

# Responding to the Mental Health Impact of Terrorism: Lessons Learned from 9/11

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# Key collaborators

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- Center for Mental Health Services at the Substance Abuse and Mental Health Services Administration.
- Federal Emergency Management Agency.
- New York City Department of Health and Mental Hygiene and Departments of Mental Health in 10 counties surrounding NYC.
- Division of Health Services Research at Mount Sinai School of Medicine.
- Center for Urban Epidemiological Studies at the New York Academy of Medicine.
- Mailman School of Public Health at Columbia University.
- National Center for Post-Traumatic Stress Disorder.
- New York State Psychiatric Institute.
- The Center for the Study of Issues in Public Mental Health at the Nathan Kline Institute.

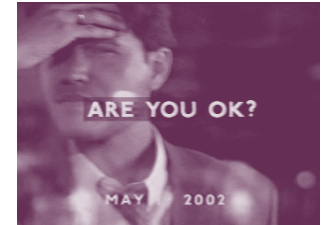


# A DISASTER OF GREAT MAGNITUDE



# Summary of Mental Health Impact of the World Trade Center Attack

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- Widespread traumatic stress reactions in the general population
- Large numbers of individuals in geographic proximity to the attacks report symptoms consistent with trauma-related mental disorders
- Dramatic impact on school-aged youth throughout NYC
- For a substantial minority of individuals, WTC-related mental disorders persisted over time

# Responding to the Attacks: Implementing Project Liberty



# What was Project Liberty?

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- A Crisis Counseling Assistance and Training Program of disaster mental health services funded through the Federal Emergency Management Administration (FEMA) and jointly overseen by FEMA and the Center for Mental Health Services (CMHS).
- FEMA funding for crisis counseling is available to states for use in Presidentially declared disaster areas (only state mental health authorities may apply for the funds).
- Project Liberty was a joint state and local mental health authority effort. The NYS Office of Mental Health (OMH) is responsible for overall program implementation and oversight; local mental health authorities secure and coordinate local service provision.



# CMHS Crisis Counseling Program Purpose



“The purpose of the crisis counseling program is to help disaster victims recognize that, in most cases, their emotional reactions are normal and to develop coping skills that will allow them to resume their pre-disaster level of functioning and equilibrium.”

*Case Management and Advocacy  
within Crisis Counseling Programs  
CMHS Emergency Services and  
Disaster Relief Branch*

*Revised 2000*



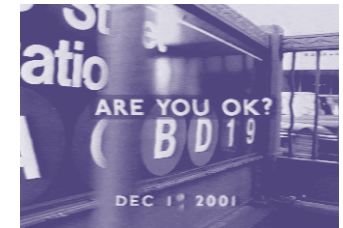
# Core Program Principles

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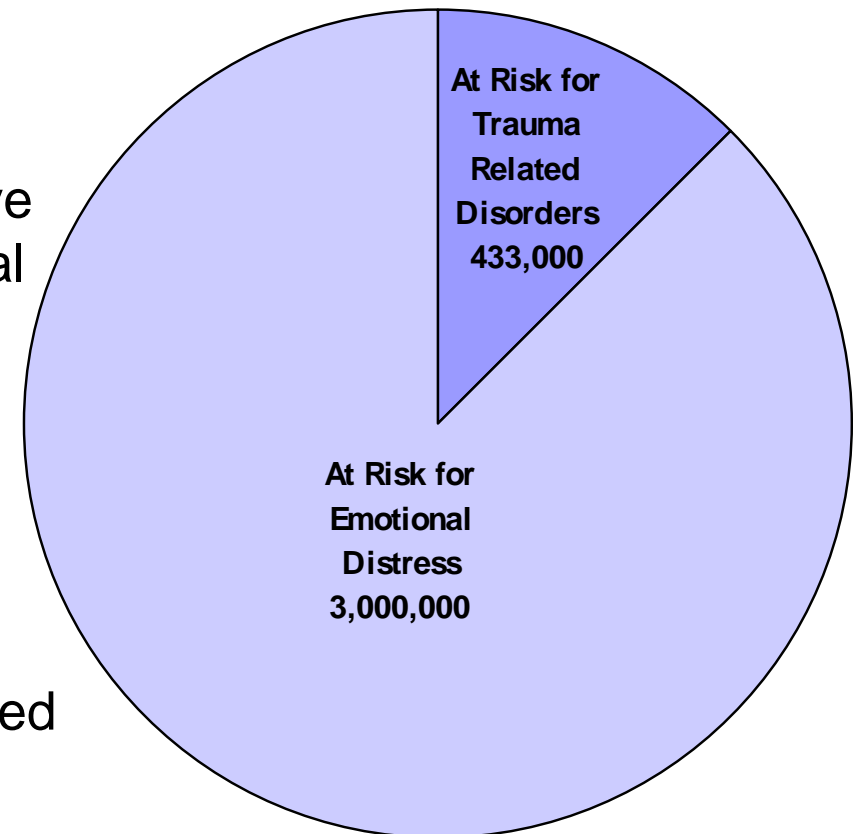


- Focus on supporting healthy coping and assisting each survivor to return to a pre-disaster level of functioning
- Community-based service delivery (shelters, family assistance centers, places of worship, schools, workplaces)
- Rely on a mix of MH professionals, and other community workers
- Outreach viewed as a critical element in reaching people who typically do not see themselves in need of mental health services following a disaster
- Culturally competent to encourage participation

# Mental Health Response Strategies



- Two categories of need:
  - Broad-based outreach and public education concerning normative reactions to trauma, and supportive counseling to respond to emotional distress
  - Identification of individuals with intensive and persistent trauma reactions and provision of appropriate interventions (population at risk for trauma-related disorders)



# Project Liberty Time Line



<b>2001</b>	
<i>September</i>	World Trade Center Attacks
	President Bush declares disaster in NYC and surrounding counties
	Office of Emergency Management sets up at Pier 92
	OMH submits \$22.7 mil ISP application to FEMA/CMHS on 9/19, which is approved 9/27. Project Liberty under way.
<i>October</i>	Project Liberty crisis counseling training begins
	Formal outreach, education and crisis counseling begins
<i>November</i>	Media campaign begins
	Evaluation of services begins with completion of encounter logs
<i>December</i>	Fire extinguished at WTC
<b>2002</b>	
<i>March</i>	Six-month anniversary
<i>May</i>	Recovery at WTC site ends
<i>June</i>	ISP ends and \$132 mil RSP begins
<i>August</i>	FEMA/CMHS approve enhanced services
	Media campaign gears up for anniversary
<i>September</i>	Commemoration of One-Year Anniversary
	Death toll from WTC set at 2,801

# Project Liberty Time Line (cont.)



<b>2003</b>	
<i>January</i>	Development of enhanced services curricula, tools and training under way
<i>May</i>	Child and Adolescent Trauma Treatment services begin Enhanced services training and service provision begin
<i>June</i>	Sesame Street <i>You Can Ask!</i> campaign launched Phase down of Group 1 New York City provider agencies begins
<i>September</i>	Commemoration of Second-Year Anniversary
<i>November</i>	Media campaign focuses on resiliency
<i>December</i>	Phase down of Group 2 New York City/county provider agencies Phase down of enhanced services for adults
<b>2004</b>	
<i>January</i>	Continuation of crisis counseling and enhanced services for FDNY and in high needs districts for New York City schoolchildren
<i>July</i>	Extension to continue services to FDNY and New York City schoolchildren until December approved by FEMA/CMHS
<i>December</i>	Project Liberty ends





# Implementation challenges

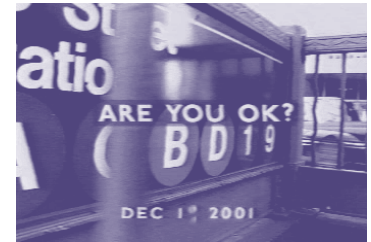
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- Had to develop a whole new disaster mental health infrastructure from scratch, while at the same time responding to the disaster.
  - Local plans of service
  - Mechanisms for payment and reimbursement (new contracts, cost-based budgets in counties, FFS in NYC)
  - Data collection and evaluation
  - Public education materials
  - Media campaign
  - Staff Training
  
- Drew on the expertise and experience of staff within the public mental health system but in atypical ways.
  
- Required an expansion of focus to the general population and large-scale provision of out-of-the office, psycho-educational services.

# Evaluating Project Liberty

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- First Crisis Counseling Program to explicitly build in an evaluation component
- Engaged with academic partners, notably Mount Sinai School of Medicine's Division of Health Services Research, to design and conduct evaluation activities
- Core components:
  - Collection of service encounter data from providers
  - Collection of recipient feedback about their experiences, needs, and opinions on the helpfulness of Project Liberty and their satisfaction with services received through paper based, anonymous mail surveys and through confidential telephone interviews
  - Collection of staff feedback through anonymous mail surveys

# Program Highlights and Accomplishments

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all in this  
together.

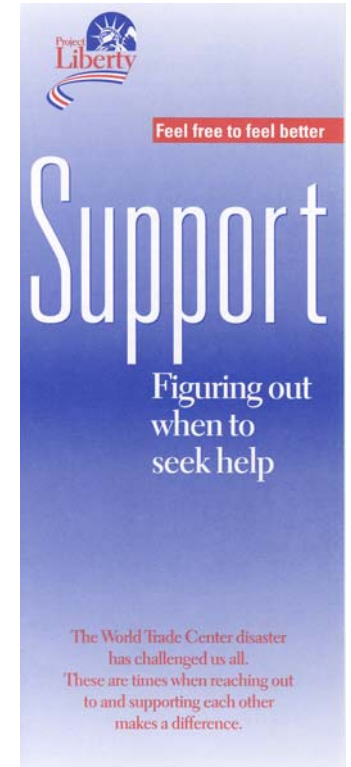
- Organized training for mental health and other community workers in outreach-based, short-term supportive counseling and public education techniques (more than 6,600 staff trained).
- More than 200 mental health agencies provided counseling services in NYC/Counties. In NYC schools, there were programs in approximately 500 schools staffed by school-based counselors and more than 100 community-based organizations working with school-age youth.
- Collected more than 930,000 encounter logs to document and evaluate Project Liberty service delivery.
- Approximately 1,500,000 individuals received direct face-to-face counseling services and/or participated in group public education sessions.
- Media-based public education campaign included radio, print materials, posters on subways and buses; telephone surveys show that millions of New Yorkers knew about Project Liberty.



# Project Liberty Material Distribution

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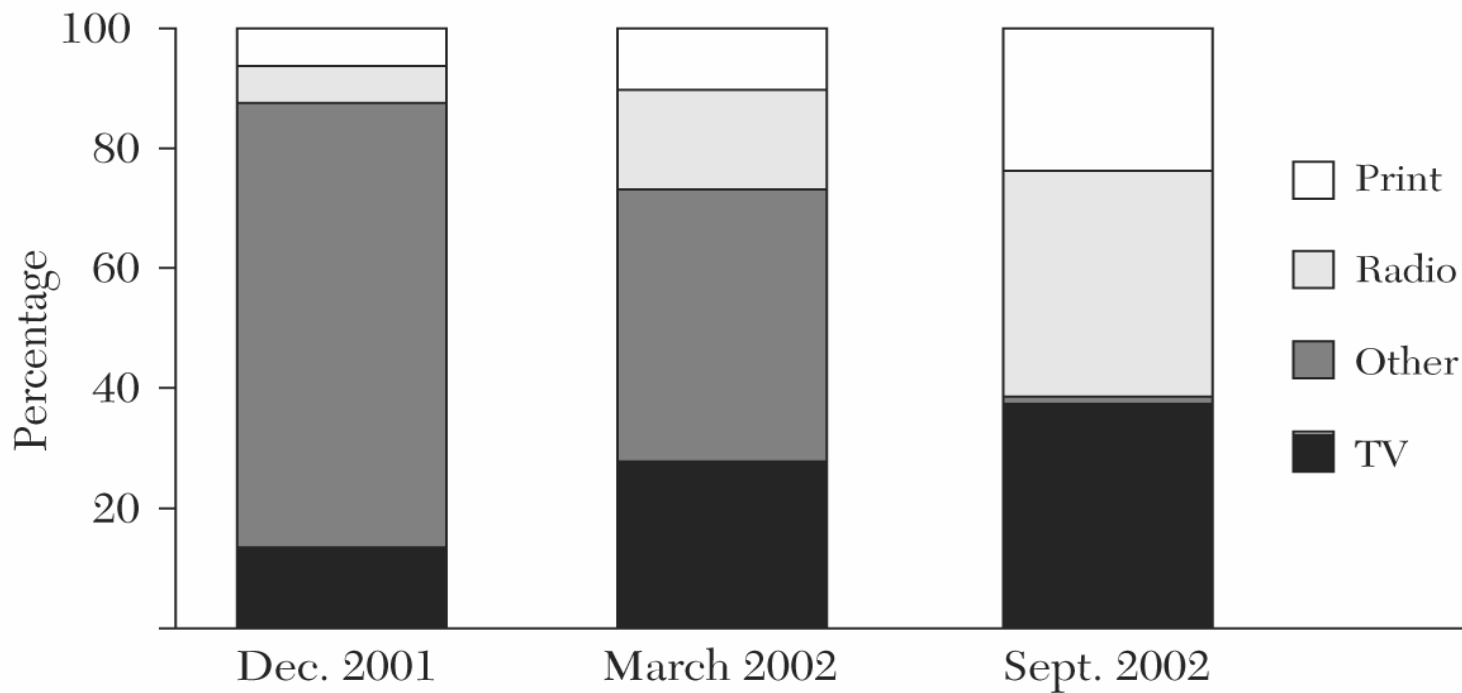
- In addition to face-to-face crisis counseling and public education sessions, more than 20 million pieces of educational material were distributed throughout the disaster area by Project Liberty providers.
- More than 450,000 individuals received individual educational contacts providing information about disaster mental health and services offered by Project Liberty.
- 91% of respondents to the Project Liberty Feedback Survey rated the helpfulness of the educational material they received as “Good” or “Excellent.”





**Figure 2**

Composition of media activity for Project Liberty media campaigns at the three peak spending periods



We're  
all in this  
together.

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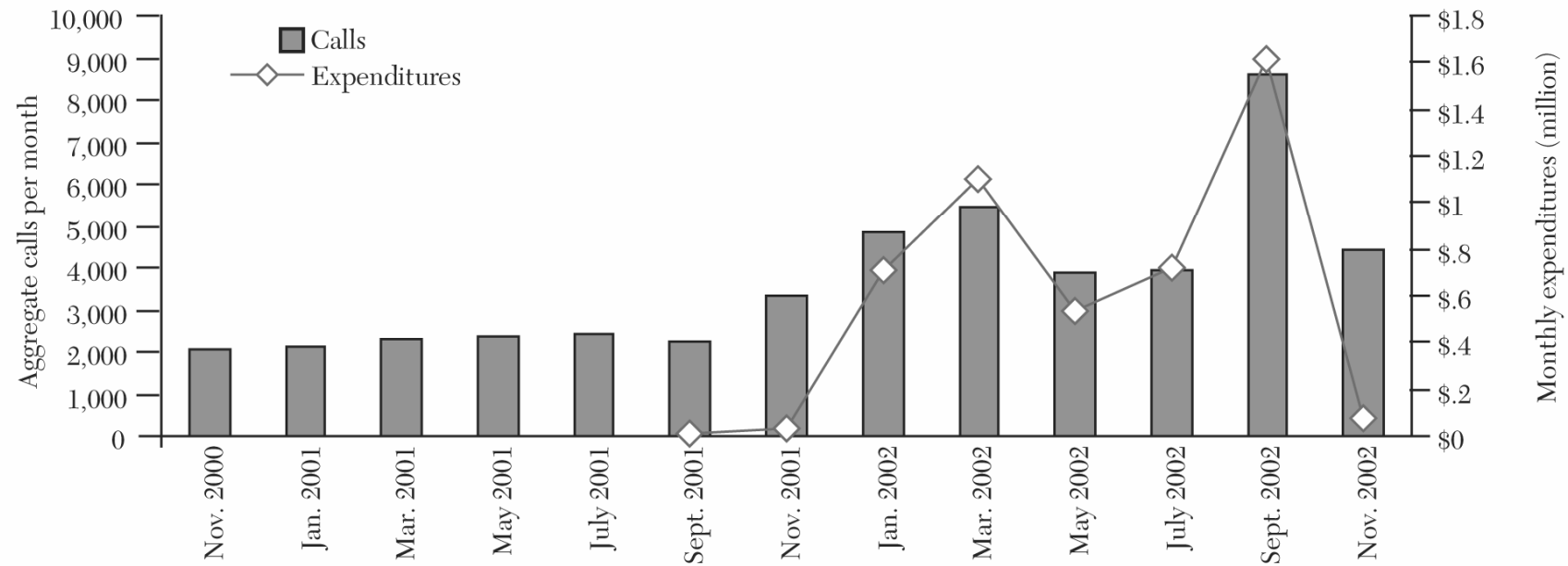
*How effective was the media  
campaign?*





**Figure 3**

Monthly calls to LifeNet from November 2000 through December 2002 and total monthly media spending by Project Liberty



# Sesame Street “You Can Ask!” Distribution

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- **Special children’s campaign with Sesame Street Workshop to help 3-8 year-olds develop coping skills and to provide practical strategies for parents, teachers, and caregivers to help their children in times of crisis and distress.**
  - **Tri-language (English, Spanish, Chinese)**
  - **Video, print, and online outreach materials**
  - **Distribution of materials through an extensive network of parent, teacher, and child-care service settings in NY, NJ, and CT**
  
- **75,000 Kits were distributed to schools and other agencies serving children.**



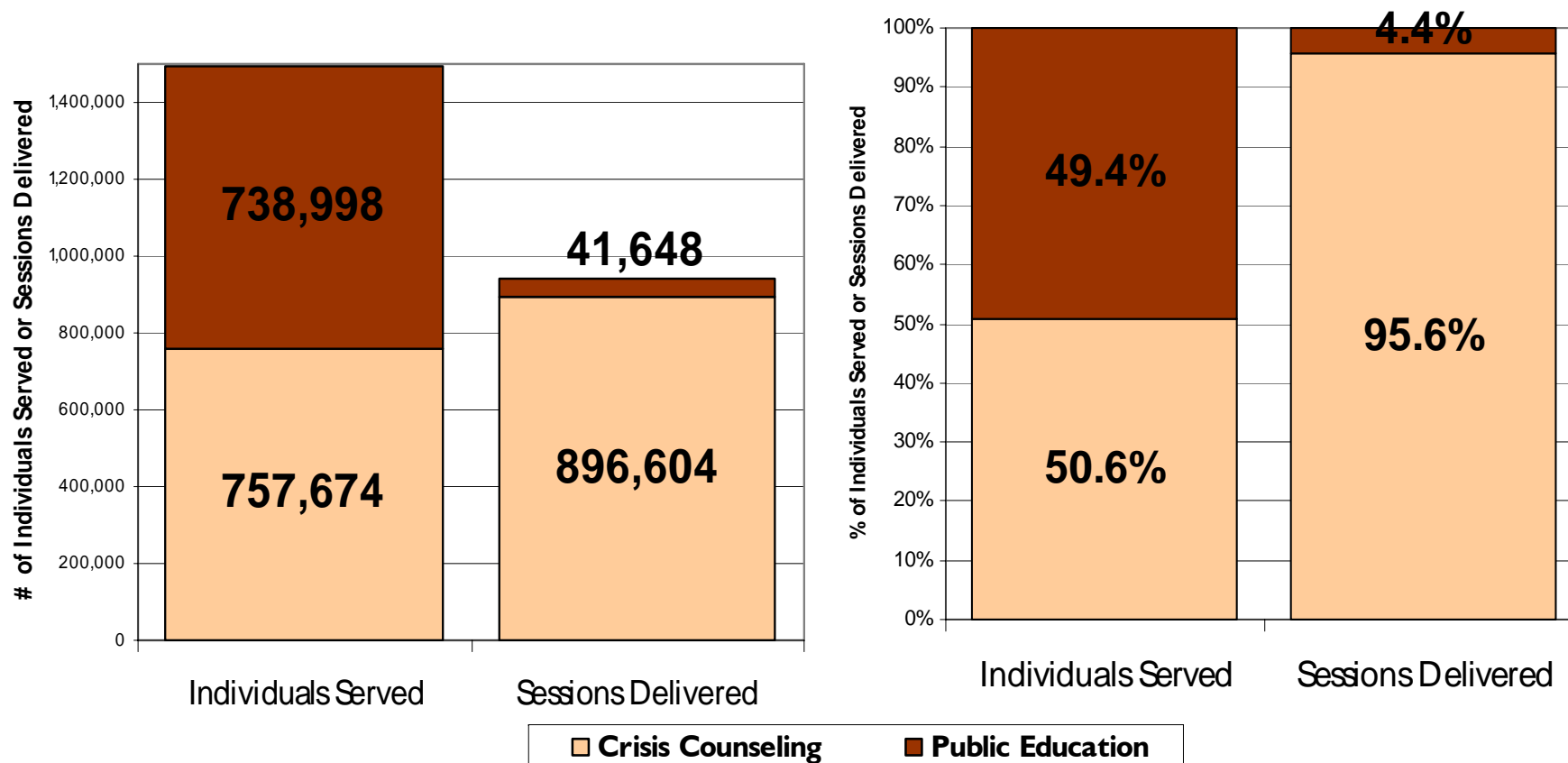
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*If you offer free counseling services post disaster, will people use them?*

# Connecting with Those in Need



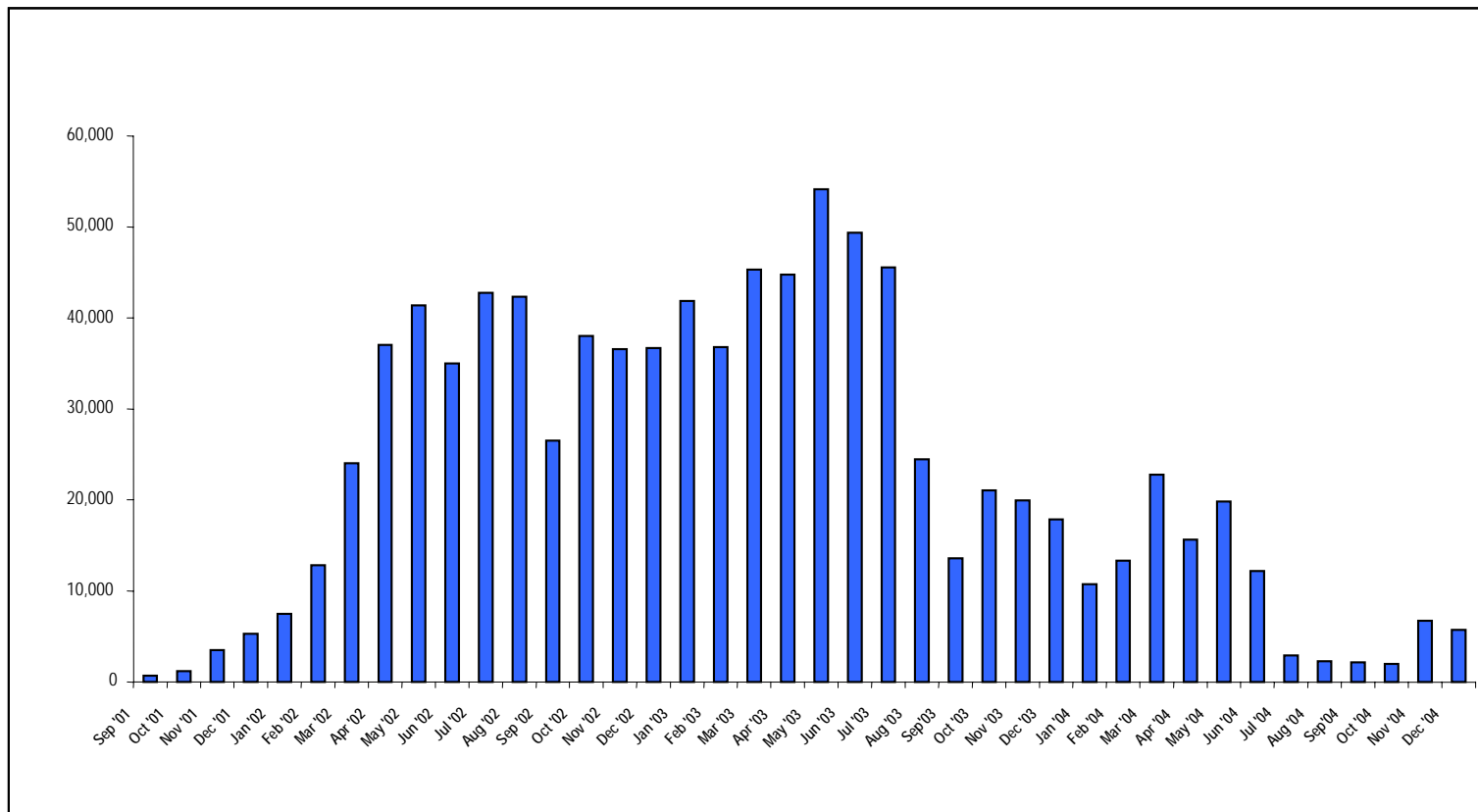
Nearly 1,500,000 individuals received face-to-face crisis counseling and group public education services (by comparison, the total number of individuals served in the NYS public mental health system in 2003 was estimated to be 600,000).



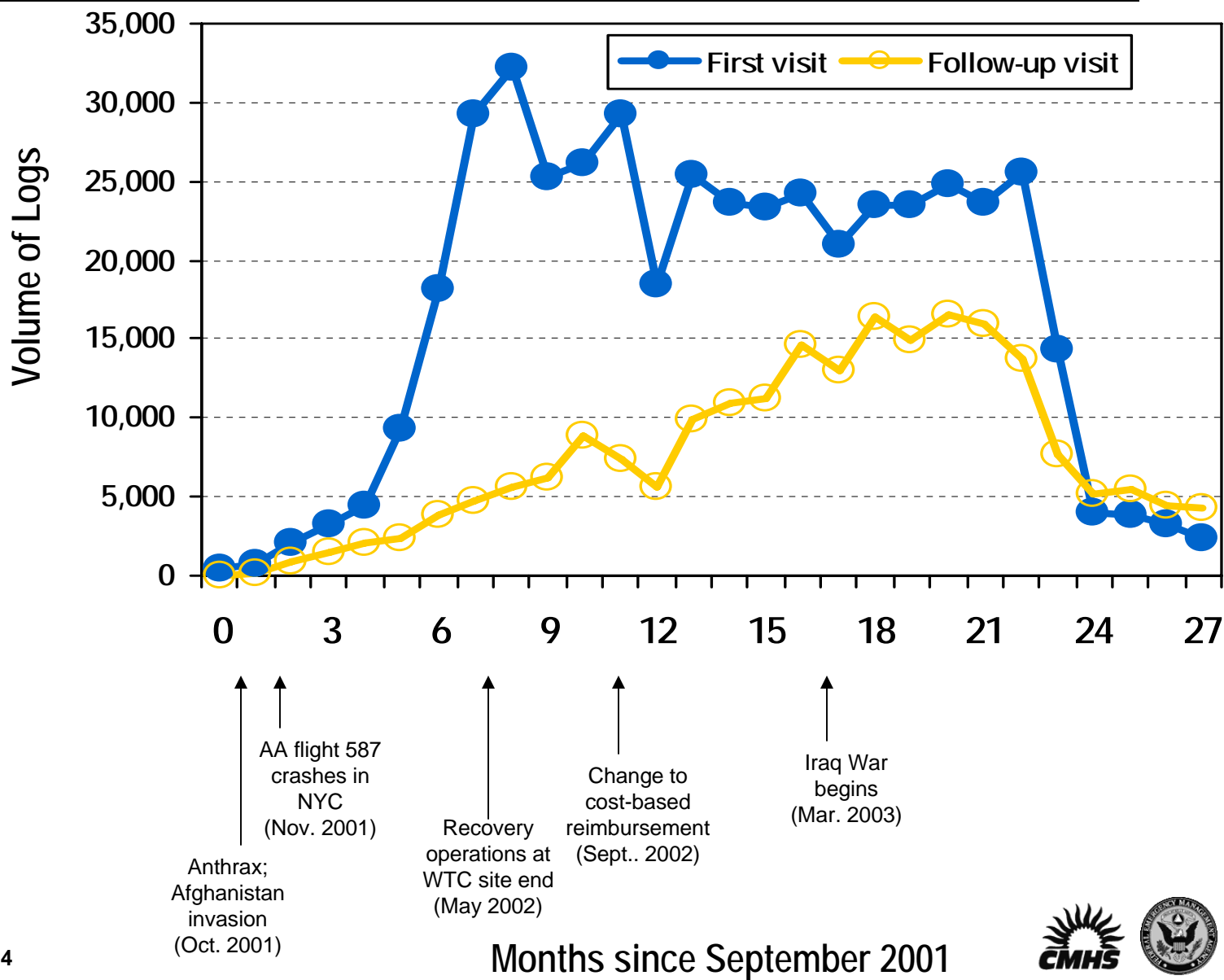
# Project Liberty Service Volume over Time



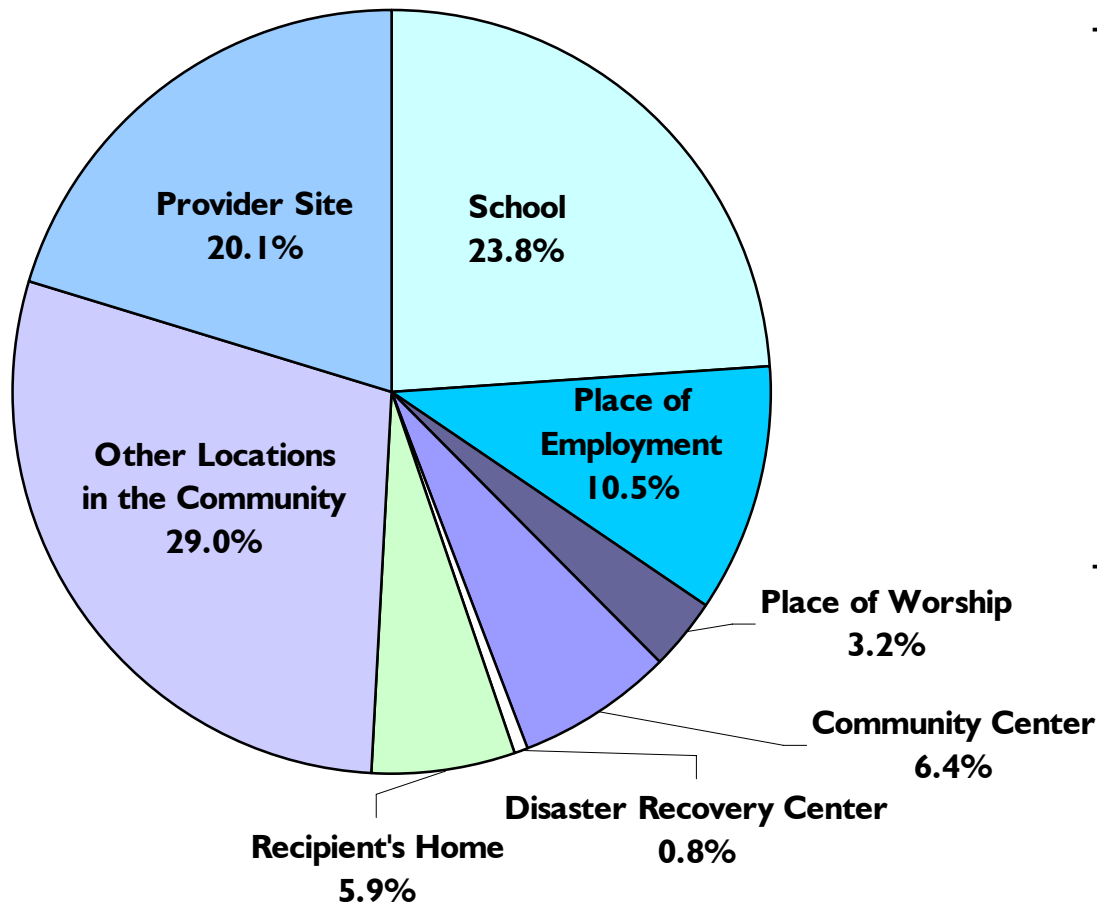
## Sessions (All Types) per Month



# Volume of service logs for first and follow-up visits for 27 months after the attacks on the World Trade Center



# Project Liberty in the Communities



Data processed as of June 18, 2004

→ Approximately 80% of all Project Liberty sessions are delivered in locations out in the communities we are serving.

→ Only 20% of services are conducted at the providers' site

# Who did Project Liberty served?

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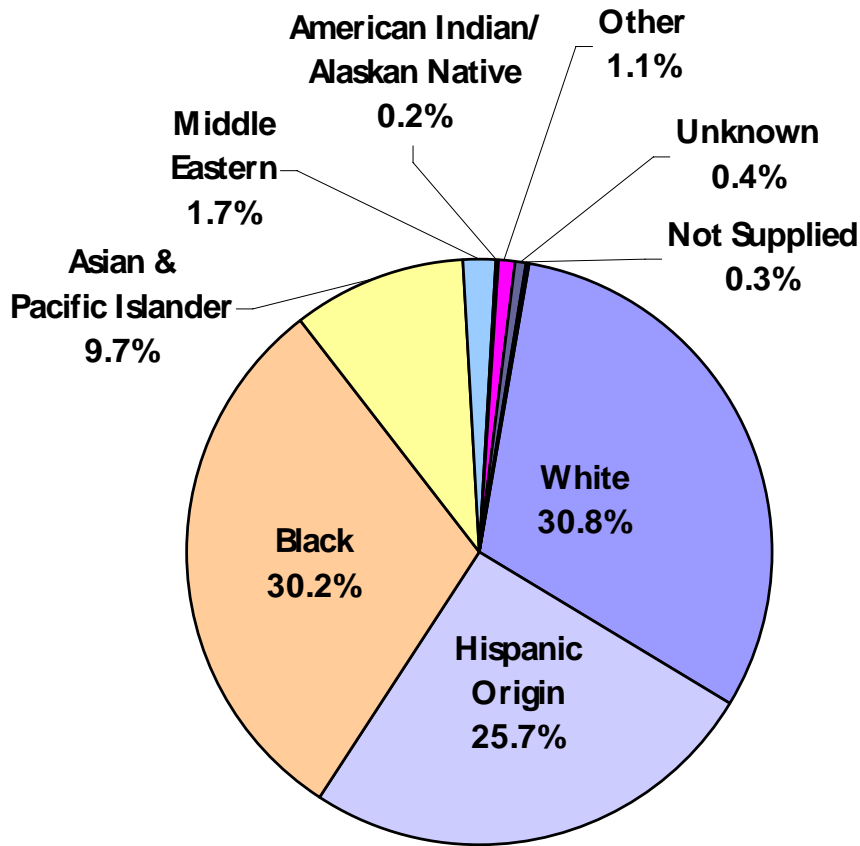
*Hasta  
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hablar.*

- **Comparison to census data shows that those served reflect the demographic and racial characteristics of the community.**
- **Children and youth under the age of 18 comprised 15% of those who received individual crisis counseling.**
- **20% of counseling sessions were provided in languages other than English. In all, services were provided in 37 different languages.**
- **53% of recipients were female.**

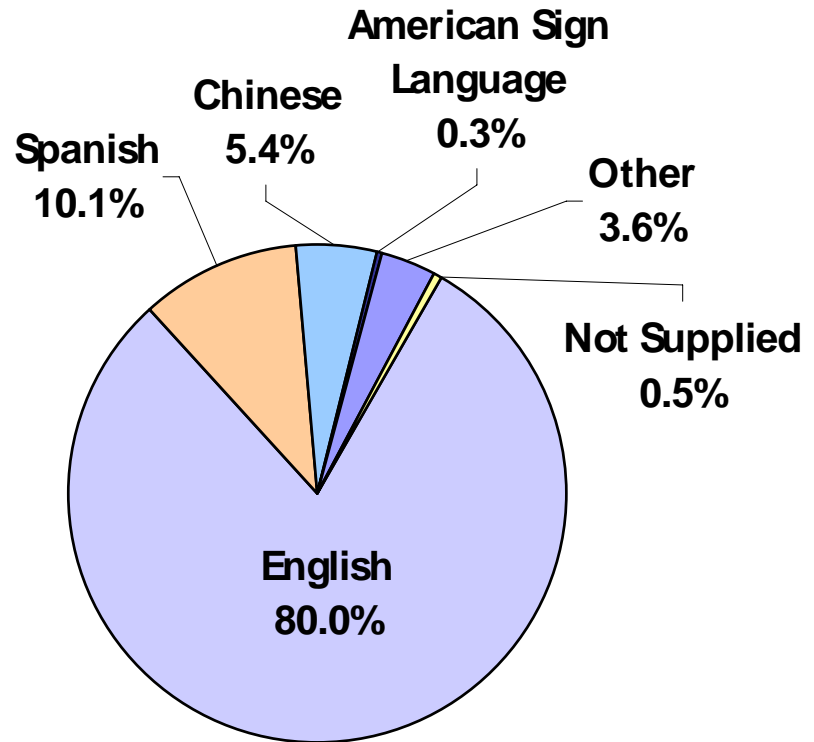
# Characteristics of Individuals Served

*Hasta los héroes necesitan hablar.*

## Ethnicity



## Preferred Language



Data processed as of June 18, 2004.

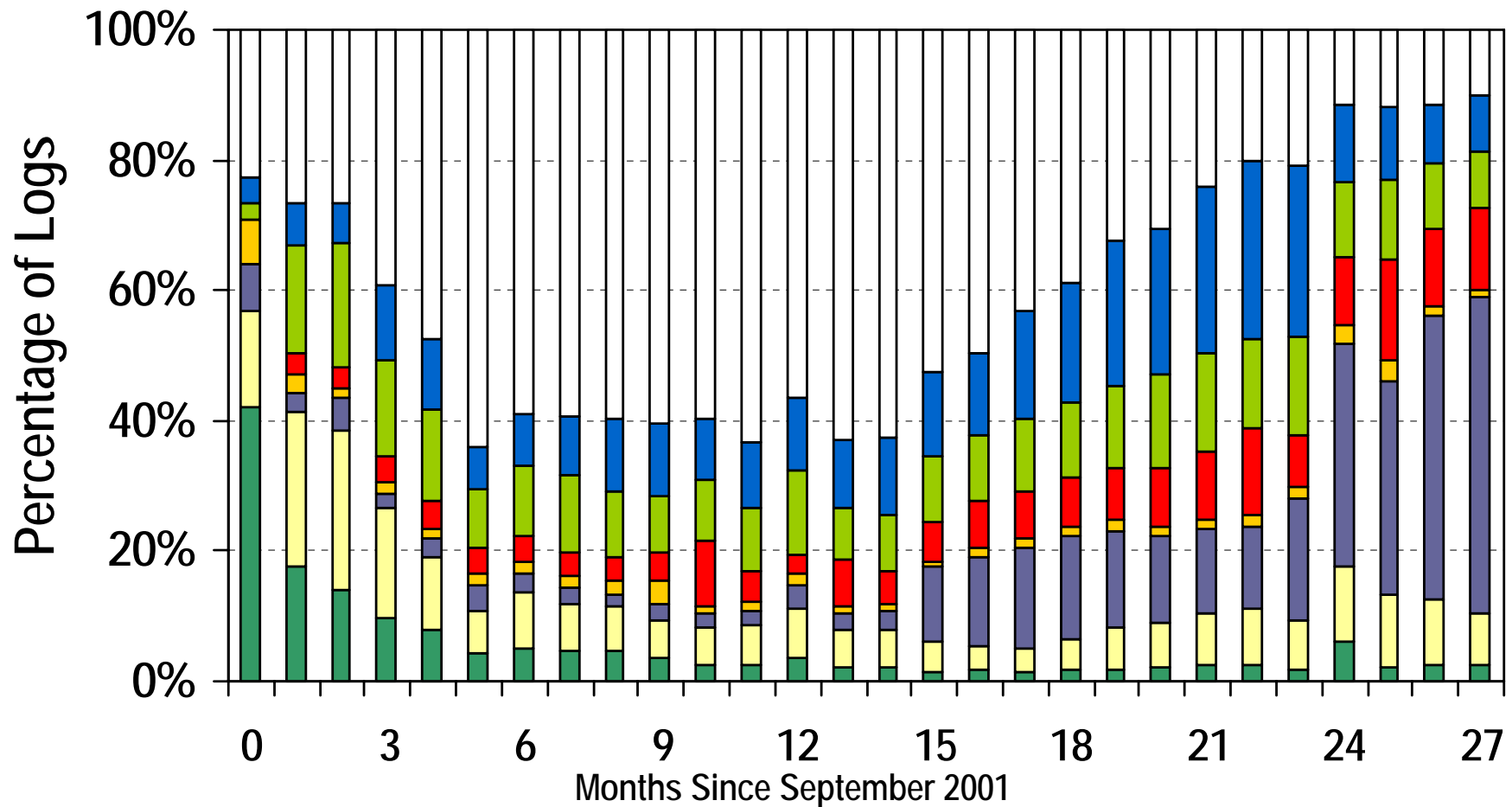
# Estimated Needs vs. Individuals Served through Individual Crisis Counseling



Risk Category	Needs Estimate	# Persons Served	% Served
Direct victims	75,690	42,975	57%
Rescue workers	47,017	50,797	108%
Unemployed	525,203	59,742	11%
Global outreach	2,500,755	373,928	15%
<b><i>Total</i></b>	<b><i>3,148,665</i></b>	<b><i>490,304</i></b>	<b><i>17%</i></b>

*The FEMA Needs Estimate formula uses a multiplier to approximate the # of family members sharing a household with a victim while the risk category "Family of Missing or Deceased" on the logs includes family members who do not reside in the same household.*

# Proportion of first-time Project Liberty counseling visits after the terrorist attacks on the World Trade Center, by risk category





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# *What event reactions do service users report?*

# Serving Individuals Having “Depression-like” Reaction Clusters

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→ **3 or more** of these reactions:

- **Despair/hopelessness**
- **Difficulty eating**
- **Fatigue/exhaustion**
- **Difficulty concentrating**
- **Difficulty remembering things**
- **Difficulty making decisions**
- **Isolation and withdrawal**
- **Emotionally numb or disconnected**
- **Stomach problems**
- **Suicidal thoughts**

**16% of  
Recipients  
met this  
criterion**

# Serving Individuals Having “PTSD-like” Reaction Clusters

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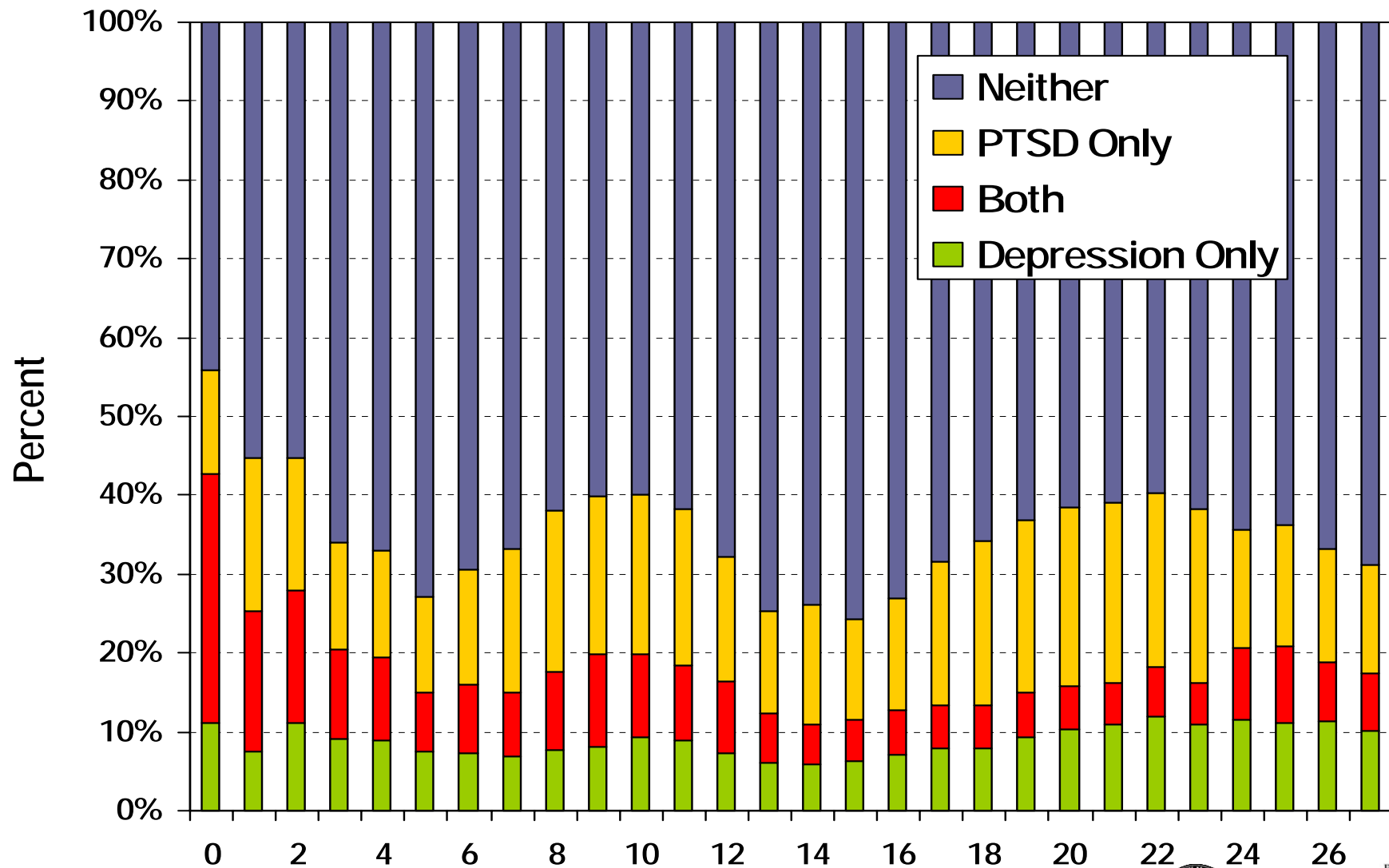
→ Based on the presence of 3 or more of the following reactions:

- Distressing dreams
- Intrusive thoughts or images
- Hyper-vigilance
- Reluctance to leave home
- Feeling anxious or fearful
- Difficulty falling or staying asleep
- Preoccupation with death

**26% of recipients met this criterion**

**8% met both PTSD and Depression Criteria**

Percentages of 465,428 recipients of Project Liberty counseling services who showed symptoms of major depressive disorder, post-traumatic stress disorder (ptsd), or both conditions



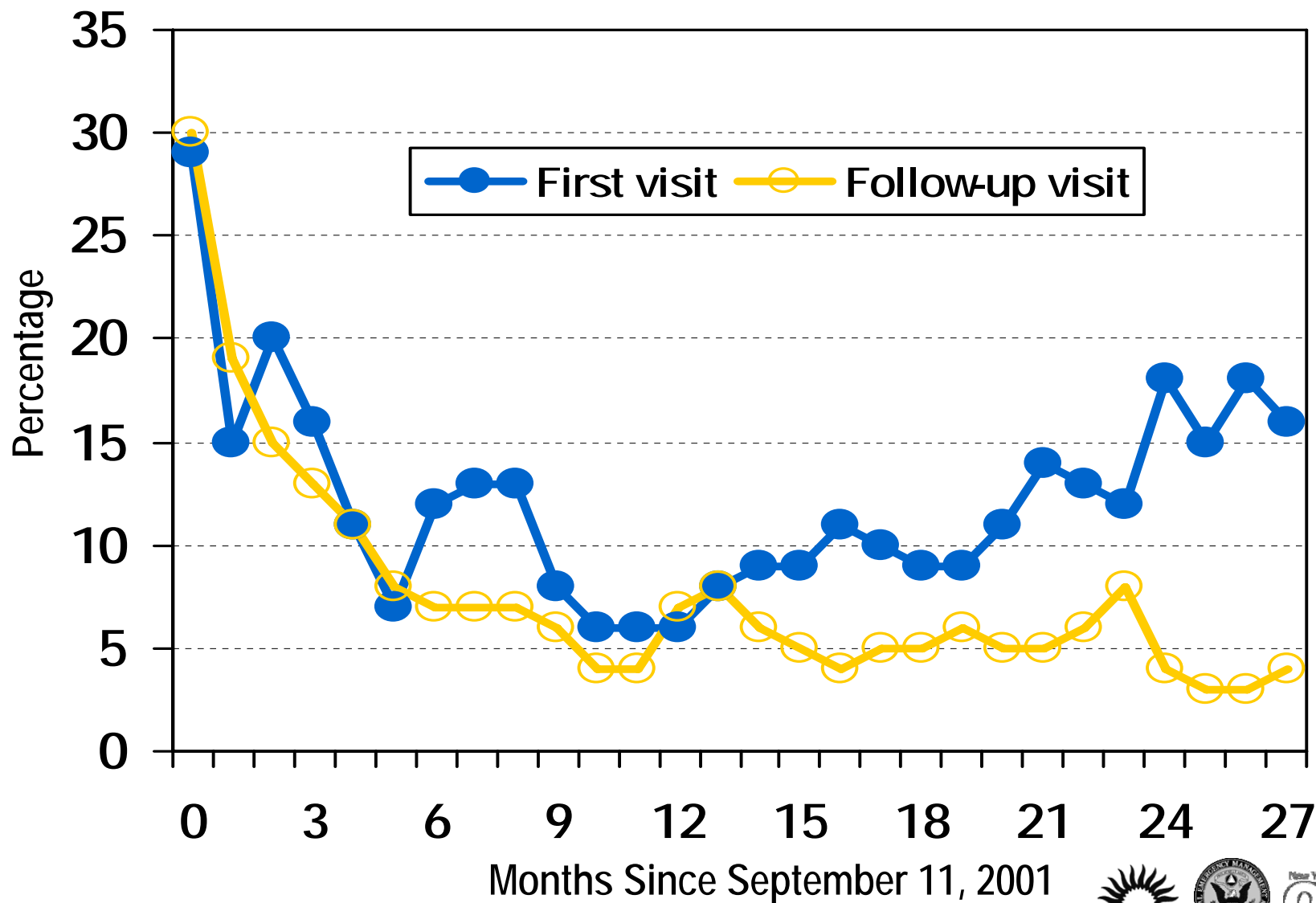


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*How many people received referrals to more intensive services?*

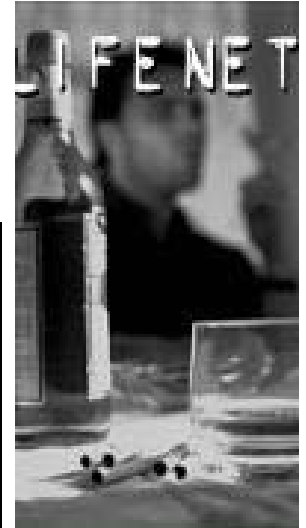


# Percentage of Project Liberty visits for individual counseling that ended with a referral to more intensive mental health care



# Providing Referrals to Mental Health Treatment

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Risk Groups	% Receiving a referral
Family of Missing or Deceased	20%
Directly Impacted	15%
Uniformed Personnel	16%
Rescue Workers	14%
Parents /Caregivers of School Children or School Children	6%
Unemployed	13%
Disabled	13%
General Population	6%
Overall – All Recipients of Individual Counseling	10%

# Expanding the Crisis Counseling Model

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- While Project Liberty services appeared to facilitate a rapid return to pre-disaster functioning for the majority of individuals encountered, the service alone were not sufficient for a sizeable minority of adults and children who were experiencing persistent traumatic symptoms.



# Project Liberty Enhanced Services

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- **Expanded the CCP model to meet the needs of more severely impacted individuals by offering:**
  - **New screening methods**
  - **Broader set of free, evidenced-based brief treatment interventions**
  - **Additional training and technical assistance to a select set of service providers**



# Enhanced Services Interventions for Adults

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- Two intervention types that address problems commonly found among adults following traumatic events:
  - Cognitive Behavioral
  - Traumatic Grief / Survivor Guilt
- Interventions were designed to deal with moderate to significant levels of distress based on models of care with proven effectiveness.
- Both included between 10 and 12 sessions with an introductory session where the referral tool was readministered.
- Focus was on understanding the needs of the individual while providing appropriate psycho-education and skills.



# Cognitive Behavioral Intervention

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- **Developed by Jessica Hamblen and colleagues with the NCPTSD**
- **Components**
  - **Psycho-education**
  - **Coping Skills**
  - **Cognitive restructuring**
- **Focus**
  - **Teaching clients to recognize symptoms of post-disaster distress**
  - **Working with participants to develop skills to cope with anxiety, depression, or other symptoms**
  - **Helping service recipients to make the connection between thoughts and feelings and to replace distorted perceptions with more balanced, accurate views**



# Traumatic Grief /Survivor Guilt Intervention

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→ Based on work of Katherine Shear and colleagues at the University of Pittsburgh School of Medicine

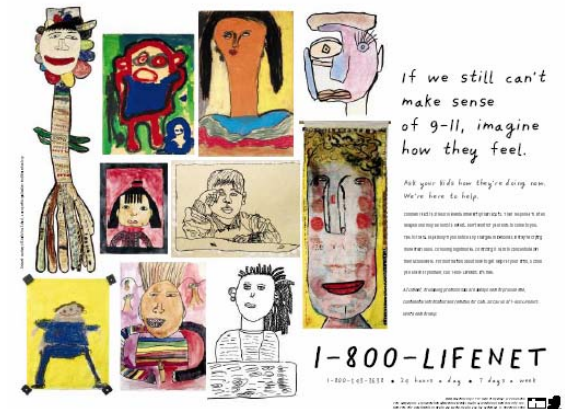


→ Focus

- Dealing with the loss of life
- Assessing where the client is in the grieving process and providing him or her with the opportunity to cope with loss and life in the absence of the person who has died

# Enhanced Services Interventions for Children and Adolescents

- Four intervention types were developed to help children and youth (ages 6 to 18 years) and their families deal with persistent and continuing difficulties related to 9/11, to return to pre-disaster levels of functioning or toward adaptation, and to avoid long-term mental health problems often experienced after a traumatic event:
  - Anxiety
  - Depression
  - Disruptive Behavior
  - Post-traumatic Stress and Grief
- Developed by a group of national experts in conjunction with NYSPI and Columbia University
- Included a maximum of 10 sessions, where the referral tool was readministered by the clinician in the introductory session
- Focus on understanding the needs of the child while providing appropriate psycho-education and skills



# Making Referrals to Enhanced Services

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- Standardized referral tools developed for adults and children
- Had to be brief, easy to score
- For adults – collaborated with NCPTSD
  - Adapted the Short Post-traumatic Stress Disorder Rating Interview (SPRINT) by Connor and Davidson
- For Children – collaborated with National Center for Child Traumatic Stress.
  - Adapted UCLA PTSD RI as well as incorporated items from the SPRINT
- Crisis counselors were trained in use of the tools

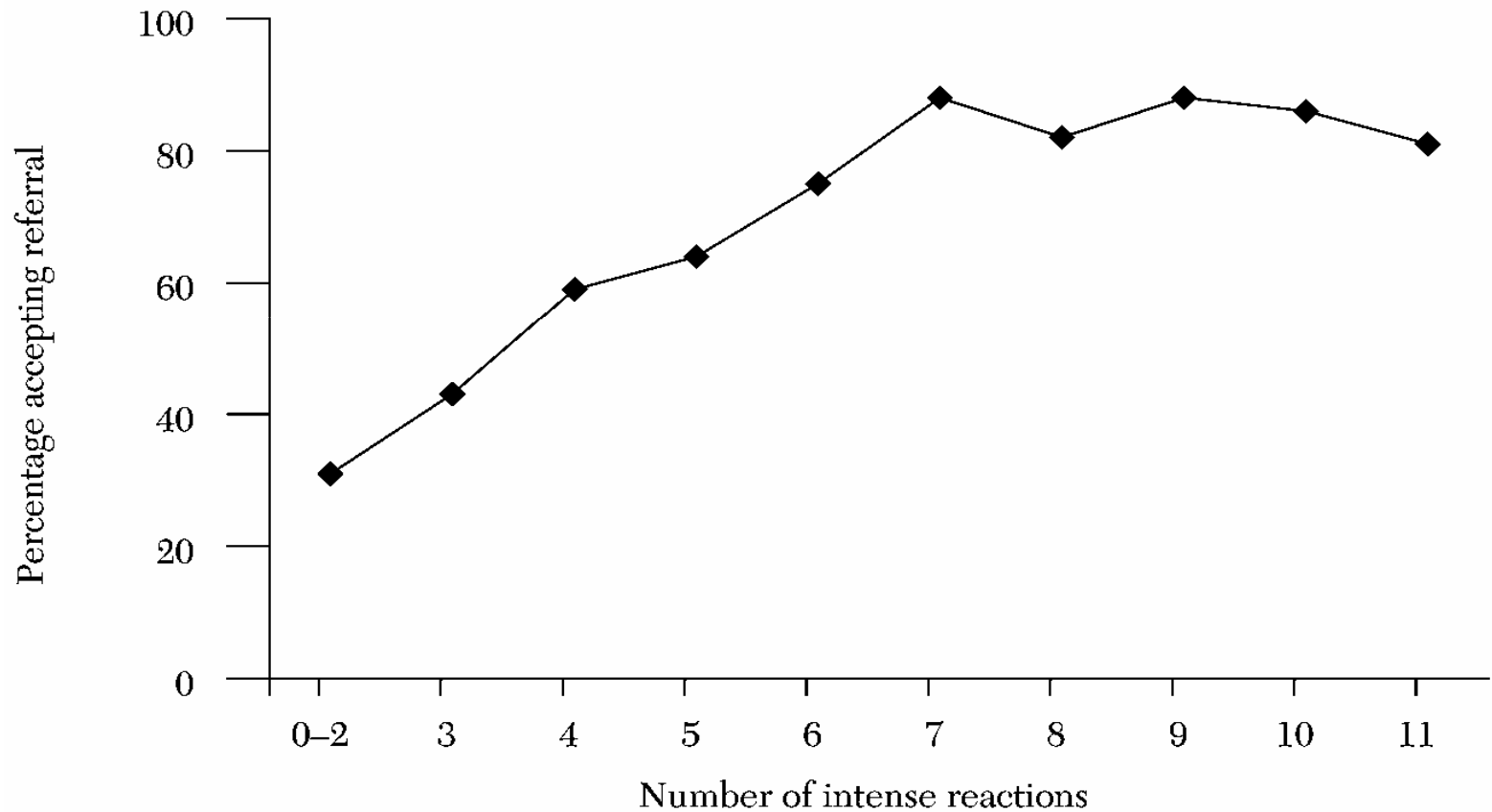
# Making Referrals to Enhanced Services

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- Performance of adult referral tool
- Examined 788 tools collected between June and October 2003
- High internal consistency ( $\alpha=.93$ )
- Using cut point of 3 or more items scored at “moderately” or “quite a bit”, 65% of persons were offered a referral
- 71% of those offered a referral expressed interest
- Interest was higher the greater number of intense reactions were noted.

**Figure 1**

Percentage of referrals to enhanced services accepted by the 543 persons offered such a referral, by number of intense reactions on the expanded version of the Short Post-Traumatic Stress Disorder Rating Interview<sup>a</sup>



<sup>a</sup> Intense reaction measured as a score of 4, quite a bit, or 5, very much

# Making Referrals to Enhanced Services

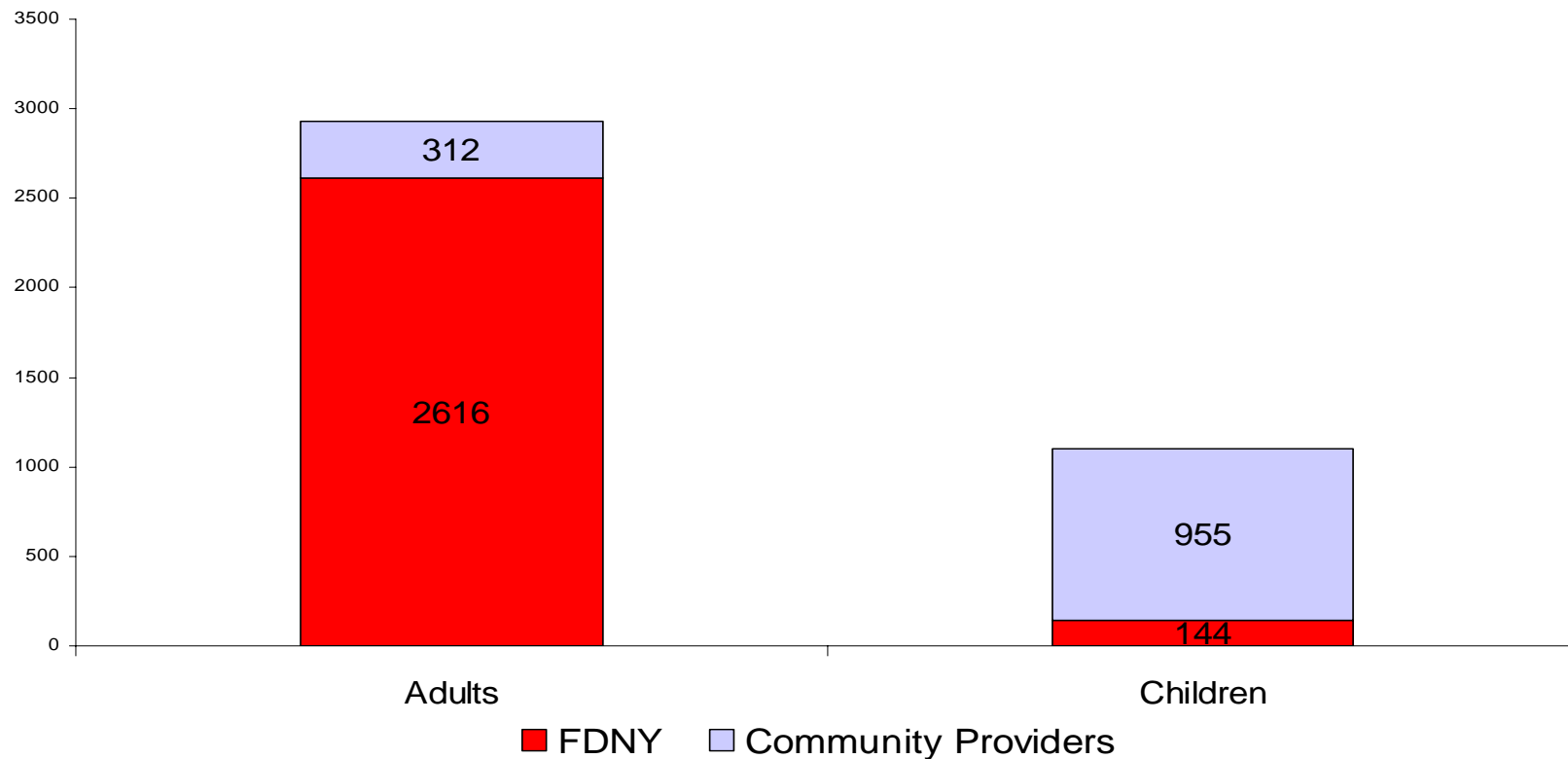
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- For continuous, latent constructs, there is not a single, valid cutoff point.
- Decision rules must be based on judgments of program purpose, capacity and the consequences of false positives in the particular context under consideration.
- A criterion of 7 intense reactions would have yielded a referral rate of 30%

# Enhanced Services Volume



→ 4,027 individuals participated in one or more of the 30,861 enhanced services sessions held





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# Results from written and telephone surveys of Project Liberty service recipients

# Obtaining Recipient Feedback

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- Piloted collection self-report data using two methods
- Instruments used included a telephone interview and a brief, anonymous paper and pencil questionnaire.
- 8 sites participated, 4 both instruments, 4 telephone interview only. Instruments were available in English and Spanish.
- Completed surveys:
  - Brief Questionnaires = 107
  - Telephone Interviews = 153
- Brief Questionnaire distributed program wide July 2003
  - N=356



## Findings concerning data collection methodologies

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Although response rates were modest (14-17%),

- Handing out a brief questionnaire did not reduce rates of completing a form allowing 'permission to contact' for a telephone interview.
- Individuals who participated in the brief questionnaire and telephone interview were representative of those served by Project Liberty in terms of gender, age, race/ethnicity, and preferred language.
- Individuals who completed a telephone interview and a brief questionnaire were representative of all interviewees in terms of gender, age, race/ethnicity, and preferred language, suggesting that the use of either method yields **respondents with similar demographic characteristics.**

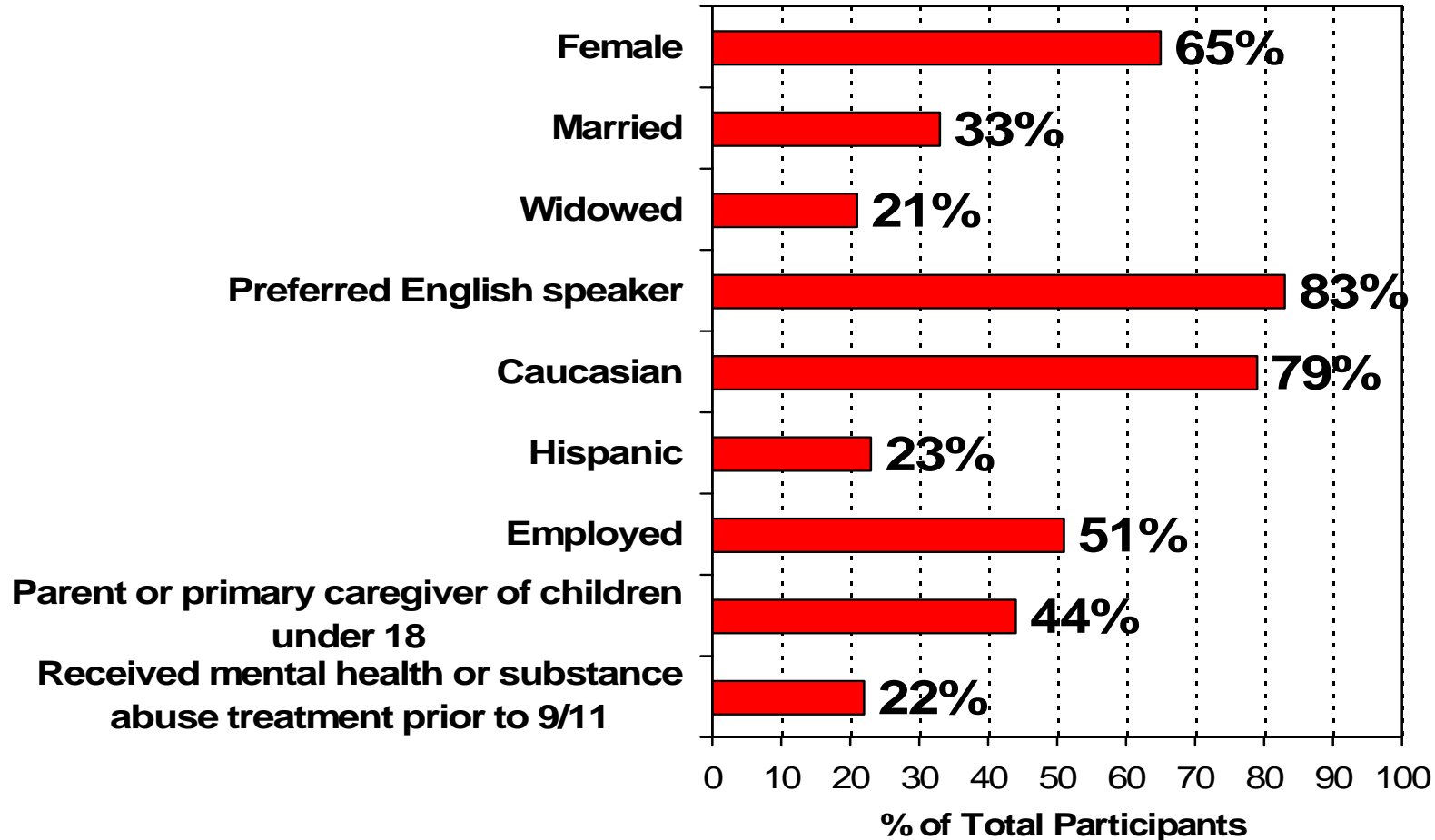
# Evaluation Methodology for Adult Enhanced Services

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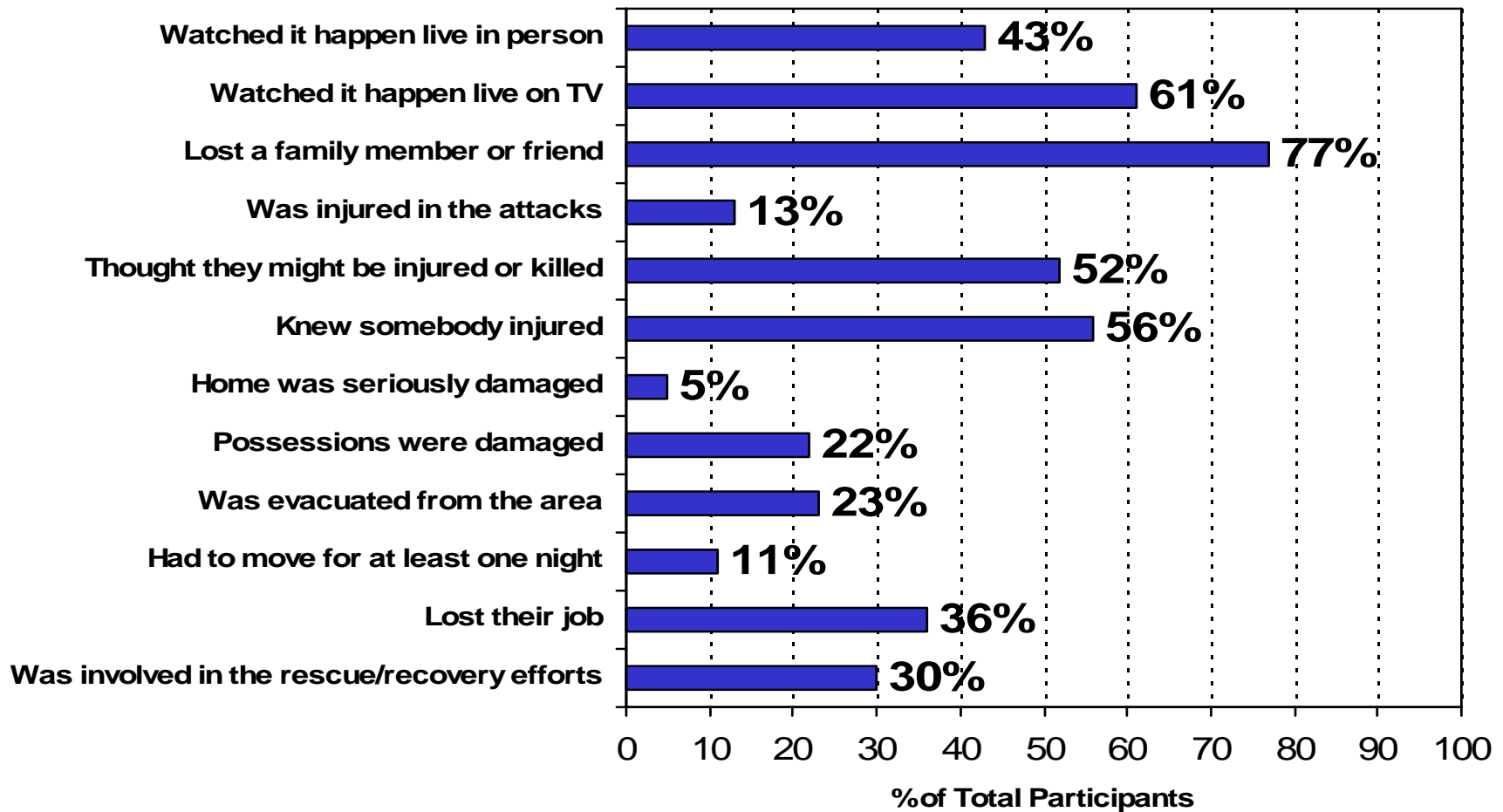


- Pre- and post-interviews were conducted via telephone with service recipients.
- Adults entering enhanced services were asked to sign a permission to contact form and provide a telephone number where they could be reached so an interviewer could obtain informed consent and conduct the interview.
- The phone survey includes sections related to disaster exposure, event reactions, functioning, and satisfaction with services received.
- The recipient would be contacted as soon as possible after entry into enhanced services and then again 7–12 weeks later.
- 93 Baseline interviews were completed, 76 follow-up.

# Enhanced Services: Demographics of Evaluation Participants



# Experience During and Immediately Following the WTC Attacks



# Traumatic Grief

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- Recipients of enhanced services were significantly more likely to report that they knew somebody who had been killed in the World Trade Center attacks (77%) compared to recipients of crisis services (45%) ( $X^2(1)=23.58, p<.001$ ).
- Of the recipients of enhanced services who knew somebody killed, 47% stated that they were still having trouble accepting the person's death when interviewed at baseline.

# Traumatic Grief

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- For those who were having trouble accepting the death of a loved one, a traumatic grief score was calculated based on respondents' ratings on 5 items: 1) how much are you having trouble accepting the death of loved one, 2) how much does your grief still interfere with your life, 3) how much are images or thoughts of loved one bothering you, 4) how much are you avoiding reminders of loved one, and 5) how much are you feeling cut off from others?
- Respondents' traumatic grief scores decreased over time, with 1/3 (N=10) of them reporting no problems at follow up (total scores based on 5-items, ranging from 0 to 10, mean score at baseline = 7.3 ( $SD=2.2$ ), and at follow up = 4.1 ( $SD=3.6$ ); Wilcoxon Signed Ranks  $Z=-3.58$ ,  $p<.001$ )

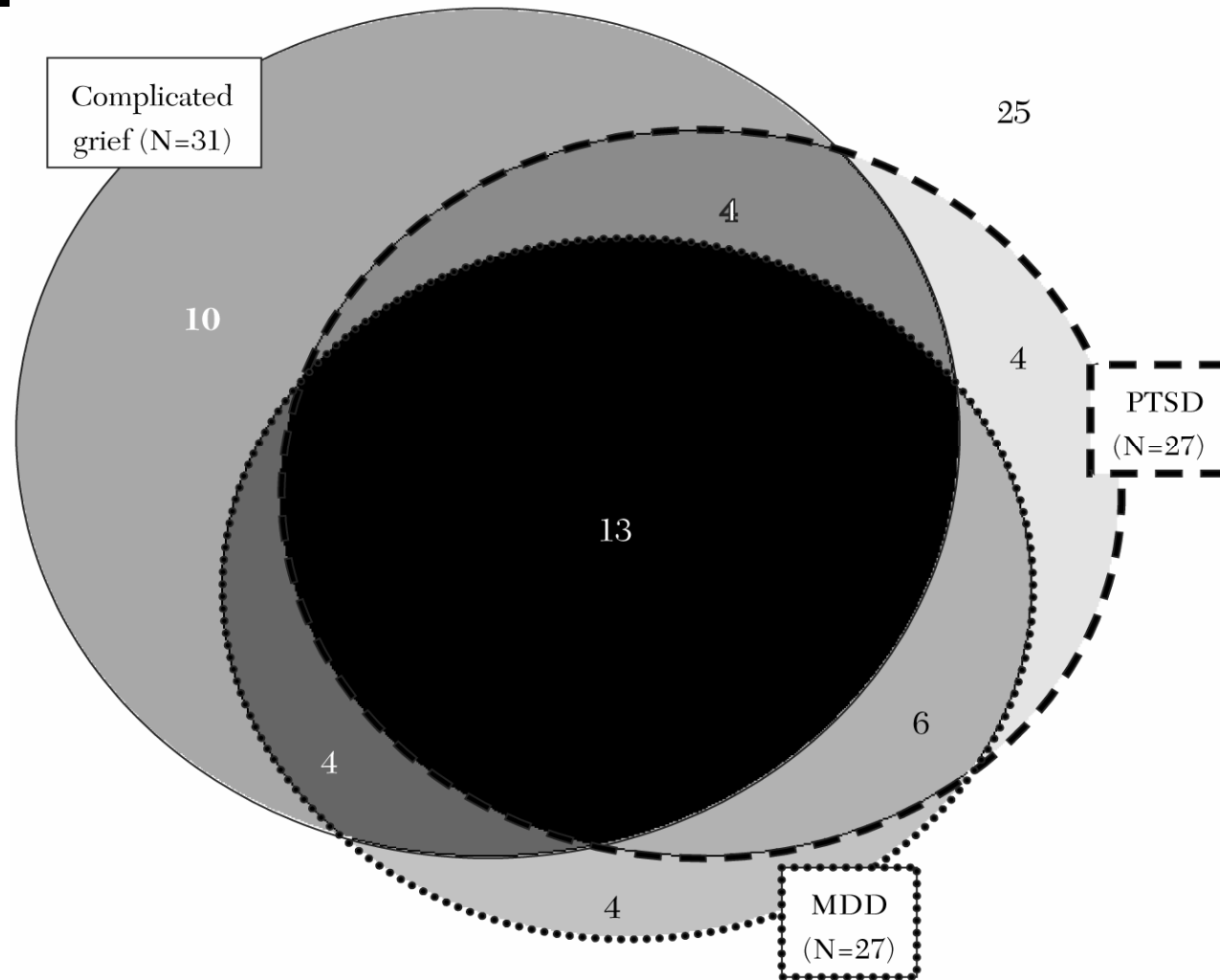
## **Baseline Presence of PTSD, Depression Or Complicated Grief**

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- For PTSD, 39% ( $N=36$ ) of the met criteria suggestive of PTSD, and 9% ( $N=8$ ) met subthreshold criteria.
- For Major Depression 42% ( $N=39$ ) met criteria suggestive of depression and 16% ( $N=15$ ) met subthreshold criteria.
- For those who knew someone killed, 26% ( $N=19$ ) met criteria for probable complicated grief and 12% ( $N=9$ ) met subthreshold criteria.

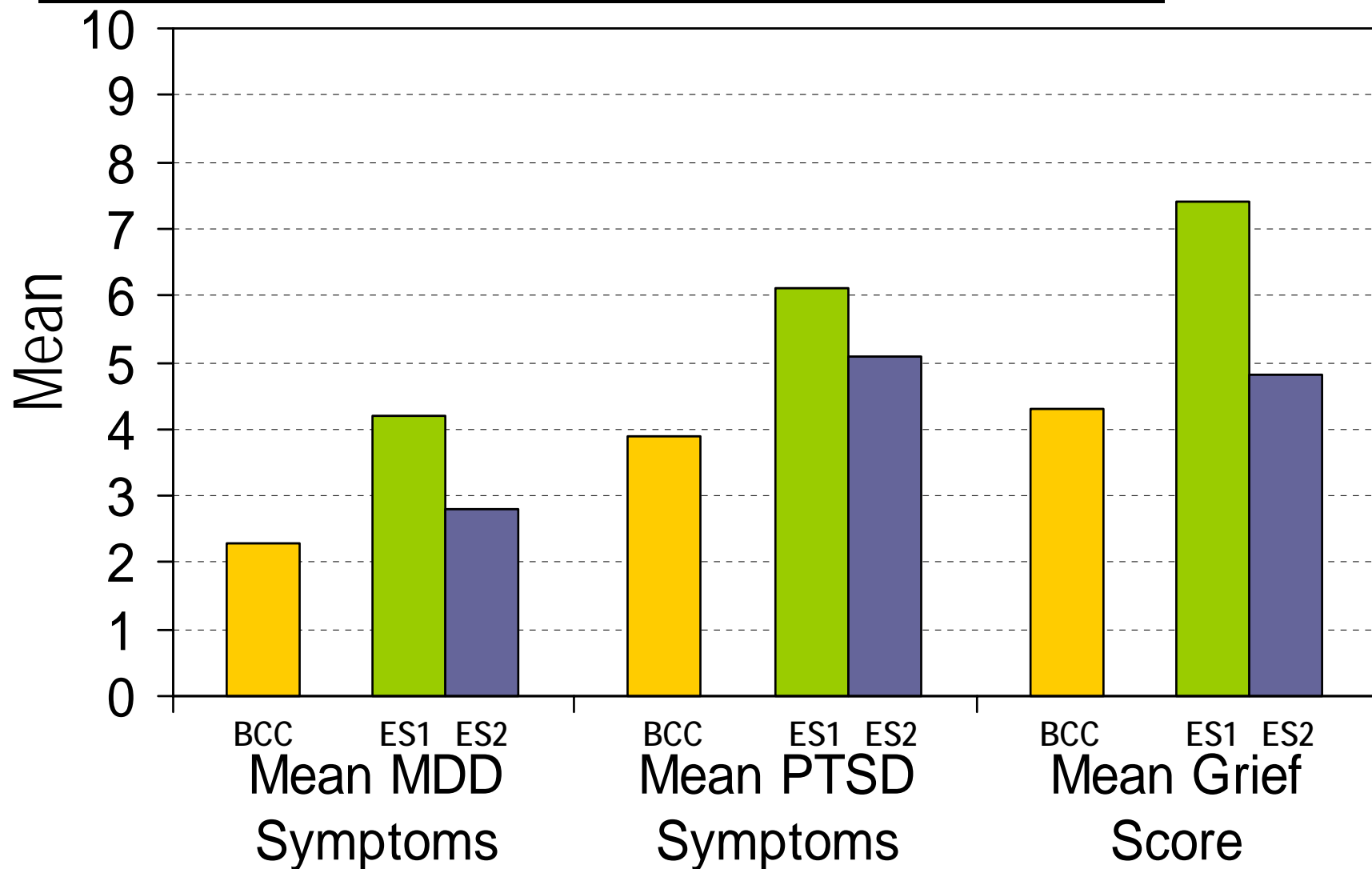
**Figure 3**

Overlap between diagnostic categories for 70 persons who knew someone who died in the September 11, 2001, disaster<sup>a</sup>



<sup>a</sup> PTSD, posttraumatic stress disorder; MDD, major depressive disorder

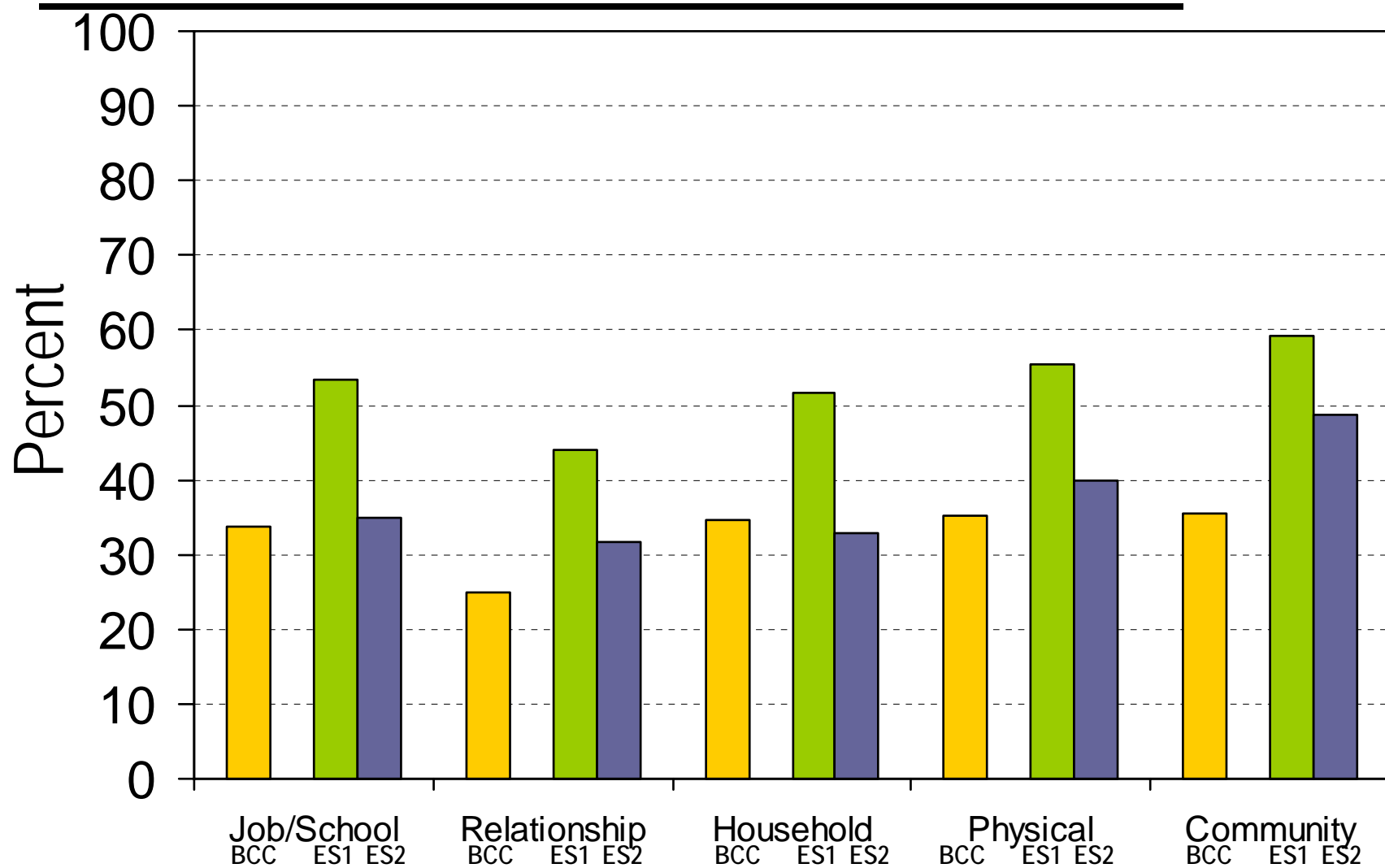
Mean number of symptoms of depression and posttraumatic stress and mean ratings of grief reported by recipients of enhanced counseling services at two time points and by recipients of brief crisis counseling



BCC= Brief Crisis Counseling Sample (N=150); ES1=Enhanced Services 1<sup>st</sup> Interview (N=93); ES2=Enhanced Services 2<sup>nd</sup> Interview (N=76)



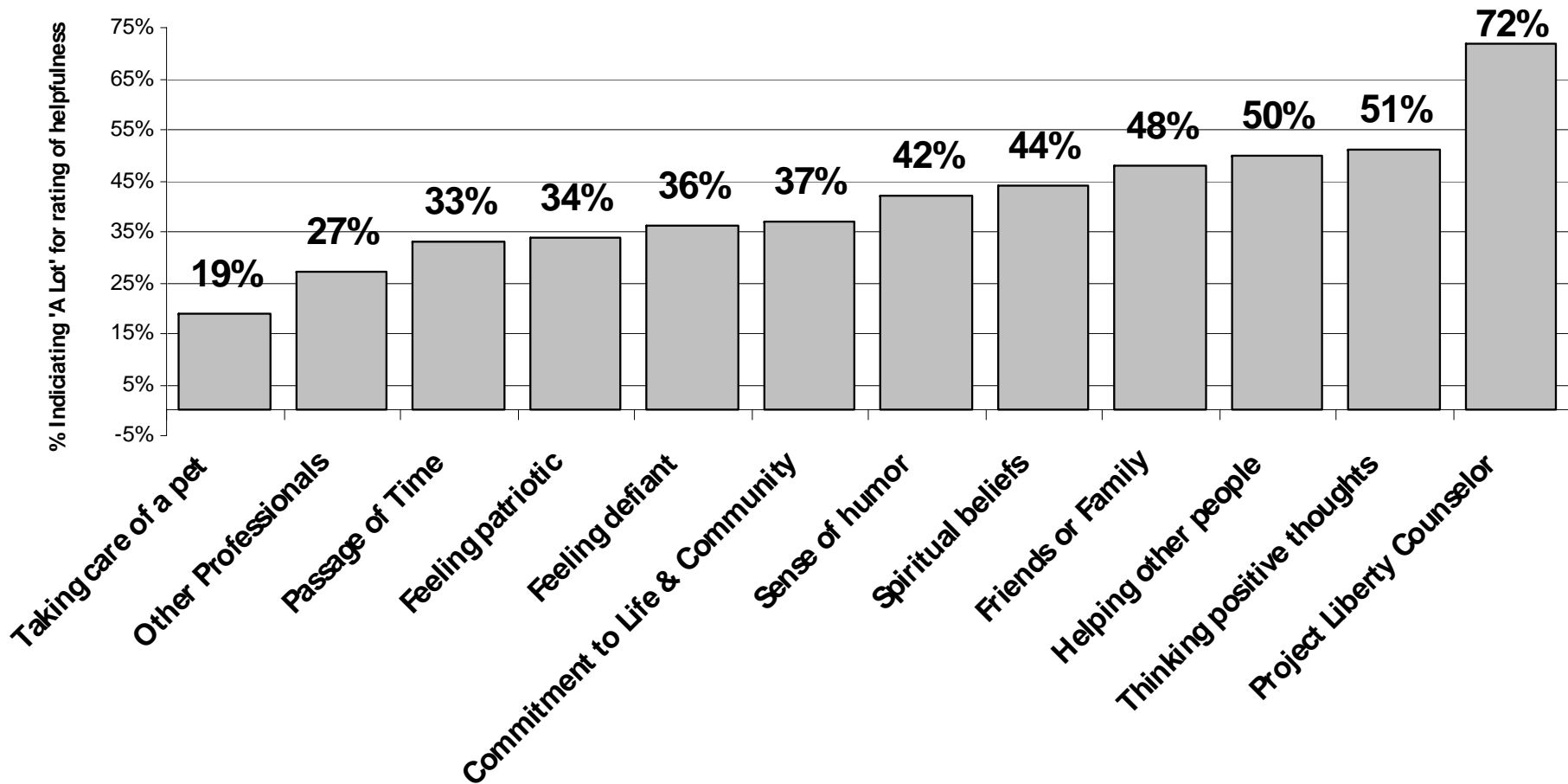
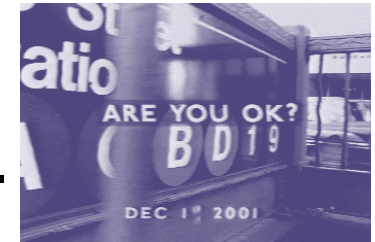
Percent of recipients of brief crisis counseling and recipients of enhanced counseling services who reported poor or fair functioning in five daily life domains



BCC= Brief Crisis Counseling Sample (N=150); ES1=Enhanced Services 1<sup>st</sup> Interview (N=93);  
 ES2=Enhanced Services 2<sup>nd</sup> Interview (N=76)



# Personal Resources: How much have these helped?



# Project Liberty Service Ratings: % of Respondents Rating Good or Excellent



Survey Questions	Telephone Interview
Respect with which you were treated	97%
Likelihood you would recommend to friend	95%
Willingness of the counselor to listen	97%
Staff sensitivity to culture, race, ethnicity or religion	98%
Convenience of meeting time	95%
Likelihood you would use PL again	93%
Information received about typical disaster reactio	97%
Convenience of service location	85%
Amount of time counselor spent with you	97%
Counselor's ability to speak your language	100%
<b>Overall quality of PL services received</b>	<b>94%</b>

# Perceived Efficacy of Services: % of Respondents Rating Good or Excellent



Survey Questions	Telephone Interview
Helping you to access alcohol/subst abuse svcs	86%
Supporting you emotionally	95%
Helping cope with emotional distress	90%
Helping you to stay involved with community	90%
Helping maintain relationships with family & friends	90%
Helping carry out daily responsibilities	93%
Helping you to access other mental health services	77%
Helping you to access other services	74%
Helping you to take care physically	93%

# Lessons Learned: The Good News

We're  
all in this  
together.

- The necessity to respond to an incident of mass violence brings out the good in people and organizations. Qualities such as empathy, compassion, willingness to collaborate, and flexibility are in abundance and greatly facilitate the process of assembling an effective mental health response.
- By definition, an emergency provides 'cover' that enables people and organizations to think outside the box, rapidly overcome the typical bureaucratic obstacles to mounting any new program, and be less risk-averse.
- The combination of outreach, public education and supportive counseling (the services currently funded under the Clinical Crisis Program) appears sufficient to meet the disaster-related mental health needs of many (but not all) affected individuals.
- The Crisis Counseling Program model can be successfully implemented in a complex, highly diverse urban environment.



# Lessons Learned: Improvements Needed

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- The public mental health system – including the provider community – is not sufficiently prepared to respond to terrorism.
- Responding effectively requires an expansion of focus to the entire population and large-scale provision of out-of-the office, psycho-educational services that are atypical for most providers – this in essence is a public health model.
- Because disaster mental health has to date not been part of the 'mainstream,' everything has to be developed from scratch immediately in the aftermath of the disaster (e.g., training, contracting, hiring new staff). All this takes valuable time and energy.
- The federal government should further support state and local disaster preparedness by developing and funding mechanisms that insure valuable infrastructures and program information gained during FEMA Crisis Counseling Programs are not lost.

# Lessons Learned: Improvements Needed (cont.)

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- The needs assessment methodology for the CCP program should be revised to utilize a population-based approach that anticipates individual and collective reactions ranging from emotional distress, to changes in behavior, to emerging psychiatric illness. The methodology should have the capacity to make initial need projections for CCP and enhanced services as well as facilitate changes in the mix of services offered as needs change over time (e.g., phasing down group public education activities and specifying types of outreach needed).

# Lessons Learned: Improvements Needed (cont.)

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- There is no disaster mental health funding stream readily available to support the more intensive services needed to enable individuals with more severe and persistent traumatic reactions to return to pre-disaster functioning. This gap results in a fragmented disaster mental health delivery system. Project Liberty is the first Crisis Counseling Program permitted to provide enhanced services. This change needs to be permanently incorporated into the Crisis Counseling Program .

# Lessons Learned: Improvements Needed (cont.)

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- The federal government should enhance the effectiveness of the Crisis Counseling Program by assisting states to tailor time frames for immediate and regular service programs based on each disaster's specific circumstances and assessments of current and ongoing mental health needs among impacted populations.

# Conclusions



- The mental health impact of terrorism is substantial, varied, and persistent, particularly in an environment of ongoing threats.
- Project Liberty represents a successful, large-scale response, that required intense intergovernmental collaboration and flexibility.
- Because terrorism was new to us, the necessary infrastructure for an effective mental health response to terror had to be built largely from scratch; now built, government needs to support its persistence over time as a preparedness strategy.
- Continued clinical and services research concerning the mental health impact of terrorism and effective interventions (clinical and organizational) needs to be supported, as scientific knowledge remains limited.