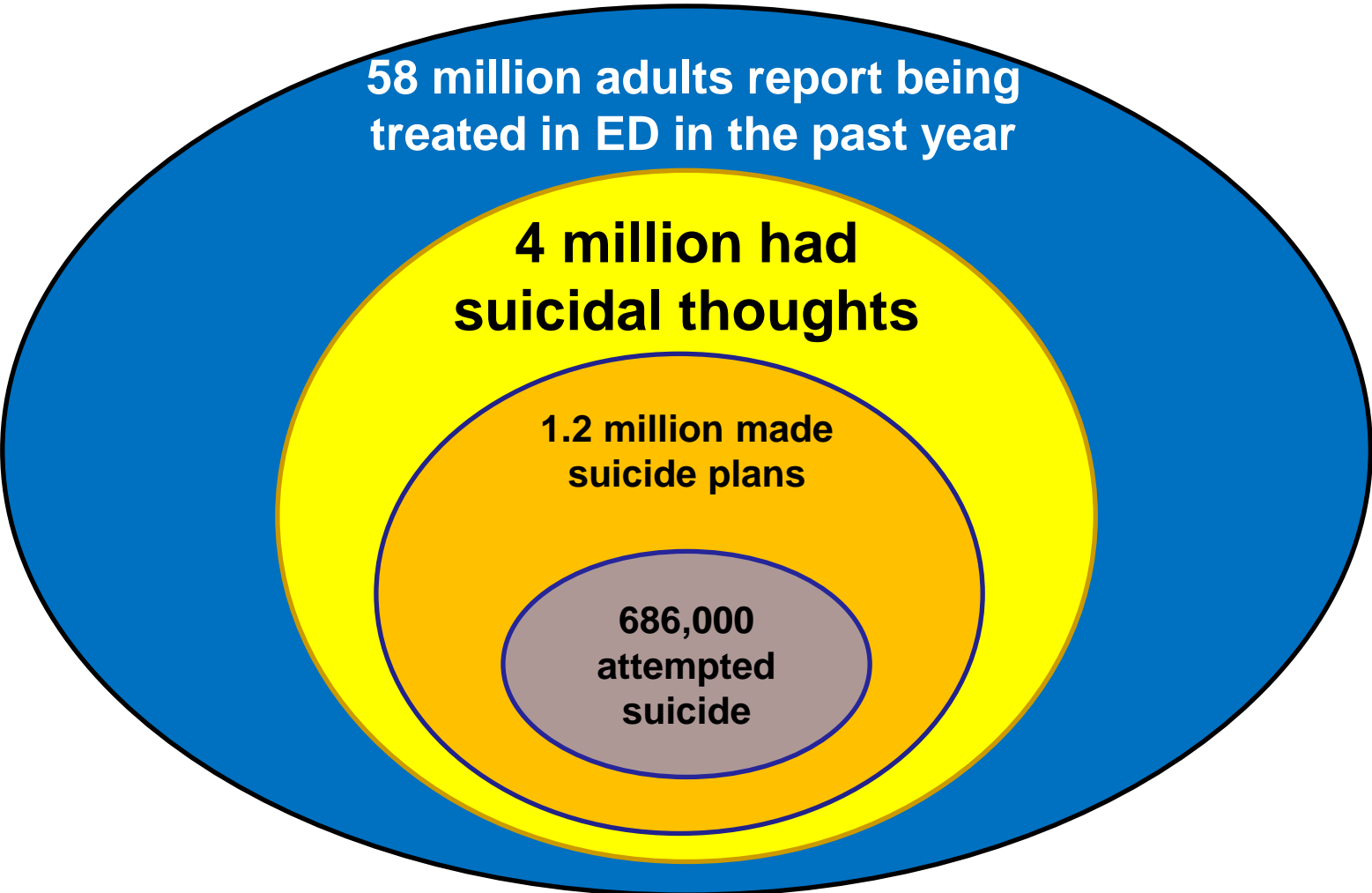


Data Sources:

- CDC WISQARS 2009
- CDC NVDRS 2005
- Schwartz 2011
- Bureau of Justice Statistics 2008-2009
- US Army 2009-2010



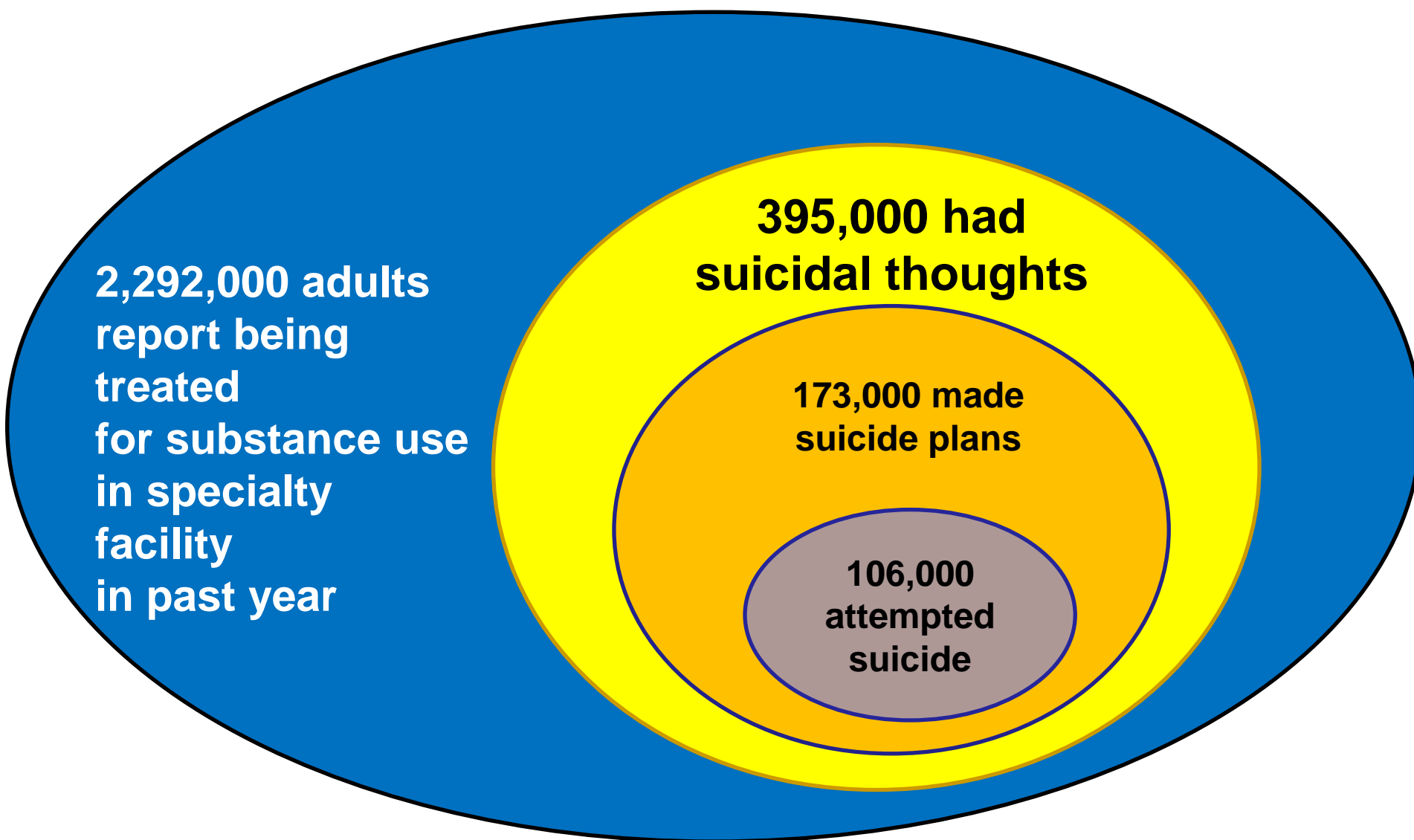
Emergency Department as Intervention Setting



Source: SAMHSA, NSDUH 2008 – 2009.



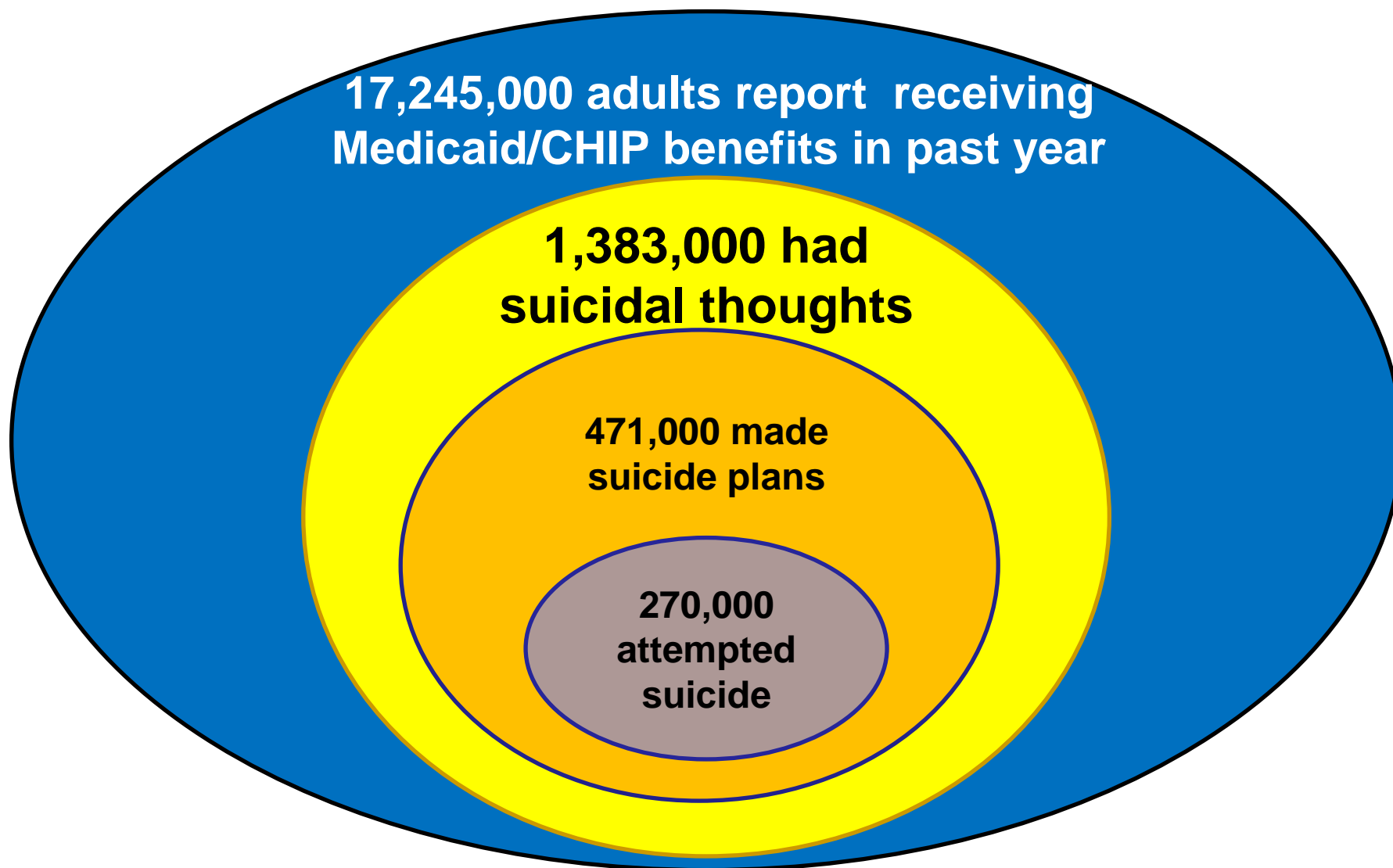
Substance Use Treatment as Intervention Setting



Source: SAMHSA, NSDUH 2008 – 2009.



Medicaid / CHIP Agencies as Intervention Setting



Source: SAMHSA, NSDUH 2008 – 2009.



REDUCING MORTALITY AND MORBIDITY FROM SUICIDE: HOW CAN WE GET THERE?

JANE PEARSON OVERVIEW OF RESEARCH AGENDA PROCESS

SHERRY MOLOCK STAKEHOLDER SURVEY: ASPIRATIONAL GOALS

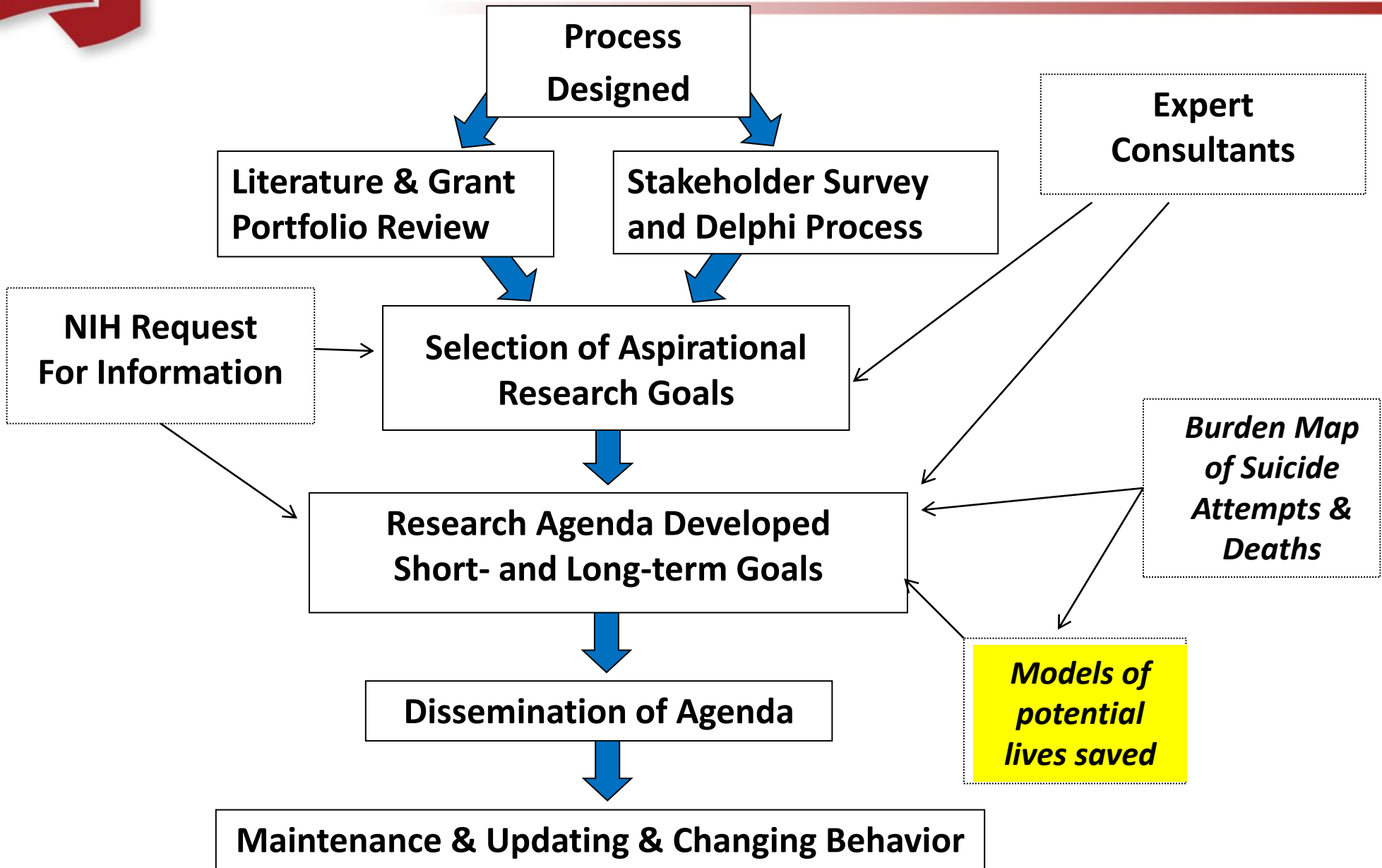
MARGARET WARNER
& LISA COLPE ESTIMATING BURDEN OF SUICIDE

JOEL SHERRILL CHALLENGES IN ESTIMATING INTERVENTION EFFECTS

BELINDA SIMS COMMUNITY PREVENTION EXAMPLE



Research Prioritization Task Force Agenda Development Process



Presentation Four:

CHALLENGES IN ESTIMATING INTERVENTION EFFECTS

JOEL SHERRILL

NATIONAL INSTITUTE OF MENTAL HEALTH



Estimating the Population Impact of Suicide Prevention: Extrapolating from the Intervention Literature

Overview:

- Gaps in the intervention research literature.
- Characteristics of published studies.
- Potential strategies for future efforts.



Estimating the Population Impact of Suicide Prevention: **Extrapolating from the Intervention Literature**

Overview:



- Gaps in the intervention research literature.
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- Potential strategies for future efforts.



Gaps in the Intervention Research Literature

- Few studies explicitly address suicide interventions¹; studies on specific boundary populations are more limited²
- Suicidal individuals are often excluded from MH treatment studies³
- Methodological approaches and rigor vary across studies^{1,2,4}
- Attempts and deaths are often not reported as outcomes⁴
- Effect sizes are often based on limited samples

¹Mann, JJ, Apter, A, Bertolote, *Journal of the American Medical Association*, 294: 2064-2074, 2005

²Bagley, SC, Munjas, B, Shekelle, P, *Suicide and Life-Threatening Behavior*, 40: 257-265, 2010


³Pearson et al.(2000), NIMH: <http://www.nimh.nih.gov/health/topics/suicide-prevention/issues-to-consider-in-intervention-research-with-persons-at-high-risk-for-suicidality.shtml>

⁴Tarrier, N, Taylor, K, Gooding, P, *Behavior Modification*, 32: 77-107, 2008



Estimating the Population Impact of Suicide Prevention: **Extrapolating from the Intervention Literature**

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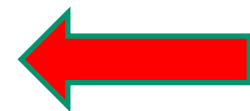


Characteristics of Published Studies

- **Target Population/Sample**
 - Relatively homogenous
 - Characteristics not assessed/reported
- **Interventionists/Clinicians**
 - Highly selected, trained, and monitored
 - Characteristics not assessed/reported
- **Study Interventions**
 - Complex---Multi-component; Multi-session
- **Setting**
 - Resource rich (support for EBPs; training/monitoring)
 - Different case-mix/competing demands



INTERNAL VERSUS EXTERNAL VALIDITY





Estimating the Population Impact of Suicide Prevention: **Extrapolating from the Intervention Literature**

Overview:

- Gaps in the intervention research literature.
- Characteristics of published studies.
-  Potential strategies for future efforts.



Potential Strategies for Future Efforts

Strategies for Intervention Development/Testing

- Broader inclusion criteria
- Standardization in operationalizing outcomes
- Adding suicide morbidity and mortality outcomes to prevention trials
- Deployment-focused intervention development/testing¹

Methodological Advances/Refinements

- Modeling/Simulations (e.g., propensity scores)²
- Standardization -> Integration & Sharing³
- Solutions for Methodological Roadblocks⁴

¹Weisz JR, Jensen AL, McLeod BD., In: Hibbs ED, Jensen PS, editors. (2005), Psychosocial treatments for child and adolescent disorders, (pp. 9-39).

²Stuart, EA, Cole, SR, Bradshwa, CP, Leaf, PJ, J. Royal Statistical Society, 174, 369-386.

³Insel,TR; NIMH Director's Blog, "Three Principles for Clinical Research," (7-30-10)

⁴NIMH RFI: "...Key Methodological Roadblocks..." (NOT-MH-12-017; 4-27-12)



REDUCING MORTALITY AND MORBIDITY FROM SUICIDE: HOW CAN WE GET THERE?

JANE PEARSON OVERVIEW OF RESEARCH AGENDA PROCESS

SHERRY MOLOCK STAKEHOLDER SURVEY: ASPIRATIONAL GOALS

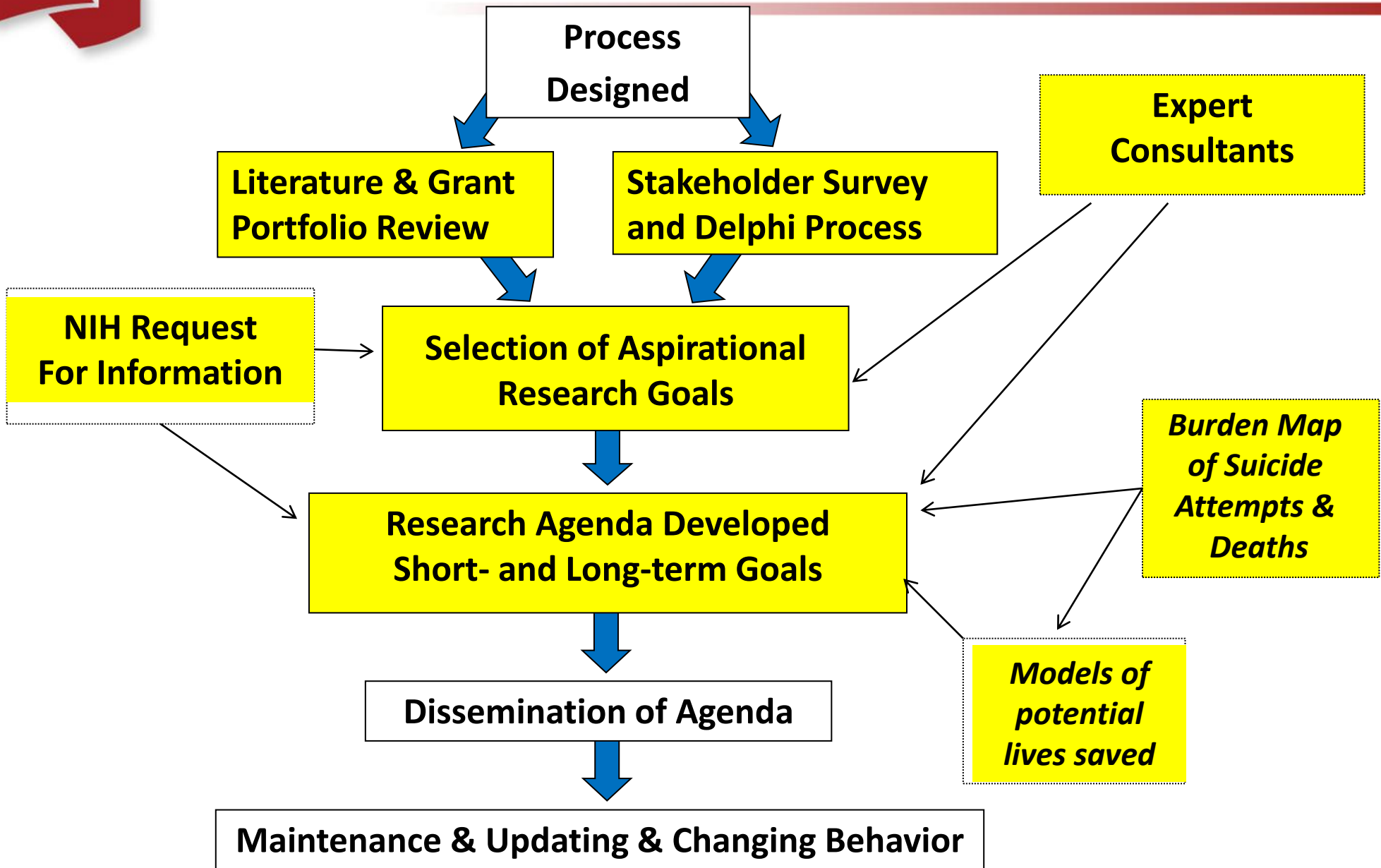
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Research Prioritization Task Force Agenda Development Process



Presentation Five:

**COMMUNITY-WIDE PREVENTION OF
SUBSTANCE ABUSE AND RELATED
RISK FACTORS:
EXAMPLE OF DEVELOPING A LOGIC
MODEL FOR AN ASPIRATIONAL GOAL**

BELINDA SIMS

NATIONAL INSTITUTE ON DRUG ABUSE



Aspirational Goal 1:

Prevent the emergence of suicidal behavior by developing and delivering the most effective prevention programs to build resilience and reduce risk in broad-based populations.



Verbatim Suggestions from Stakeholder Survey

Aspirational Goals from the Stakeholder Survey pertaining to college youth

Since 80% of suicidal students do not seek help from health services on campus, what can be done to inspire them to seek help (*Survivor*)

Evaluate an effective training program for peer support to prevention suicide that can be introduced as part of orientation programs for all students entering educational programs beyond high school (*Policy/Administrator*)

Educate service providers– doctors, teachers, college professors, police, etc about not fearing to talk about suicide.... Too many fear they will say something wrong (*Provider*)



Steps in Developing Short- and Long-term Research Objectives for Aspirational Goals

- What was the relative **rating of the goal**? What were the verbatim suggestions for this goal?
- What is the **logic model** behind the intervention(s) related to this goal?
- Are there **specific analytic models** to consider— do some vary by subpopulation or setting?
- Who are the **experts** to consult on this type of intervention?
- What is the **burden of suicide** for populations for which this goal is relevant? What surveillance data are available on suicide deaths and attempts?

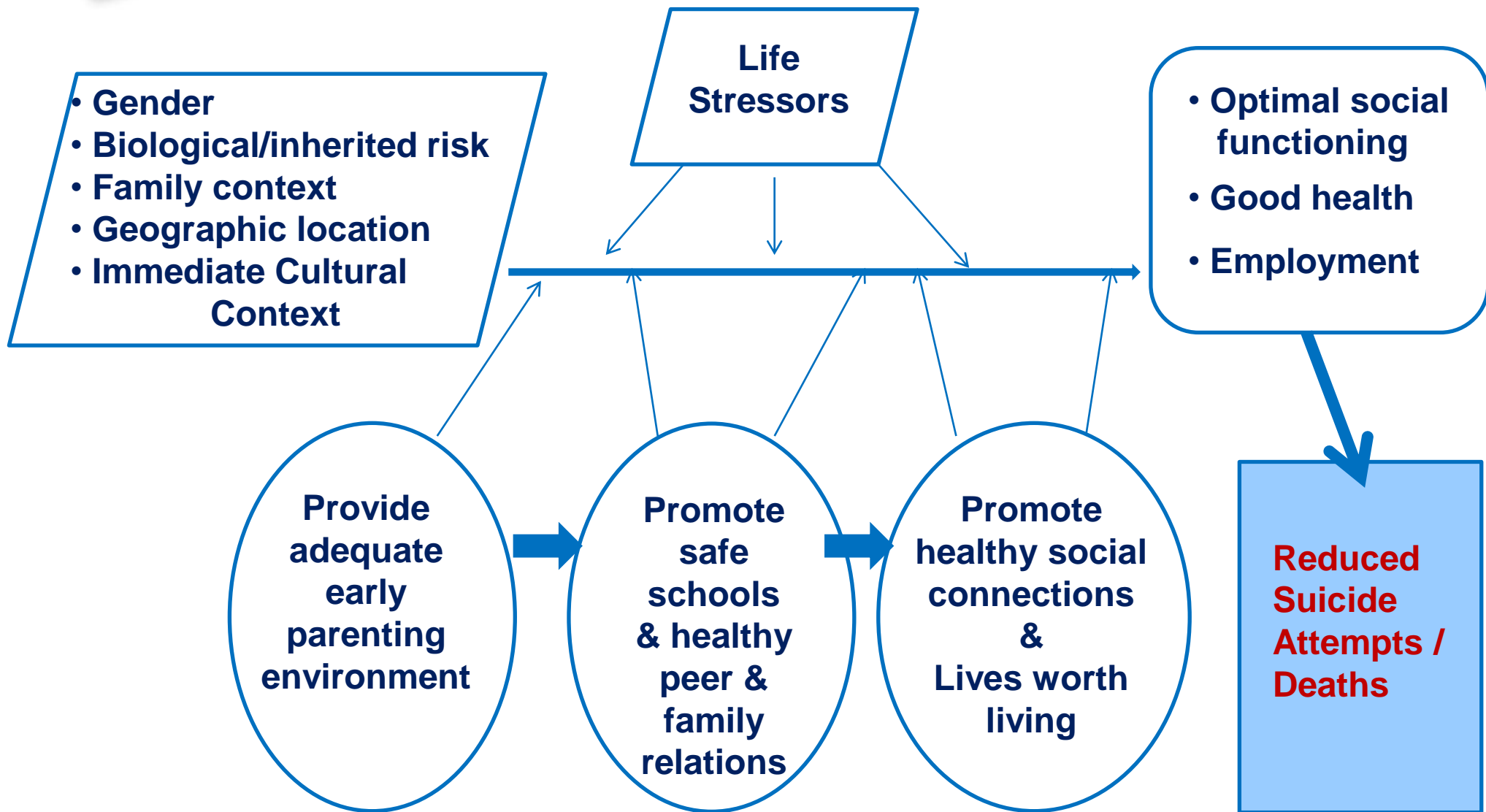


Steps in Developing Short- and Long-term Research Objectives for Aspirational Goals, cont.

- What **prior research** exists in support of the logic model/analytic model? (literature review)
- What **currently funded research** addresses this intervention approach? (portfolio analysis)
- What are the **potential intervention effects** that would reduce suicide death and attempt burden? How many suicide attempts could be averted?
- What are the **short- and long-term research objectives** needed to avert suicide attempts?
- What **organizations/agencies/ funders could be accountable** for this aspirational goal? Do current research findings indicate any policy changes that could reduce suicide burden?

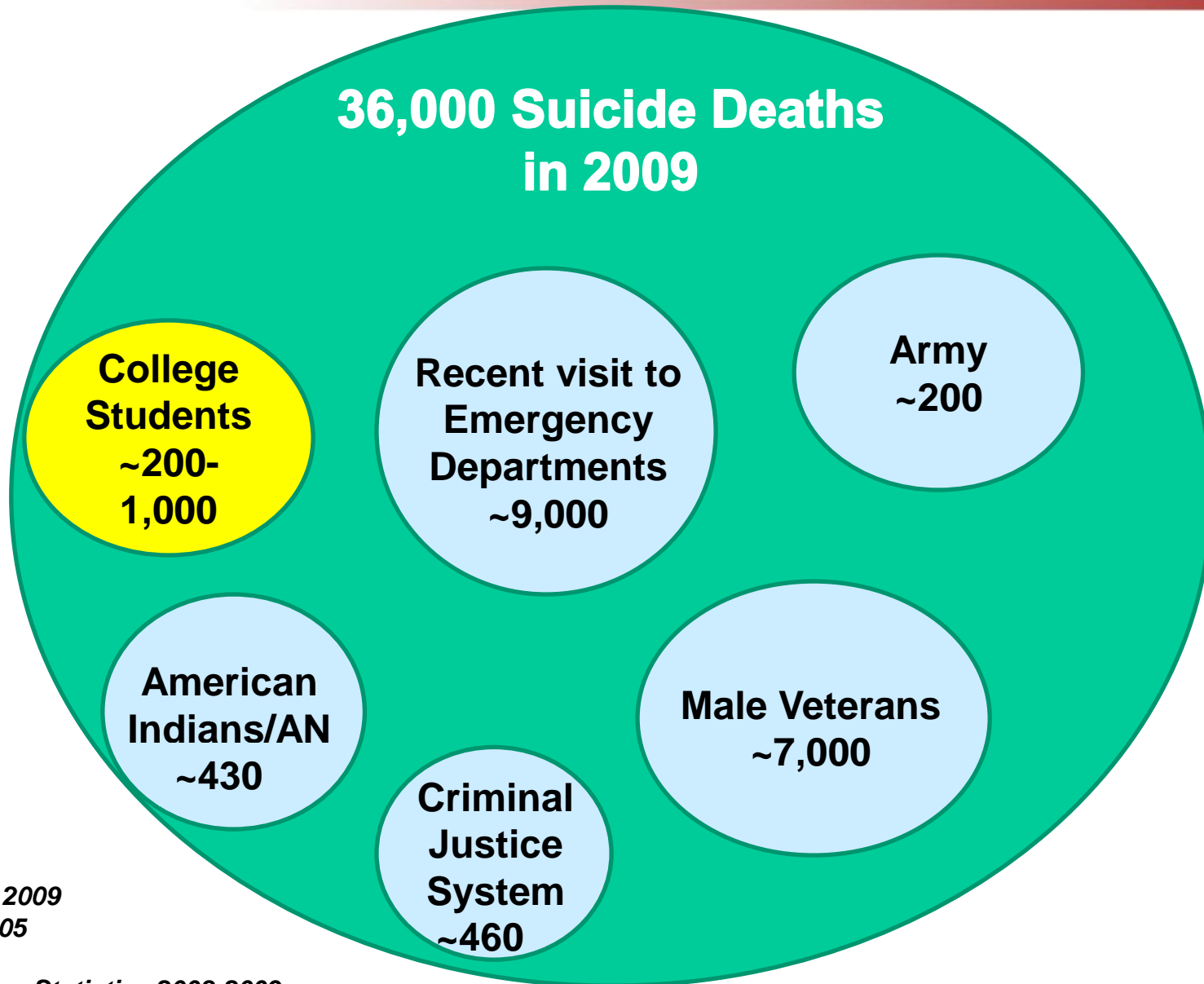


Develop Overall Logic Model of Processes For Building Resilience





Definable Subgroups with Suicide Burden



Data Sources:

- CDC WISQARS 2009
- CDC NVDRS 2005
- Schwartz 2011
- Bureau of Justice Statistics 2008-2009
- US Army 2009-2010



What is the **Suicide Attempt** Burden for College Students?

*National Survey on Drug Use And Health
(NSDUH), 2010*

**Full time college students age 18-22 who
reported attempting suicide in past year**

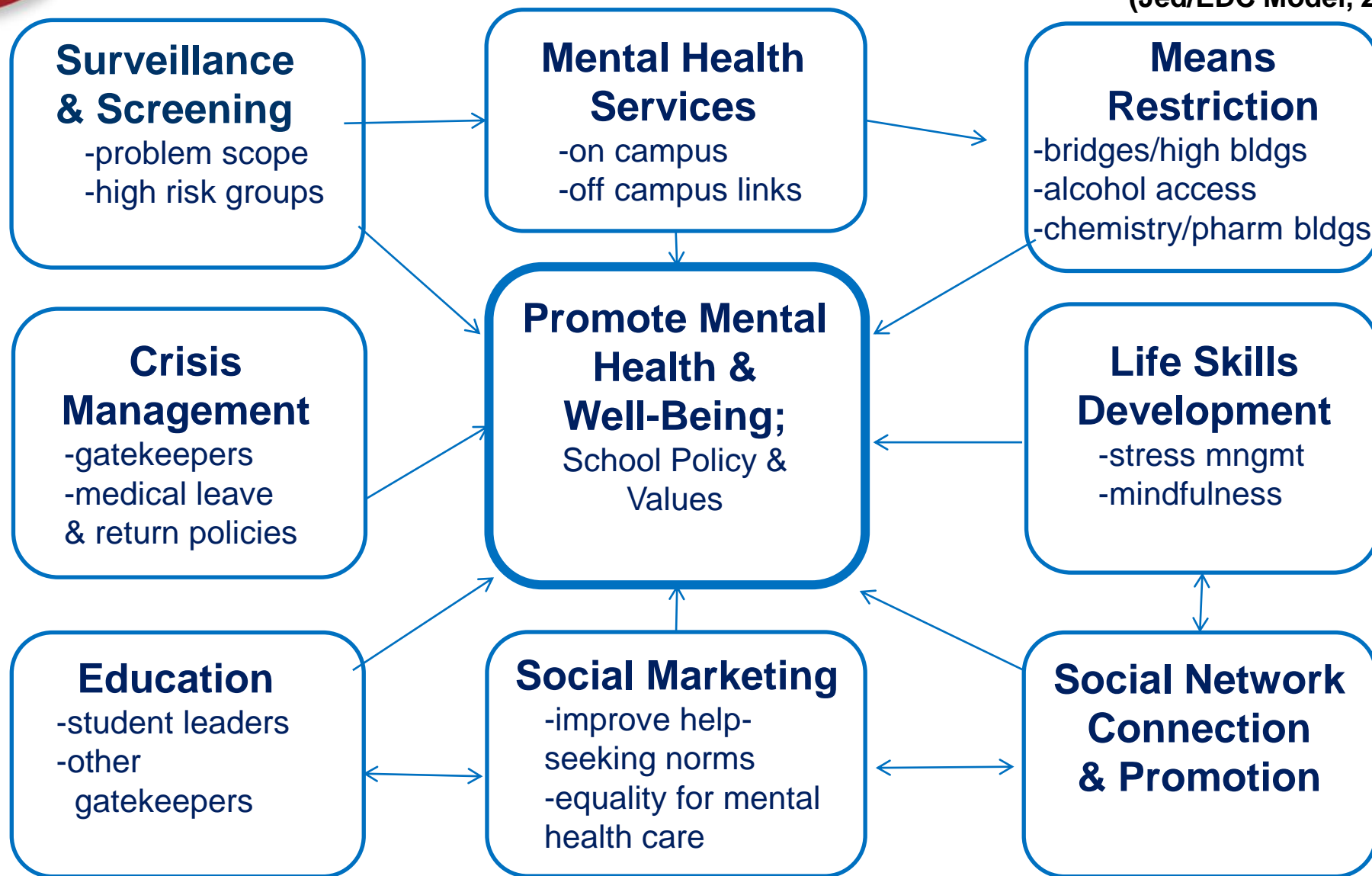
N= 84,000

Data Source: SAMHSA, Center for Behavioral Health Statistics and Quality



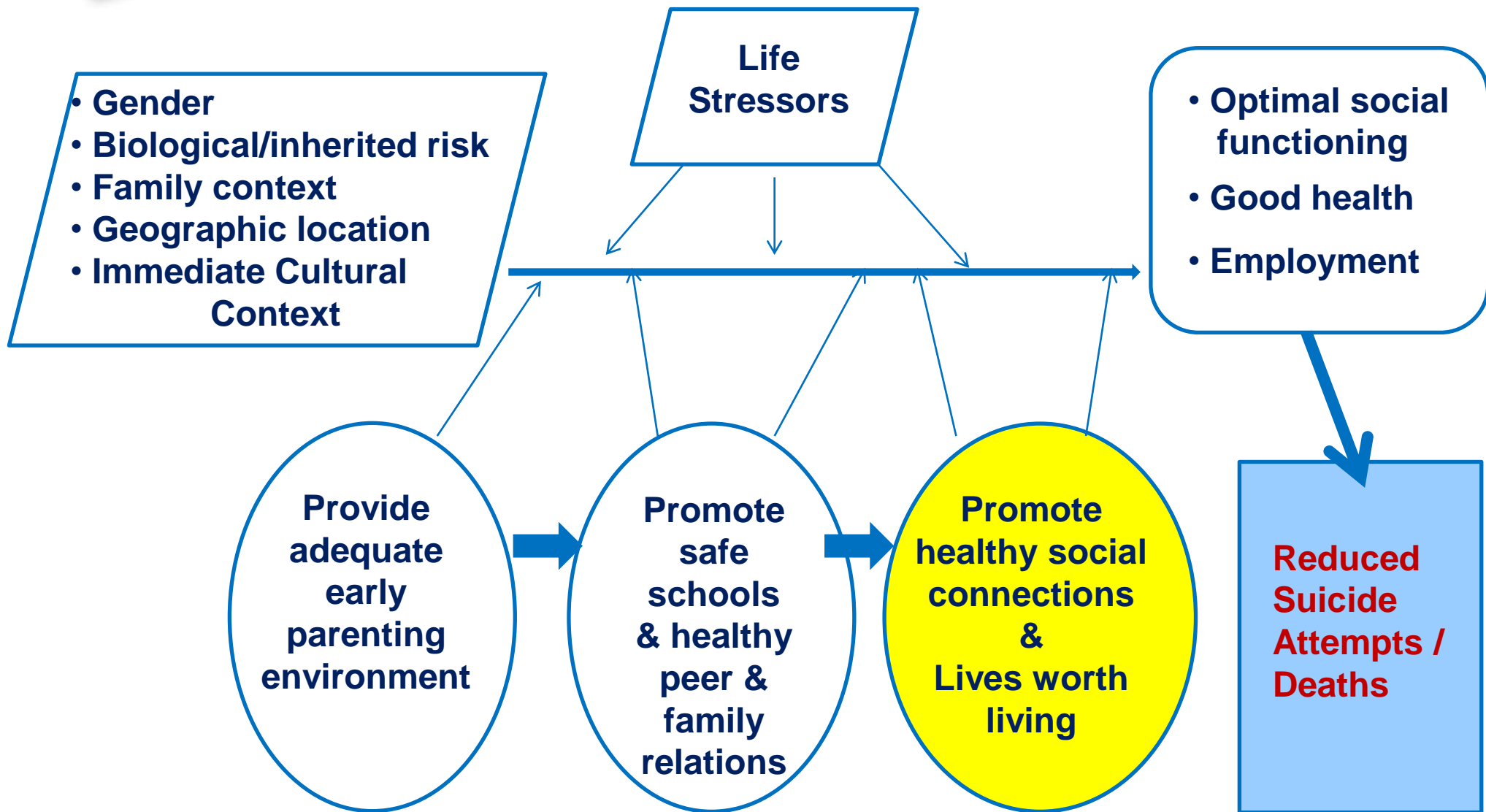
Proposed Elements of a Comprehensive Suicide Prevention Program for Colleges and Universities

(Jed/EDC Model, 2004)





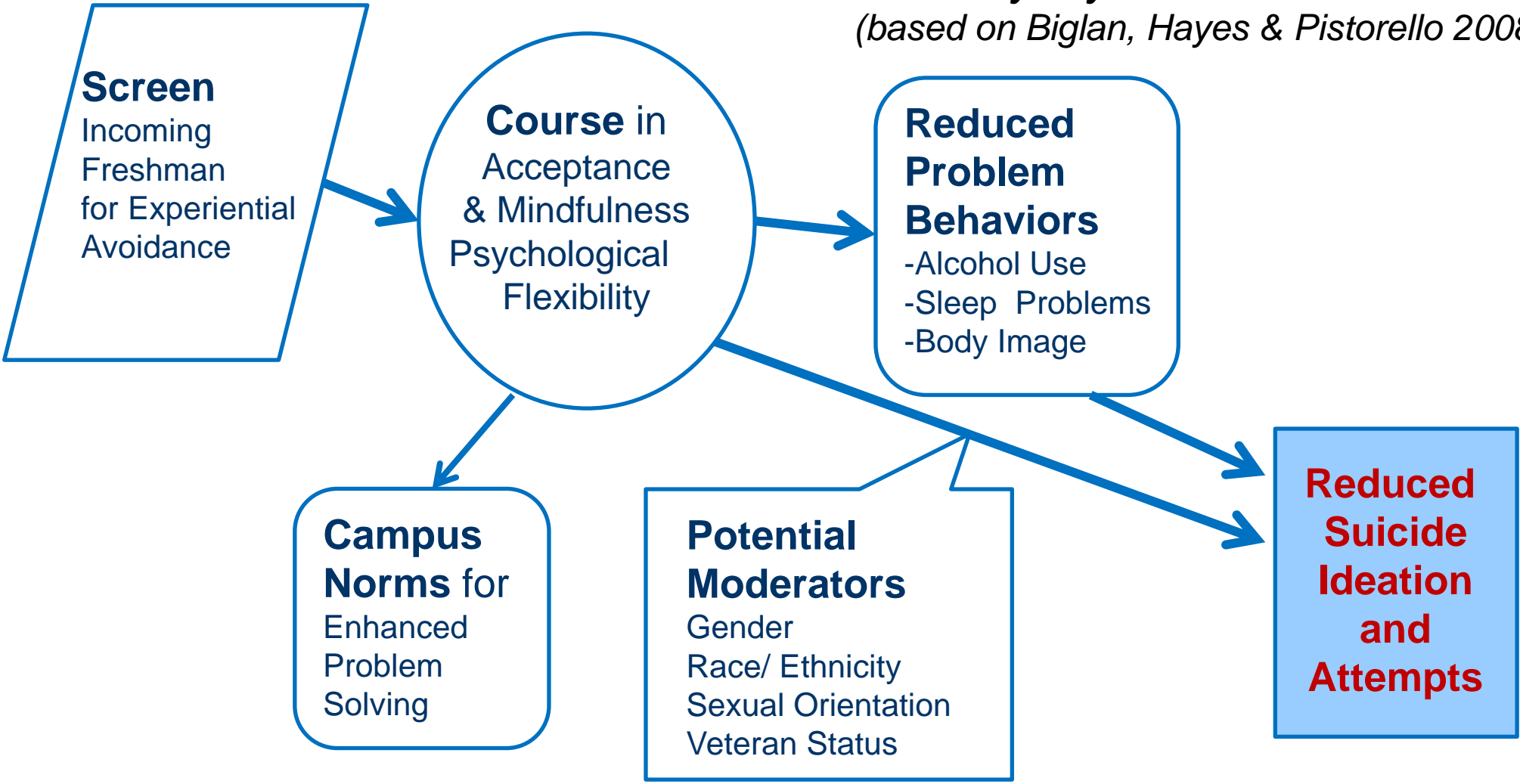
Develop Overall Logic Model of Processes For Building Resilience





Intervention/ Analytic Example: Life Skills Development Intervention

*NIMH Grant by Hayes & Pistorello MH083740
(based on Biglan, Hayes & Pistorello 2008)*

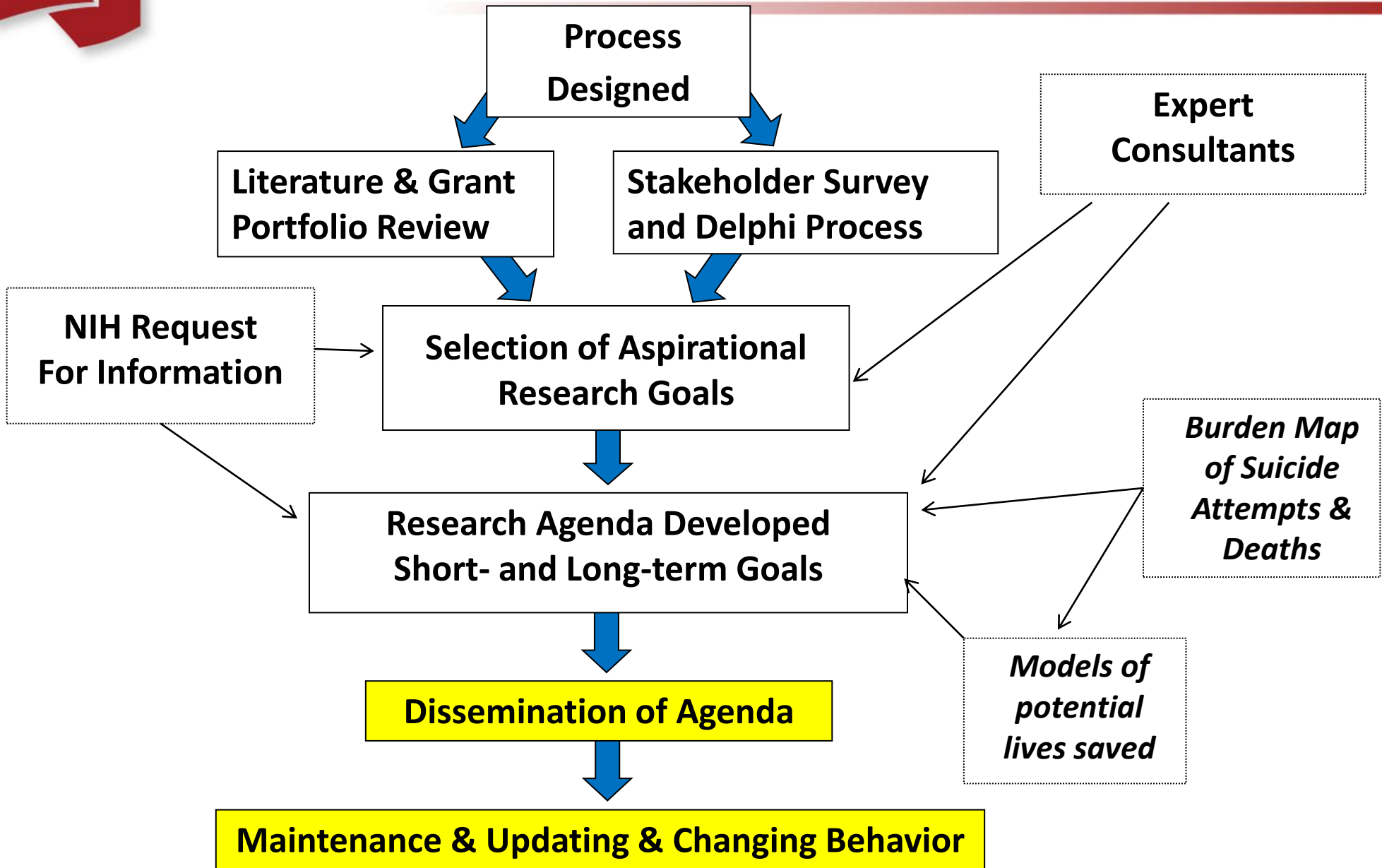


Level of evidence? Short- & Long-term Research Needed? Dissemination?

Hayes & Pistorello MH083740, NIDA COFUNDING.; Biglan, Hayes & Pistorella (2008), Prevention Science 9(3); 139-152

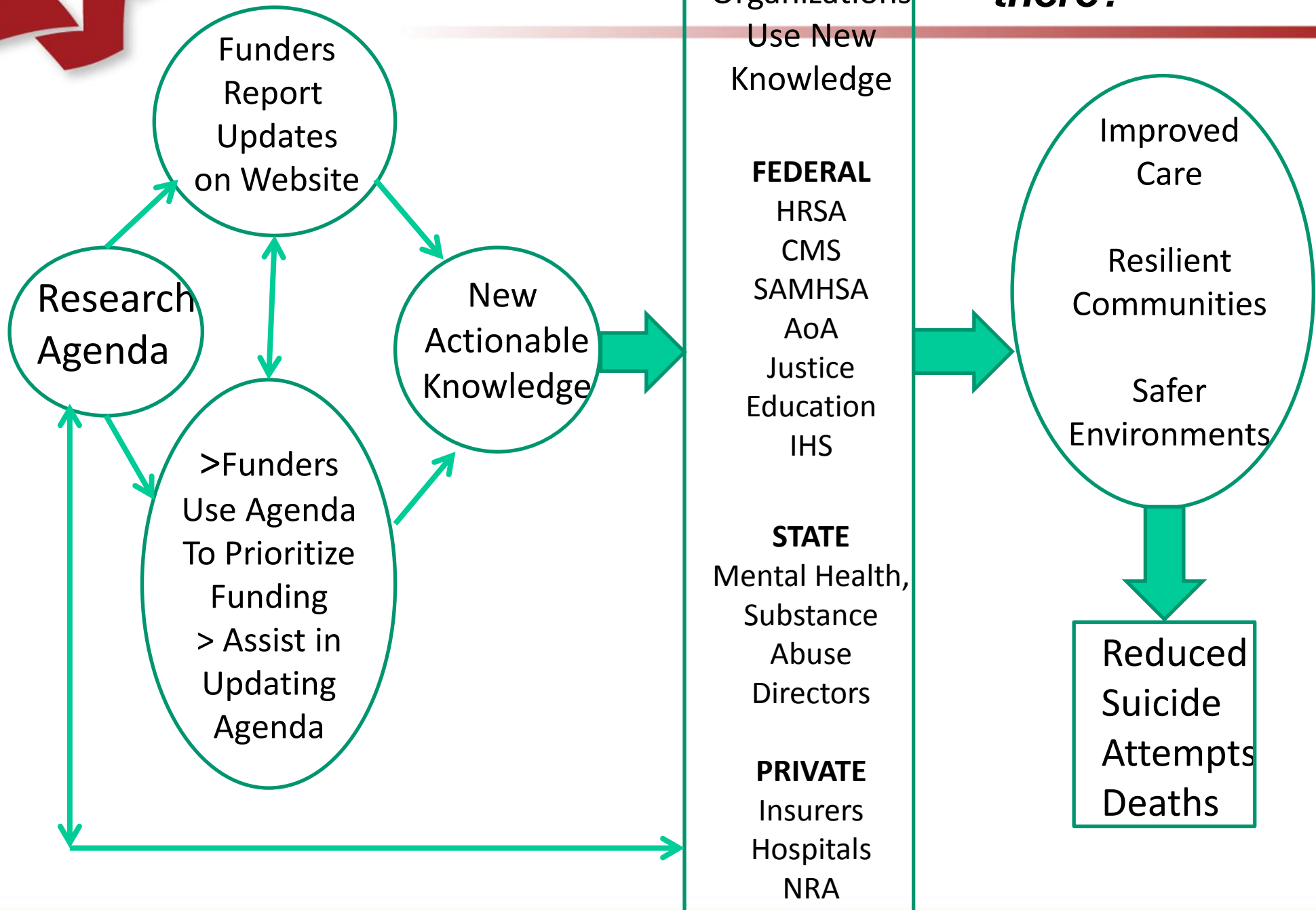


Research Prioritization Task Force Agenda Development Process





How can we get there?





Questions?

Research Task Force Information

<http://actionallianceforsuicideprevention.org/task-force/research-prioritization>

Research Task Force Questions and Information:
jpearson@mail.nih.gov