Evidence-Based Interventions for the Military and Veterans for Suicide Prevention

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Objectives

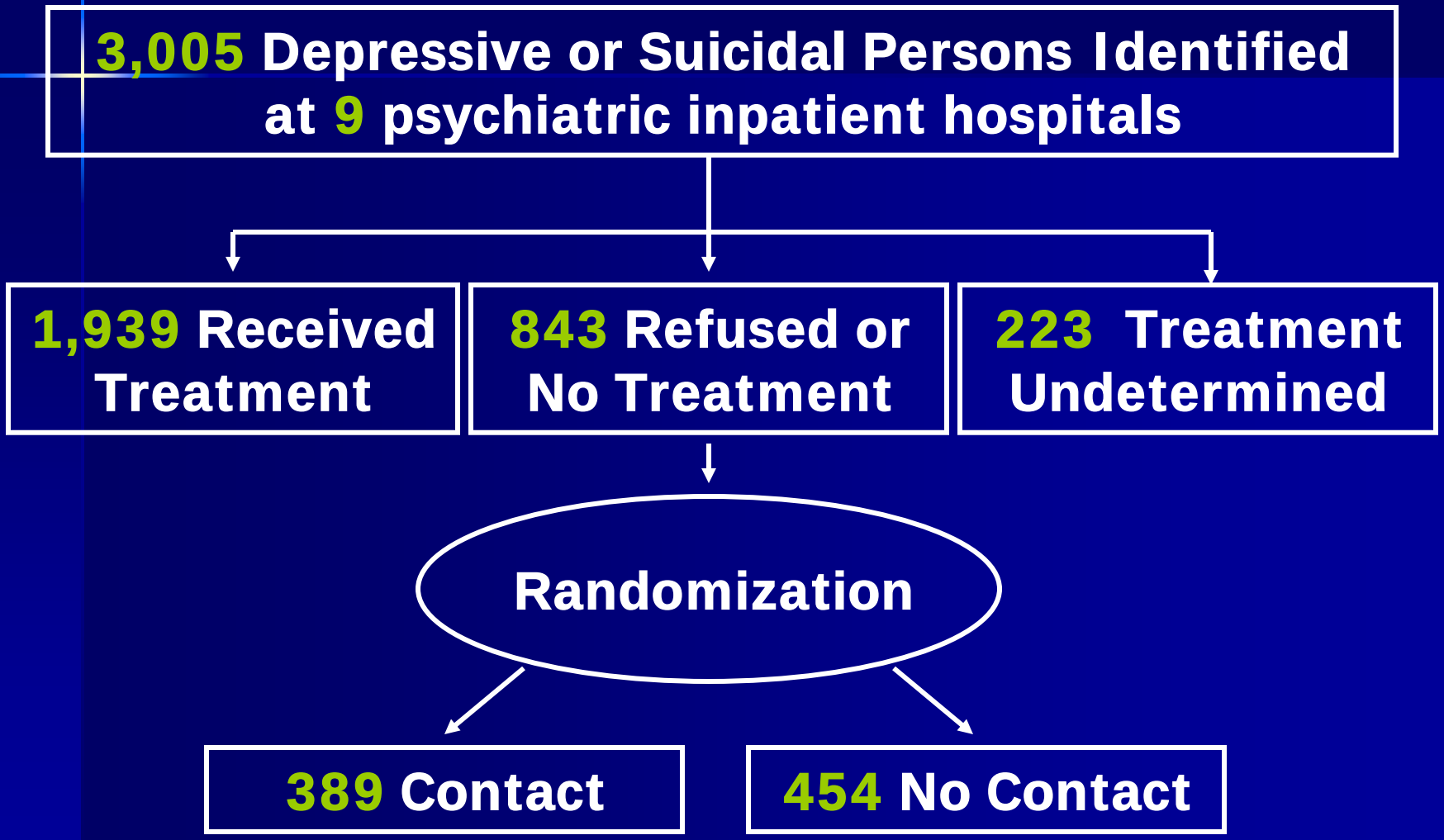
1. To review evidence-based treatments for preventing suicide attempts or self-injurious behavior
2. To provide a detailed description of cognitive behavioral treatment approaches for individuals at high risk for suicide and the effectiveness of these interventions
3. To review current intervention studies relevant to active duty service members and veterans

What evidence-based interventions actually prevent suicide?

Gold Standard

Randomized Controlled Trials

Study Design



Source: Motto & Bostrom, 2001

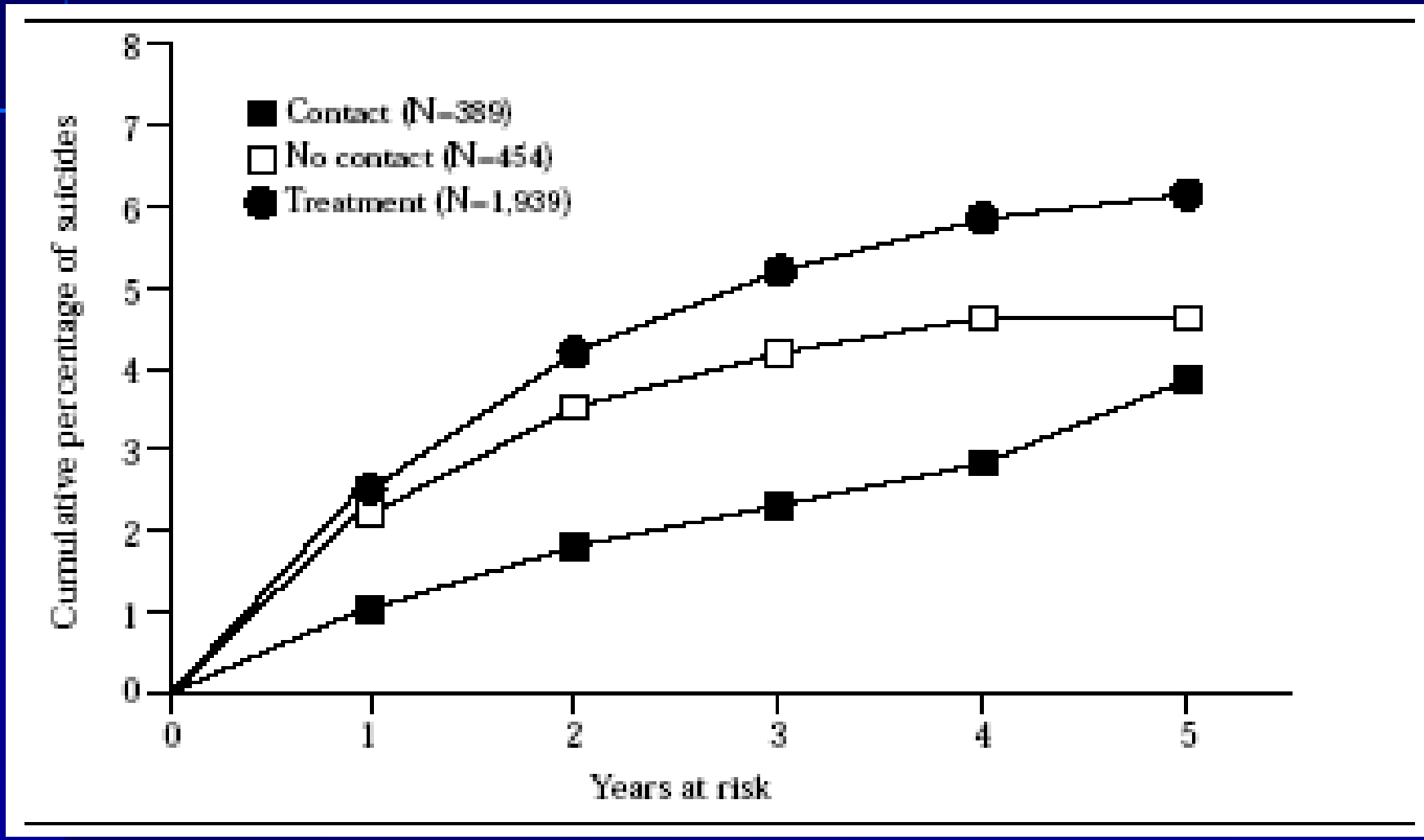
Contact Letter sent every 1-4 months over 5 year period

Dear *Patient's Name:*

"It has been some time since you were here at the hospital, and we hope things are going well for you. If you wish to drop us a note, we would be glad to hear from you."

Source: Motto & Bostrom, 2001

Cumulative Percentage of Suicides



Source: Motto & Bostrom, 2001

Multisite Intervention Study on Suicidal Behaviors (SUPRE-MISS)

- To determine whether brief intervention and contact is effective in reducing subsequent suicide mortality among suicide attempters in low and middle-income countries.

Fleischmann et al., 2008

Participant Recruitment

- Suicide attempters (*n* = 1,867) recruited from EDs in:
  - Campinas, Brazil
  - Chennai, India
  - Colombo, Sri Lanka
  - Karaj, Islamic Republic of Iran
  - Yuncheng, China

- Catchment area > 250,000

Fleischmann et al., 2008

Method

- Randomly assigned 922 to Brief Intervention & Contact (BIC) and 925 to Treatment-As-Usual (TAU).
- Assessed at 1, 2, 4, 7 & 11 weeks; and 4, 6, 12 & 18 months by a clinician.
- Assessments included the European Parasuicide Study Interview Schedule (EPSIS).
- Overall drop-out rate of 9% at 18 months:
  - BIC: 5.4% and TAU: 12.5%

Fleischmann et al., 2008

Study Intervention: Brief Intervention & Contact

- 1-hour individual information session
  - suicidal behavior as a sign of psychological and/or social distress
  - risk and protective factors
  - basic epidemiology
  - alternatives to suicidal behaviors
  - referral options (referred as clinically appropriate)

- 9 follow-up contacts (phone calls or visits, as appropriate)

Fleischmann et al., 2008

Control Intervention

- Treatment-As-Usual
  - Medical treatment of physical problems.
  - Typically, did not include psychiatric assessments. If there were no complications, the patients were normally discharged after somatic treatment.
  - No routine or systematic approach of referral for mental health treatment.
- 9 follow-up study contacts (phone calls or visits, as appropriate)

Fleischmann et al., 2008

Mortality at 18-month Follow-up

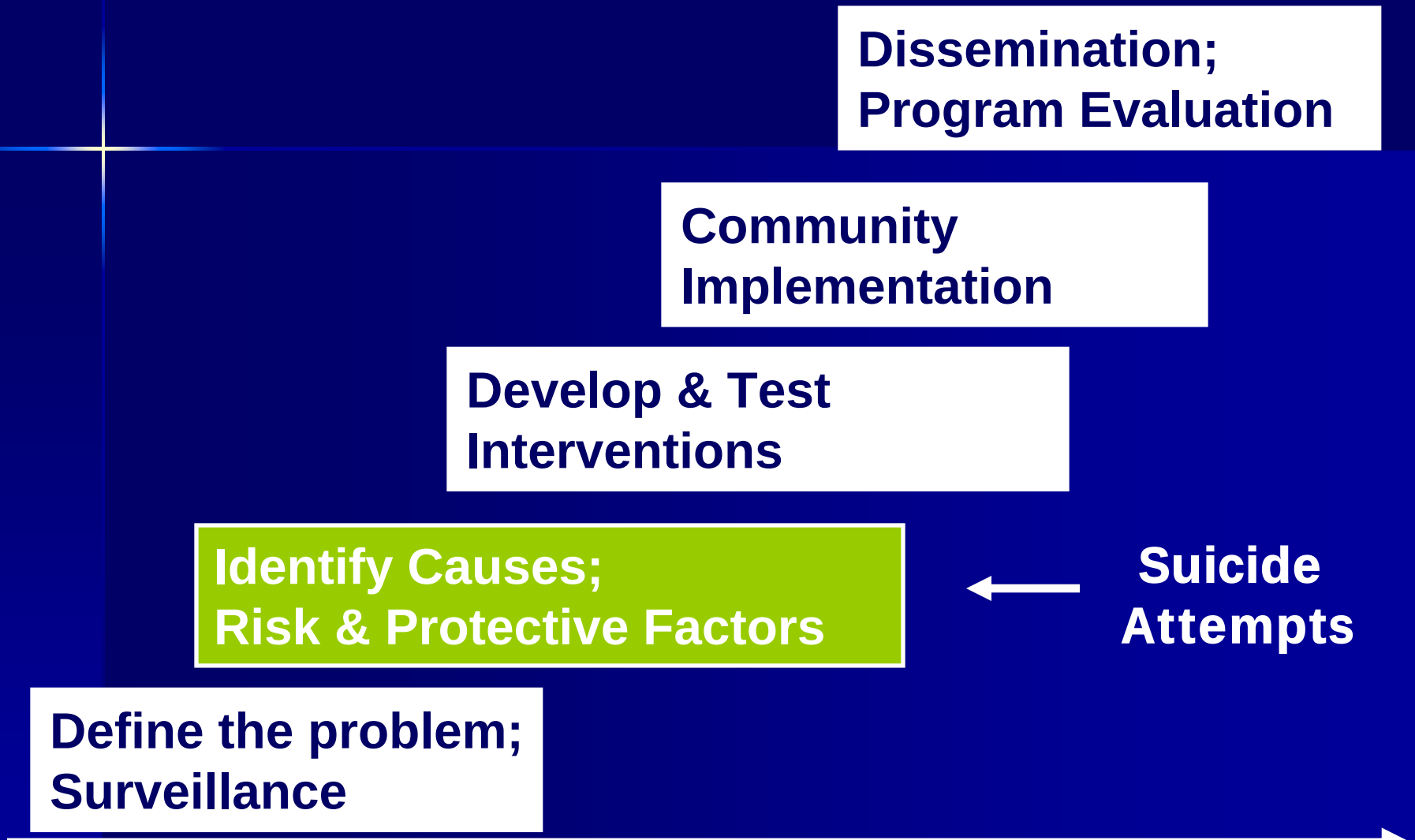
Status	TAU N = 827		BIC N = 872		χ^2	*P*-value
	(*n*)	(%)	(*n*)	(%)		
Died of any cause	22	2.7	11	1.3	4.36	0.037
Died by suicide	18	2.2	2	0.2	13.83	< 0.001

Fleischmann et al., 2008

Challenges for Evidence-Based Interventions

- There are only a few RCTs with results that have actually prevented suicide.
- Low base rate problem requires large sample sizes and long-term follow-up.

Public Health Approach to Prevention



Do psychosocial interventions prevent suicide attempts?

Postcards from the EDge

- Recruited patients from a regional toxicology unit who had presented to emergency departments in New South Wales, Australia.
- All patients had sought an evaluation following an intentional self-poisoning (overdose).
- Sent 8 non-demanding postcards to patients (in sealed envelopes) over a 12-month period following discharge.

Carter, G. L et al. BMJ 2005;331:805

Postcards from the EDge

Hunter Area
Toxicology Service

Dear «FirstName»

It has been a short time since you were here at the Newcastle Mater Hospital, and we hope things are going well for you.

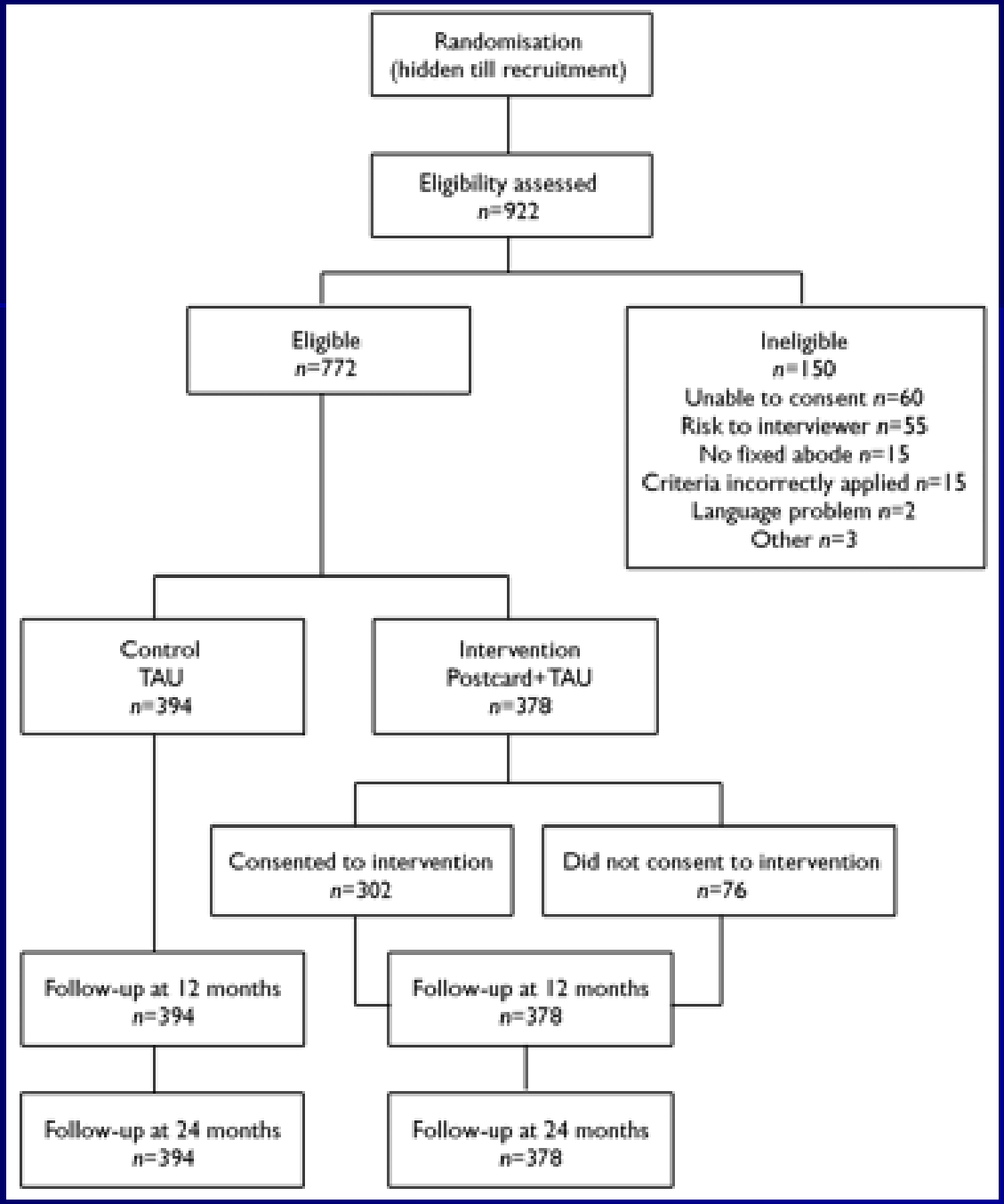
If you wish to drop us a note we would be happy to hear from you.

Best wishes,

Dr Andrew Dawson

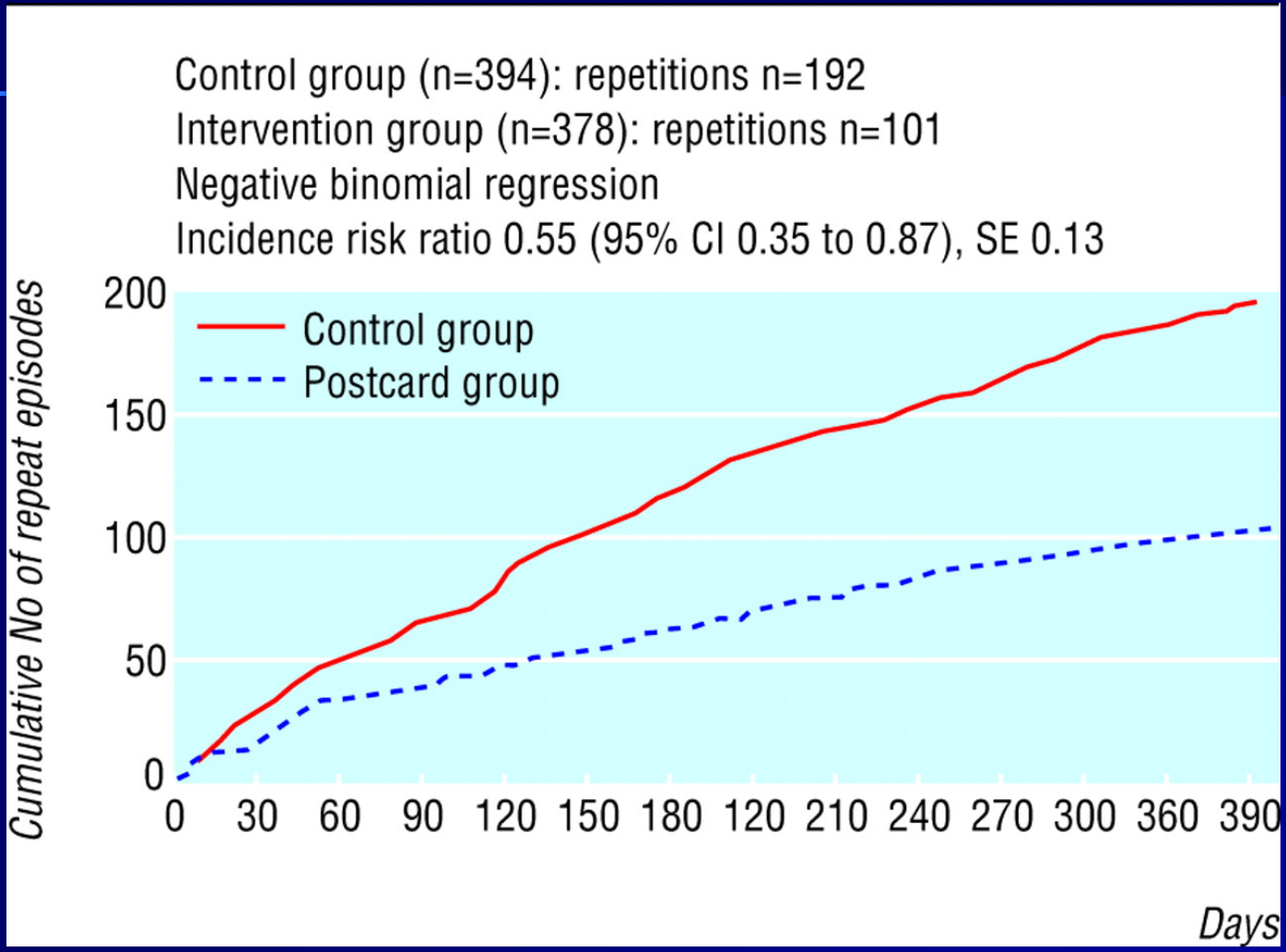
Dr Ian Whyte

Newcastle Mater Misericordiae Hospital
Locked Bag 7, Hunter Regional Mail Centre NSW 2310
Phone: 49 211 283 Fax: 49 211 870



Carter, G. L et al. BMJ 2005;331:805

Cumulative number of repeat episodes of hospital treated deliberate self poisoning

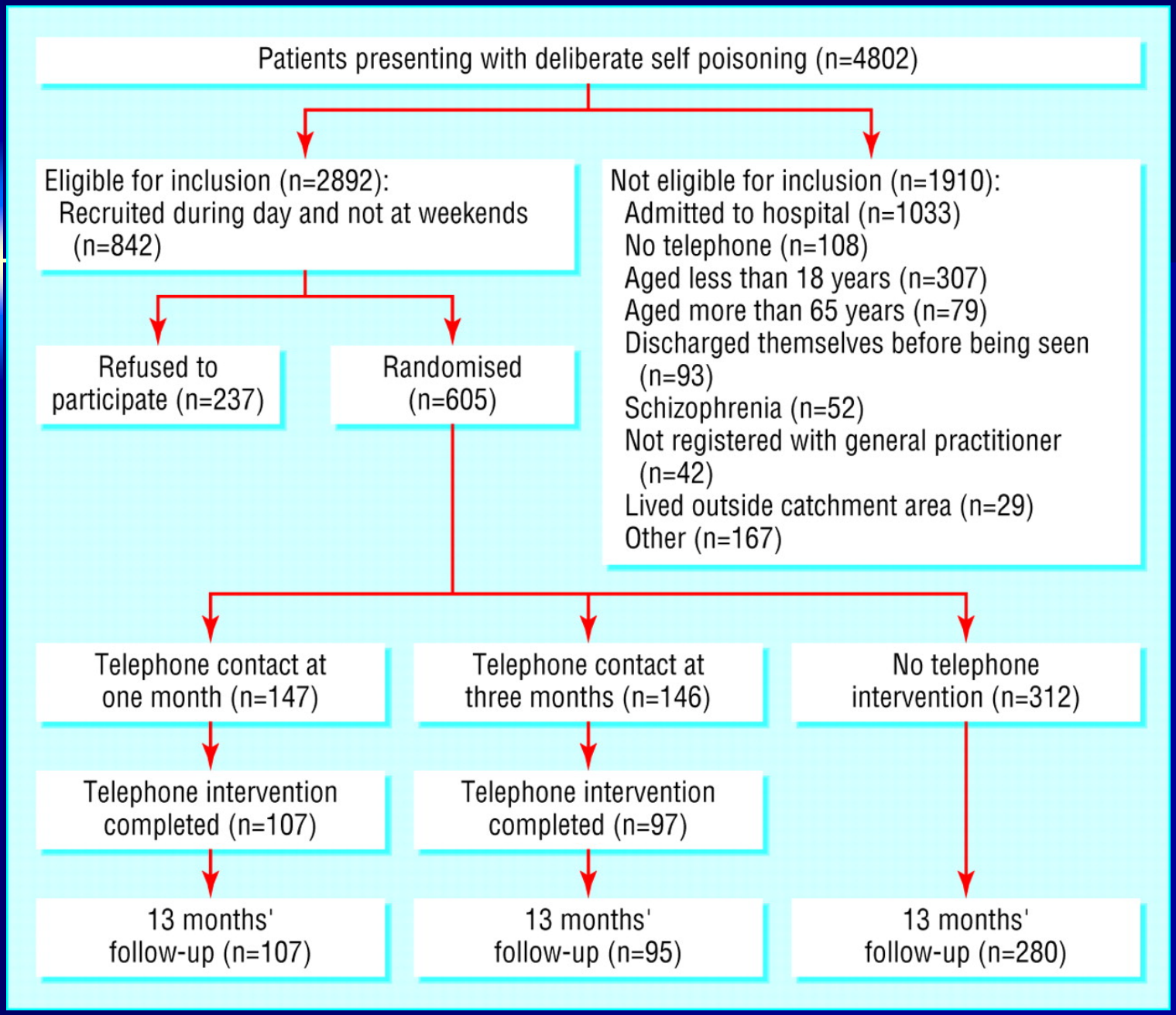


Carter, G. L et al. BMJ 2005;331:805

Effect of Telephone Contact in Patients Discharged from the ED

- To determine the effects over one year of contacting patients by telephone one month or three months after being discharged from an emergency department for deliberate self poisoning compared with usual treatment.
- 13 EDs in the northern part of France

Vaiva et al., 2006



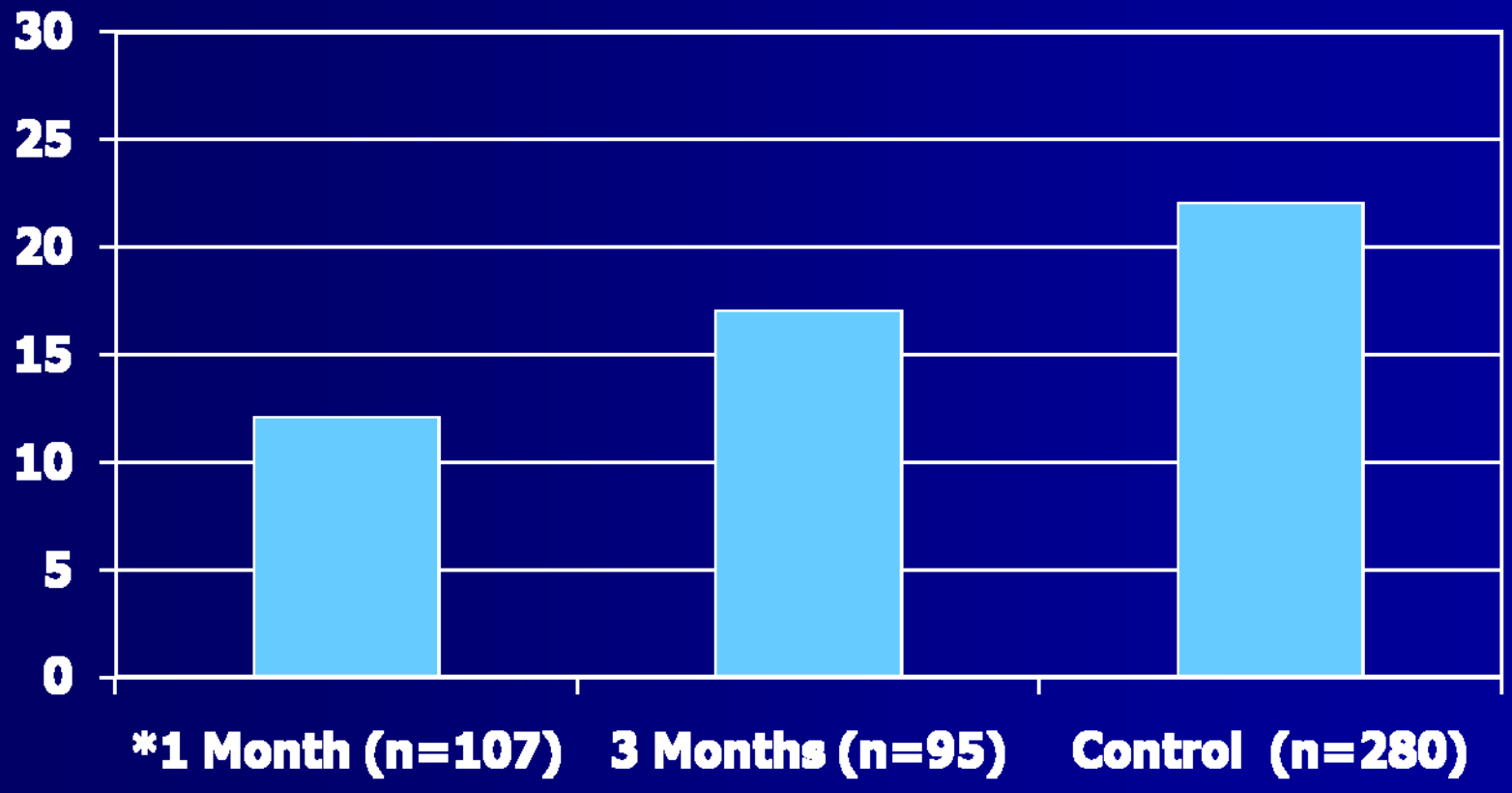
Vaiva et al., 2006

Telephone Contact Intervention

- Psychiatrists with at least 5 years of experience in managing suicidal crises telephoned the participants.
- Reviewed treatment recommended in the ED. If treatment was difficult to follow a new one was suggested or referred back to the ED if they were at high risk.
- A supportive approach was used based on empathy, reassurance, explanation, and suggestion.
- Participants' general practitioners were given details of the telephone contact and its conclusions.

Vaiva et al., 2006

Proportion of Patients who Re-Attempted Suicide during the 13 month Follow-up



*p = .03; Intent-to-Treat Results not significant. Vaiva et al., 2006

Interpersonal Psychotherapy

- To determine the effects of a brief psychodynamic interpersonal psychotherapy for patients who intentionally poisoned themselves.
- This treatment focused on identifying and helping to resolve interpersonal difficulties that contributed to psychological distress and was based on a “conversational model” of psychotherapy developed by Hobson (1985).

Guthrie et al., 2001

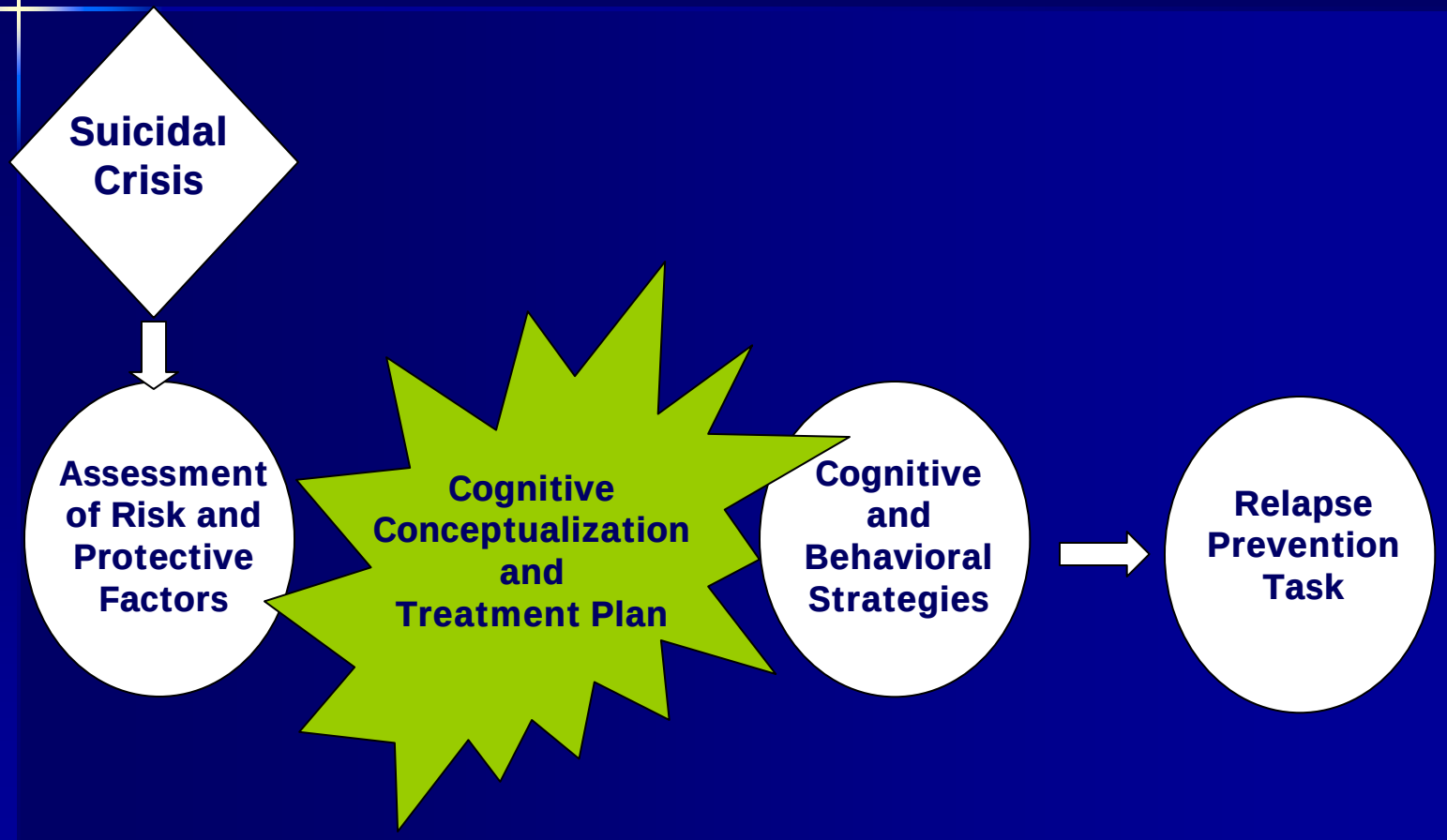
Interpersonal Psychotherapy

- Participants recruited from the ED in Manchester, U.K.
- Patients were randomly assigned to four sessions of therapy delivered in patients' homes by a nurse therapist or to a usual care condition.
- Patients who received the study intervention were significantly less likely to intentionally harm themselves than patients in the control condition during the six-month follow-up period.

Guthrie et al., 2001

Cognitive Therapy for Suicidal Patients

New Approach to Treating Suicidal Patients



Source: Wenzel, Brown, & Beck (2009)

Conceptual Underpinnings

- Suicidal behavior is viewed as a problematic coping behavior.
- Suicidal behavior is viewed as the *primary* problem rather than a symptom of a disorder.
- Cognitive therapy for suicidal patients is one of several interventions the patient may be receiving.
- Treatment is brief and focused (10 sessions).

General Principles of Cognitive Therapy Apply!

- Semi-structured, time-limited, active
- Clinician and patient work collaboratively
- Clinicians educate about cognitive model
- Focus is on cognitive restructuring and skill development
- Hypothesis-testing approach adopted

Cognitive Therapy Session Structure Applies!

- Brief mood check
- Bridge from the previous session
- Agenda setting
- Homework review
- Discussion of issues on the agenda
- Periodic summaries
- Homework assignment
- Final summary and feedback

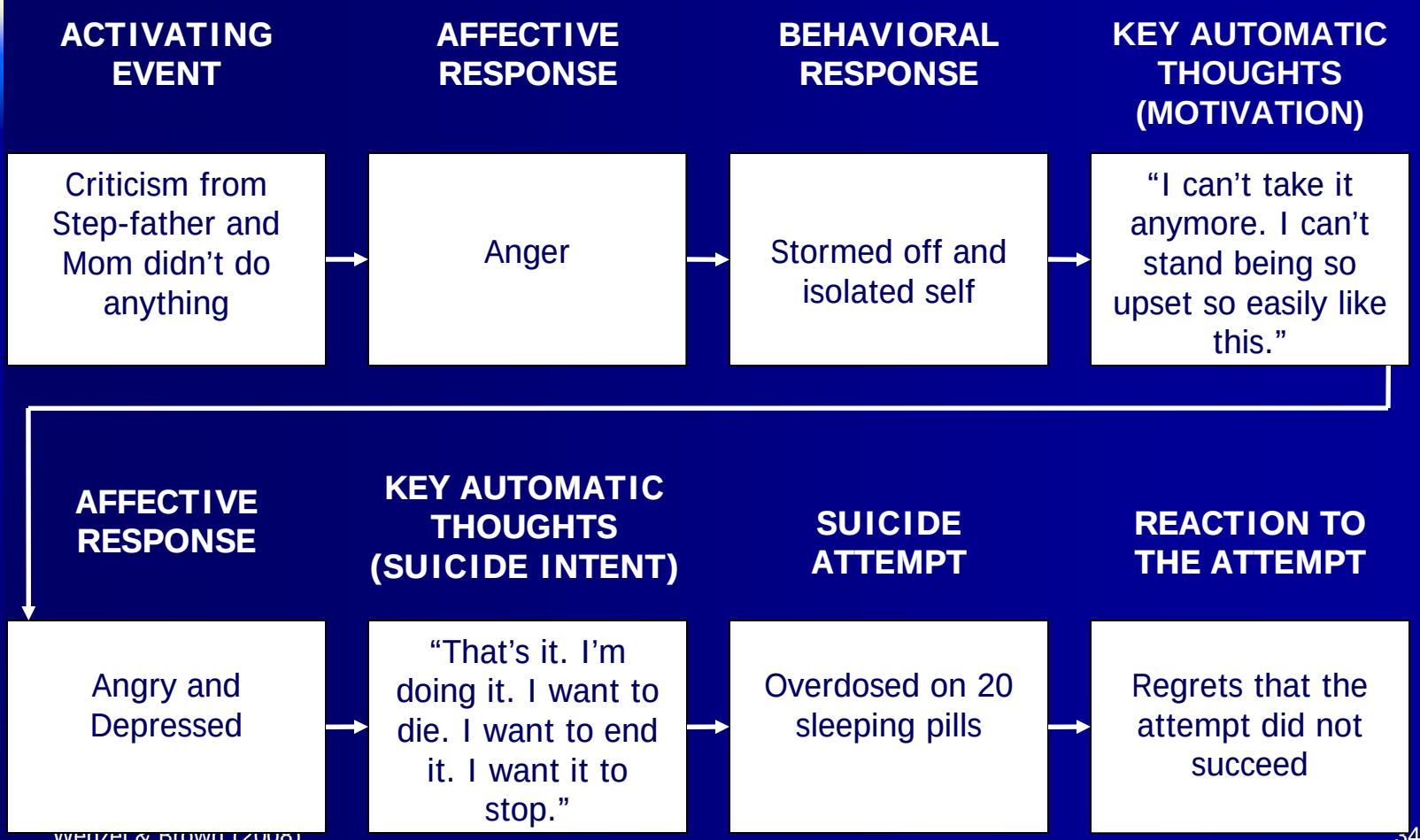
First Session Agenda

- Discussion of informed consent
- Emphasis on the importance of therapy attendance
- Completion of a suicide risk assessment
- Completion of a safety plan
- Beginning of the narrative description of events surrounding the recent suicidal crisis

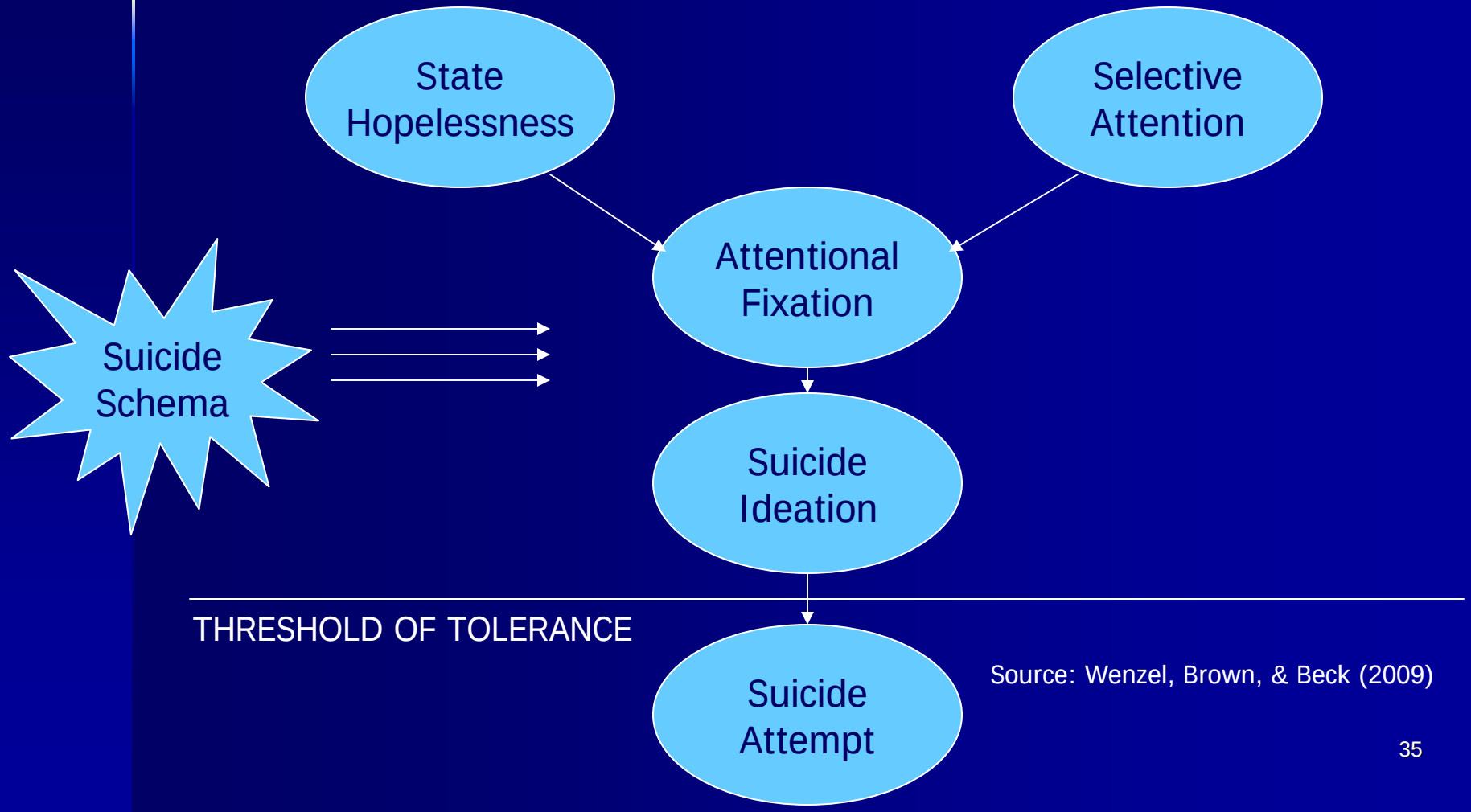
Narrative Description of the Suicidal Crisis

- Patients are asked to recall in as much detail as possible the activating events and their reactions to the events.
- Beginning of the story
  - May occur at any point in time
  - Strong emotional reaction to a specific event
- External event such as a significant loss
- Internal event, such as an automatic thought

Timeline of Suicide Attempt



Cognitive Model of Crises



Source: Wenzel, Brown, & Beck (2009)

Selecting Interventions

- Issues that were most proximally related to the suicidal crisis
- Interventions that are perceived by both the clinician and patient to be the most helpful in preventing a future suicidal act
- Thoughts, beliefs, and/or behaviors that interfere with treatment attendance and compliance
- Guided by the cognitive case conceptualization!

Behavioral Strategies

- Increasing pleasurable activities
- Increasing social support
  - Attending to existing relationships
  - Building new relationships
  - Modifying reactions toward others
  - Utilizing family support

Cognitive Coping Strategies

- Identifying reasons for living
- Modifying suicide-relevant beliefs
  - Socratic questioning, Future time-imaging
- Enhancing problem solving skills
- Developing coping cards

Reasons for Living

- Identify reasons for living
- Review advantages & disadvantages of living
- Construct a Hope Box or Survivor Kit
  - Pictures
  - Letters
  - Poetry
  - Prayer Card
  - Coping Cards

Relapse Prevention Task

- Explain rationale, describe exercise and obtain informed consent
- Three Steps:
  1. Imagine chain of events, thoughts, behaviors and feelings leading to attempt
  2. Imagine chain of events and respond to maladaptive thoughts and images
  3. Imagine future scenario likely to trigger a suicidal reaction
- Debriefing

Study Case Manager

- Provides referrals for mental health treatment, addiction treatment, and social services.
- Calls the patient's contacts in order to locate the patient.
- Mails letters or cards periodically.
- Encourages the patient to contact the study case manager with any problems or when they relocate.
- Reminds patients of appointments and helps to problem solve any difficulties in getting to appointments.

Cognitive Therapy for Suicide Attempters: Specific Aims

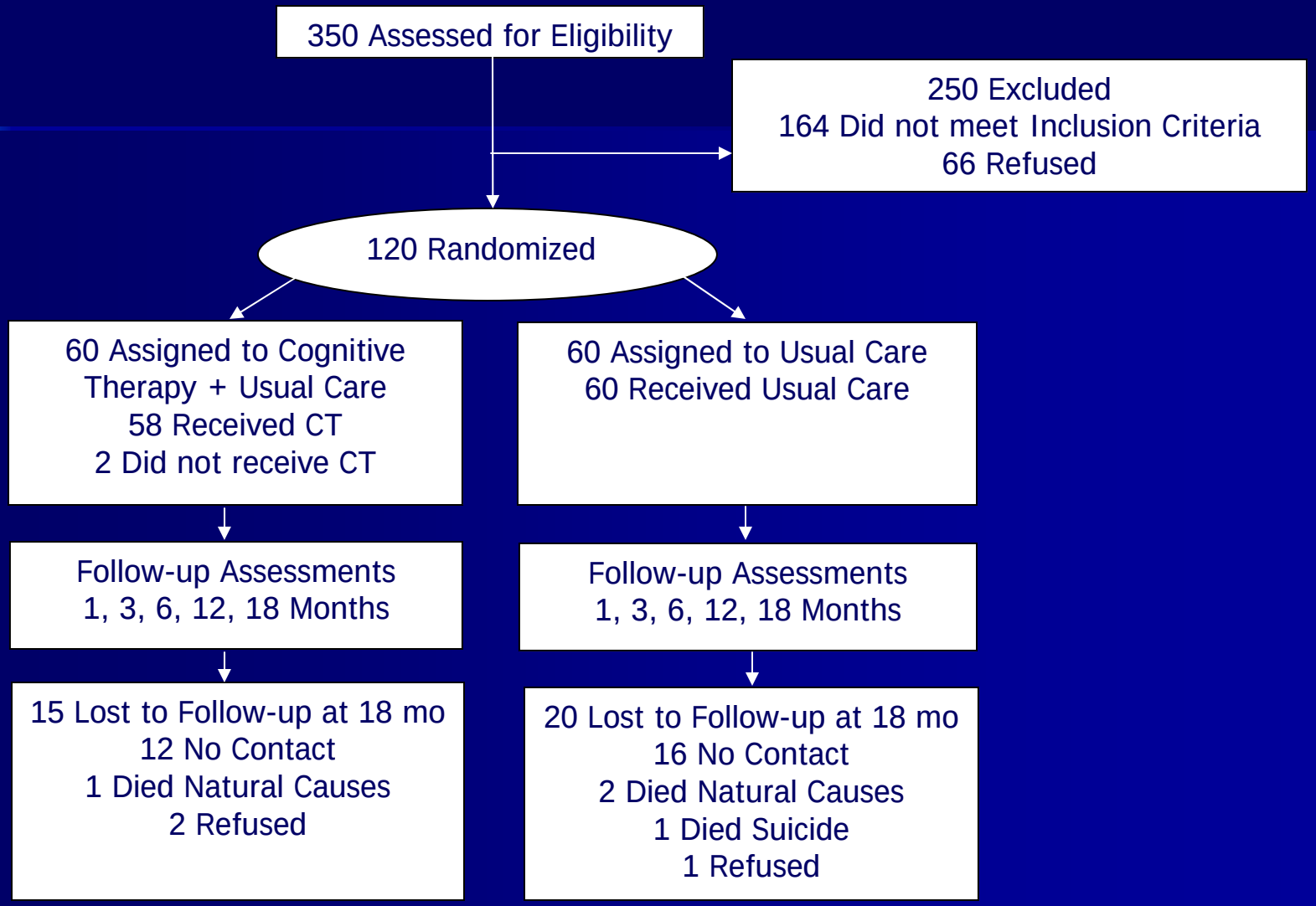
- To determine if a brief cognitive intervention for suicide attempters will be effective for:

    1. Preventing repeat suicide attempts
    2. Reducing the severity of established risk factors
    3. Increasing use of appropriate health services

Sample Selection Criteria

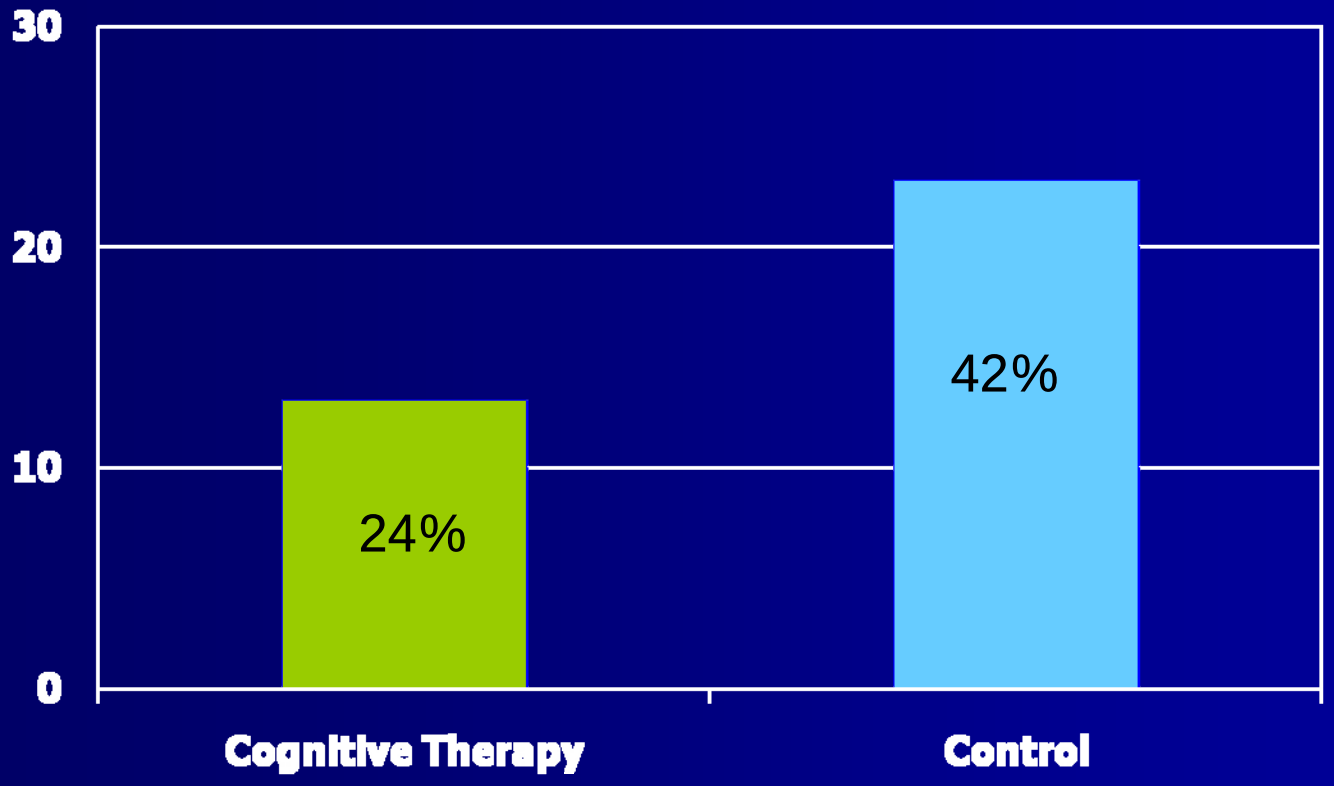
- Inclusion Criteria
  - Attempted suicide 48 hours prior to evaluation at the ED
  - Completed baseline assessment within 3 weeks
  - Age 16 or older
  - Two verifiable contacts
  - Provided written informed consent
- Exclusion Criteria
  - Severe medical disorder that would prevent participation in psychotherapy

Participant Flow



Source: Brown, G. K. et al. (2005). *JAMA, 294*, 563-370.

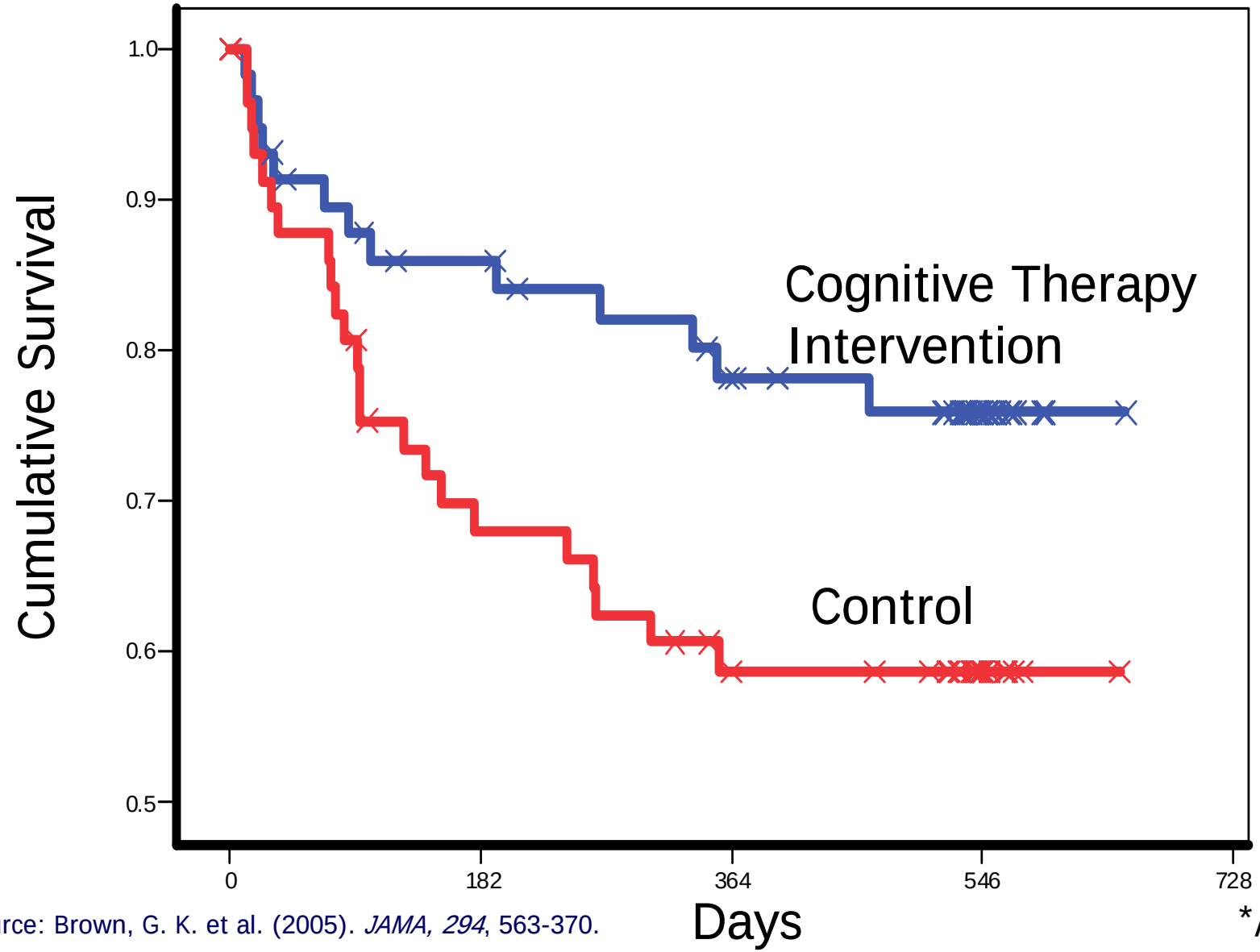
Number of Patients with Repeat Suicide Attempts



(n = 60) (n = 60) $p < .05$

Source: Brown, G. K. et al. (2005). *JAMA, 294*, 563-370.

Survival Functions for Repeat Suicide Attempt by Study Condition



Source: Brown, G. K. et al. (2005). *JAMA, 294*, 563-370.

*$p < .05$

Dialectical Behavior Therapy

developed for the
high risk for suicide
individual with multiple
mental disorders

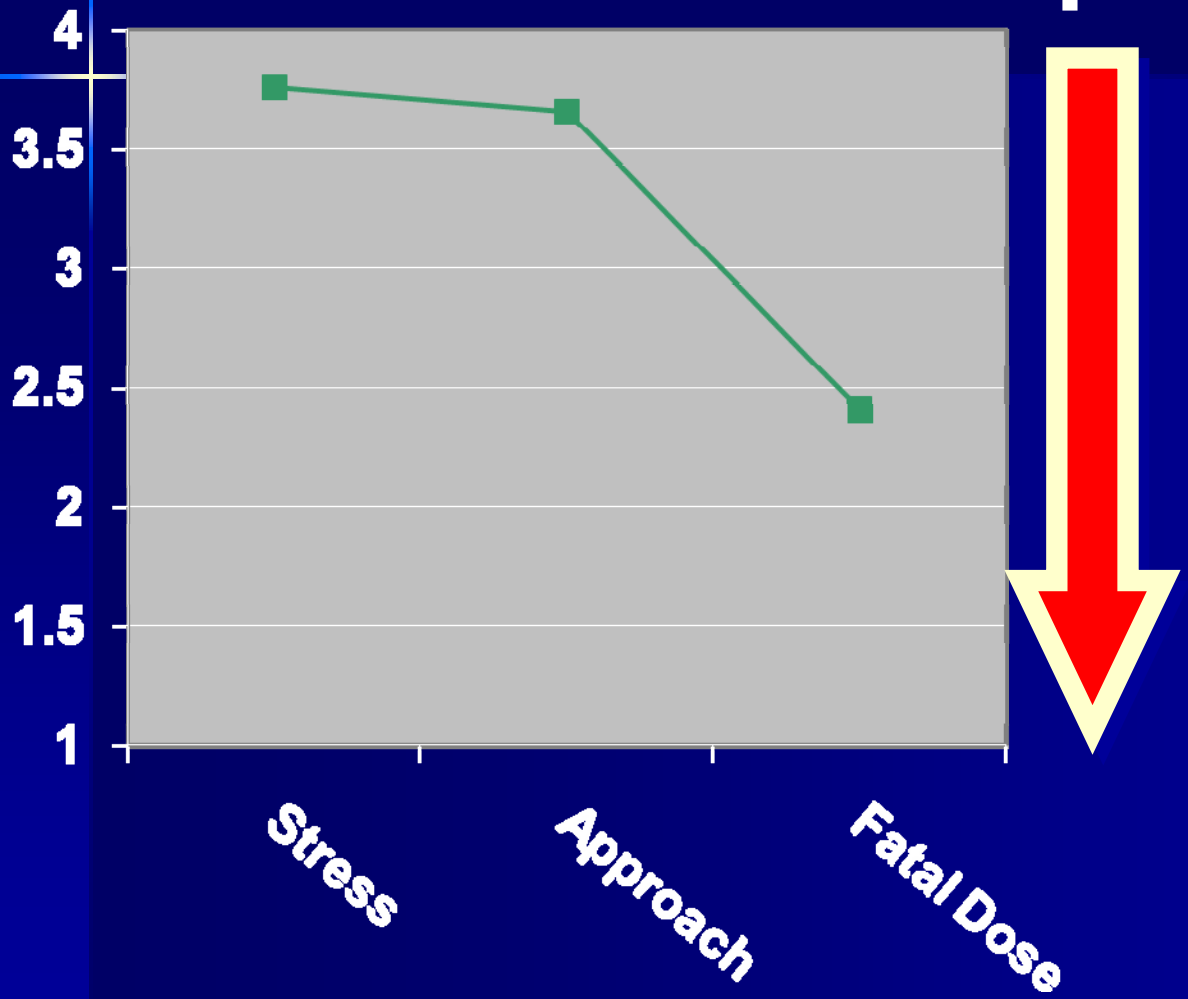
DBT Model

Suicidal Behavior =
Problem Solving
(for the client)
and
a Problem
(for the therapist)

DBT Model

Suicidal Behavior
Solves
the
Client Problem
of Unbearable
Emotional Anguish

Skin Conductance: Accidental Death Script



Emotional Arousal Goes Down Imagining Dying

Welch et al., 2008

DBT in a Nutshell

THERAPIST STRATEGIES

Change

Acceptance

Irreverence

Reciprocity

Problem Solving

Validation

Core

Consultation-to-the-Patient

Environmental Intervention

DBT SKILLS

Dialectical

Mindfulness

Change

Acceptance

Emotion Regulation

Crisis Survival

Interpersonal Effectiveness

Reality Acceptance

Middle Path

Functions and Modes of DBT

Functions of DBT

- Improve capabilities
- Improve motivation
- Structure environments to reinforce new behaviors
- Make sure behavior generalizes
- Increase skills and motivation of therapists

Modes of DBT

- Group skills training
- Individual therapy
- Telephone coaching
- Therapist consultation team

How Does DBT Target Suicidal Behavior?

DBT Target Hierarchy

- Decrease
  - Life-threatening behaviors
  - Therapy-interfering behaviors
  - Severe quality-of-life interfering behaviors
- Increase behavioral skills
  - Mindfulness
  - Interpersonal Effectiveness
  - Emotion Regulation
  - Distress Tolerance
  - Self-Management

Suicidal Behaviors Crisis Protocol

1. Assess long-term and imminent risk of suicide
2. Focus on the present
3. Problem solve current problem
4. Reduce high risk environmental factors
5. Reduce high risk behavioral factors
6. Commit to a plan of action
7. Trouble shoot the plan
8. Anticipate a recurrence of crisis response
9. Re-assess suicide potential

Following Suicidal Behavior: Protocol for Primary Therapist

1. Assess frequency, intensity, and severity of suicidal behavior
2. Conduct a comprehensive chain analysis
3. Relate current behavior to overall patterns
4. Validate the patient's pain

Following Suicidal Behavior: Protocol for Primary Therapist (cont)

5. Focus on negative effects of suicidal behavior
6. Reinforce non-suicidal responses
7. Discuss solving problem vs. distress tolerance
8. Obtain commitment to a non-suicidal behavioral plan and troubleshoot

DBT Outcome Data

Randomized Clinical Trials

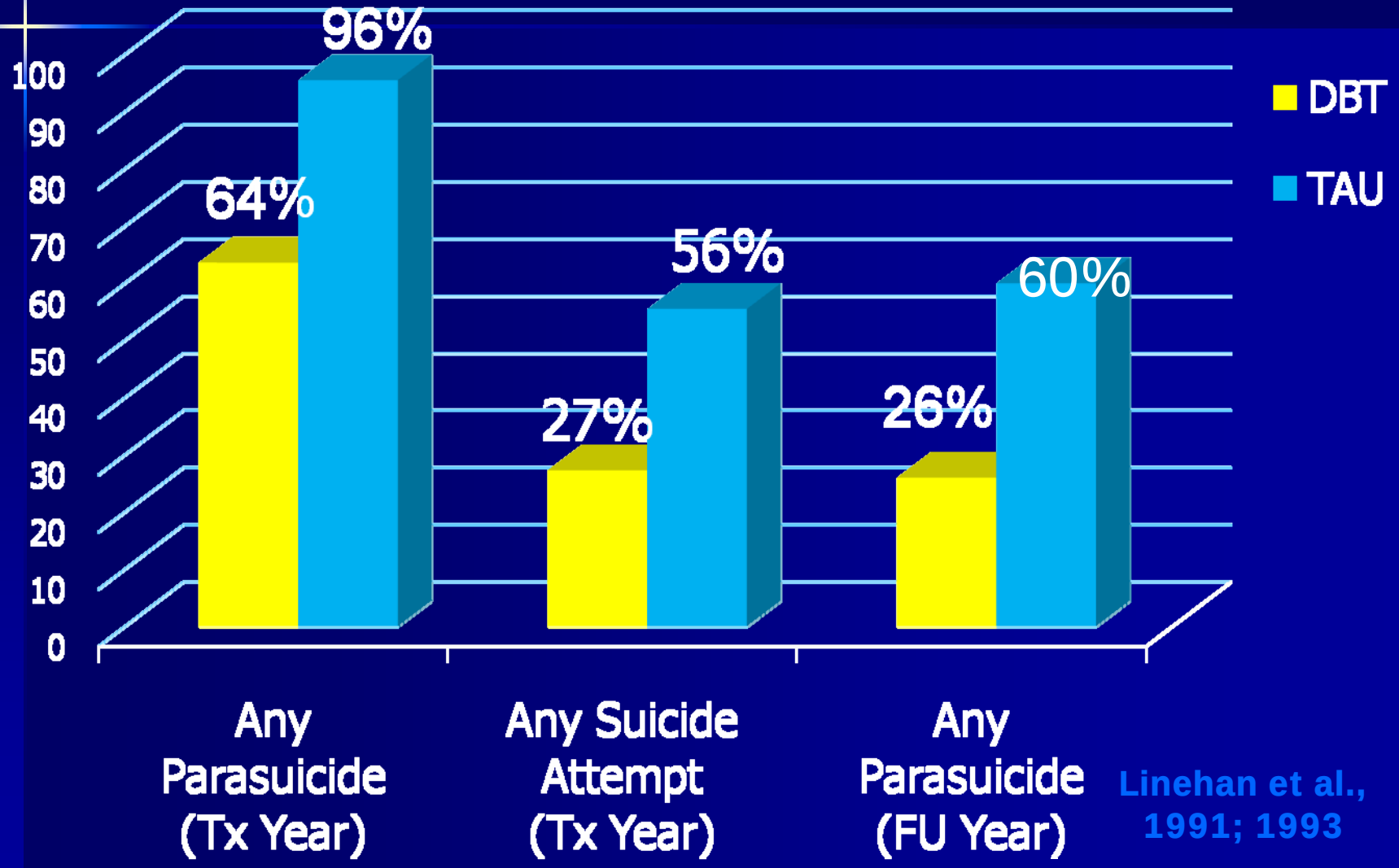
Original DBT RCT for Suicidal Behavior: Sample (Linehan et al., 1991, 1993)

- Inclusion Criteria:
  - Female
  - Age 18-45
  - Borderline Personality Disorder
  - At least 2 suicide attempts or NSSI in last 5 yrs.
  - At least 1 suicide attempt or NSSI in last 8 wks.
- Exclusion Criteria:
  - Psychotic or bipolar disorder, substance dependence, mental retardation

Original DBT RCT for Suicidal Behavior: Methods (Linehan et al., 1991, 1993)

- 1 year of treatment
  - Standard DBT (n=22)
  - Treatment as Usual (TAU) (n=22)
    - Given referrals to community treatment
- 1 year of follow-up
- Assessments: baseline, 4, 8, 12 (post-tx), 18, and 24 months

Percentage of Patients with Suicidal Behavior



Linehan et al., 1991; 1993

Are DBT Gains Due Simply to Expert Psychotherapy?

2nd DBT RCT for Suicidal Behavior: Sample (Linehan et al., 2006)

- Inclusion Criteria:
  - Female
  - Age 18-45
  - Borderline Personality Disorder
  - At least 2 suicide attempts or NSSI in last 5 yrs.
  - At least 1 suicide attempt or NSSI in last 8 wks.
- Exclusion Criteria:
  - Psychotic or bipolar disorder, mental retardation, seizure disorder requiring meds, mandated to treatment, need for primary tx for other debilitating condition

2nd DBT RCT for Suicidal Behavior: Methods (Linehan et al., 2006)

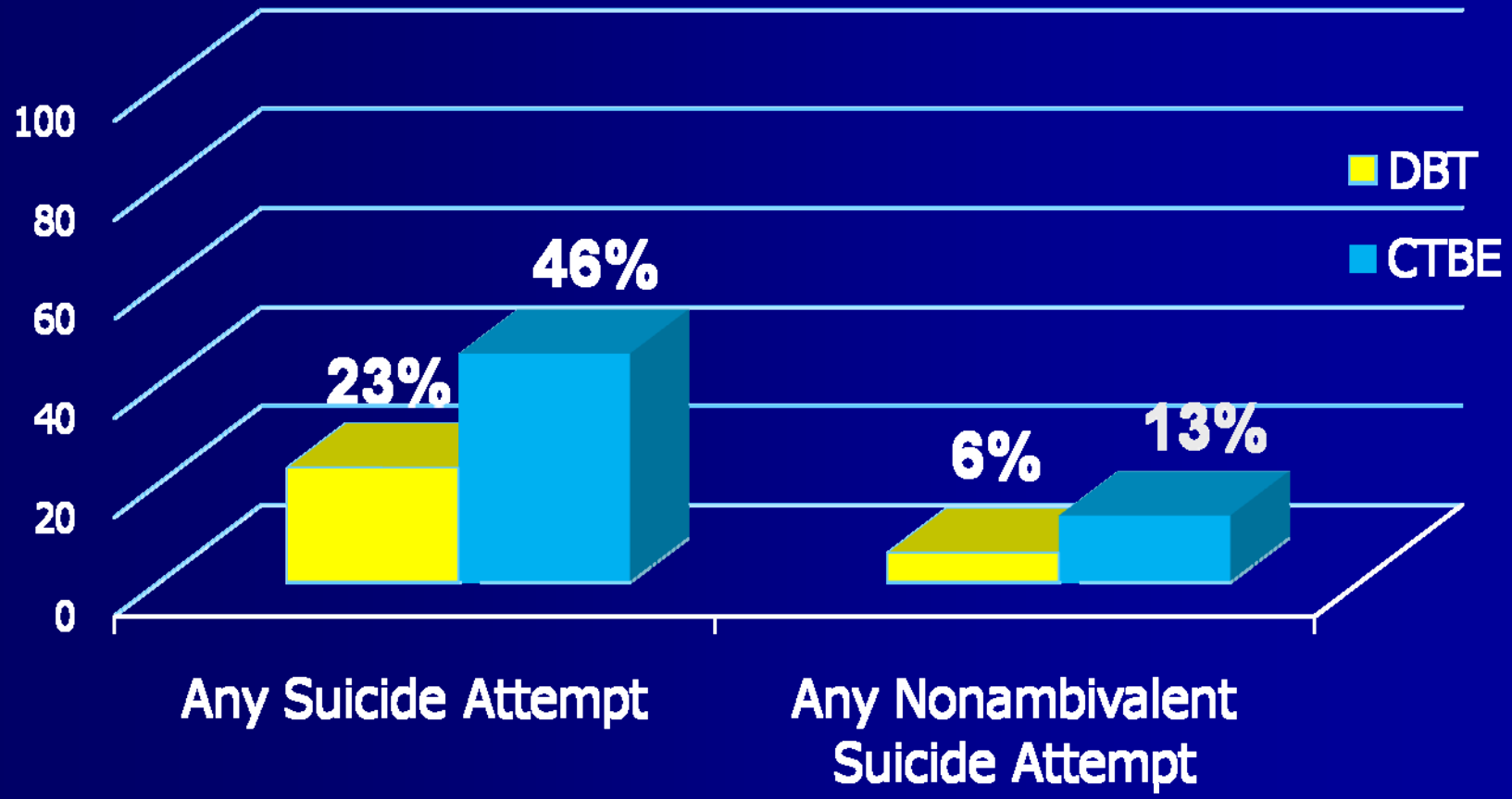
- 1 year of treatment
  - Standard DBT (n=52)
  - Community Treatment by Experts (CTBE) (n=49)
- 1 year of follow-up
- Assessments: baseline, 4, 8, 12 (post-tx), 16, 20 and 24 months

CTBE Condition

Designed to control for:

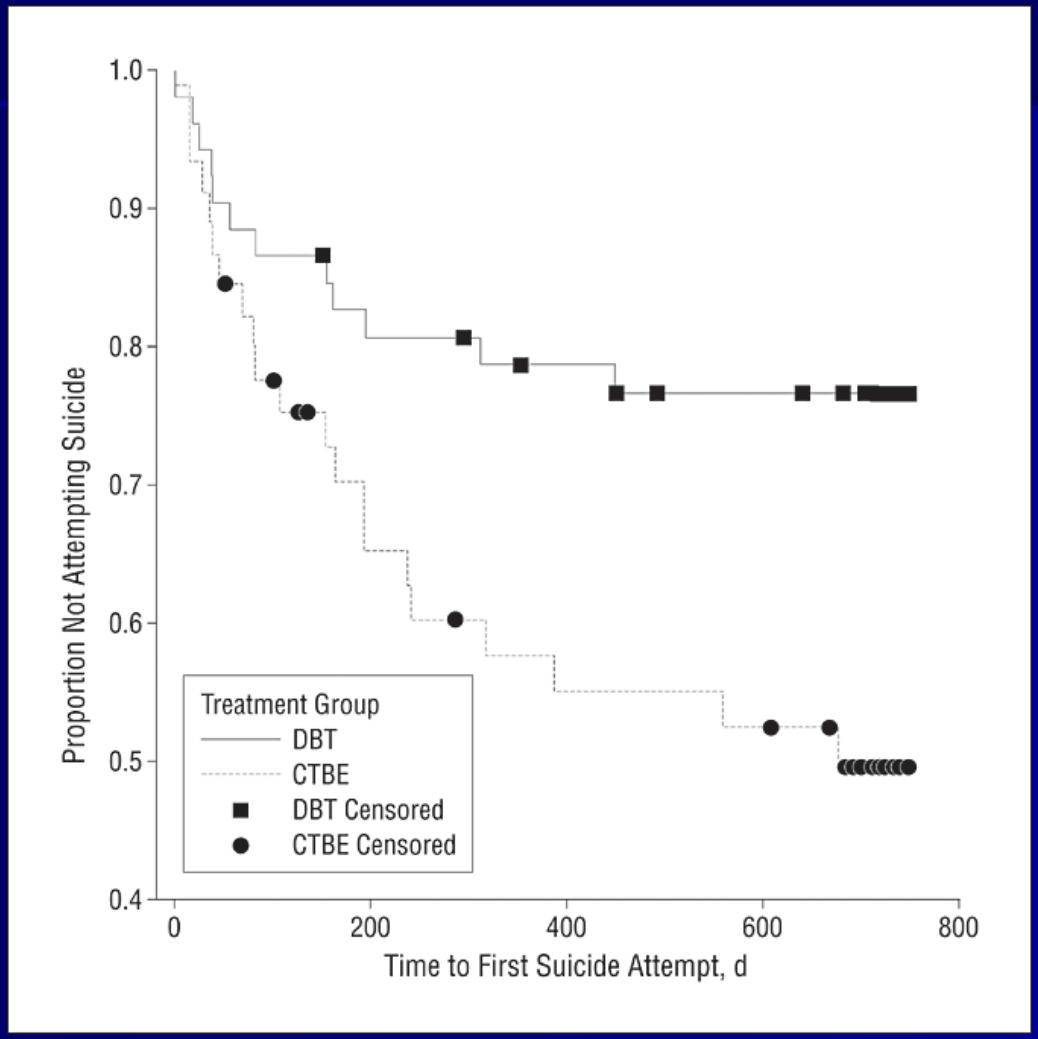
1. Therapist expertise and experience
2. Therapist gender
3. Therapist allegiance to treatment
4. Institutional prestige
5. Availability of supervision
6. Availability of affordable treatment
7. Assistance to connect with therapist
8. Hours of individual therapy
9. General factors

Compared to EXPERT Psychotherapy, DBT cuts suicide attempts in half.



Linehan et al.,, 2006

Survival analysis for time to first suicide attempt

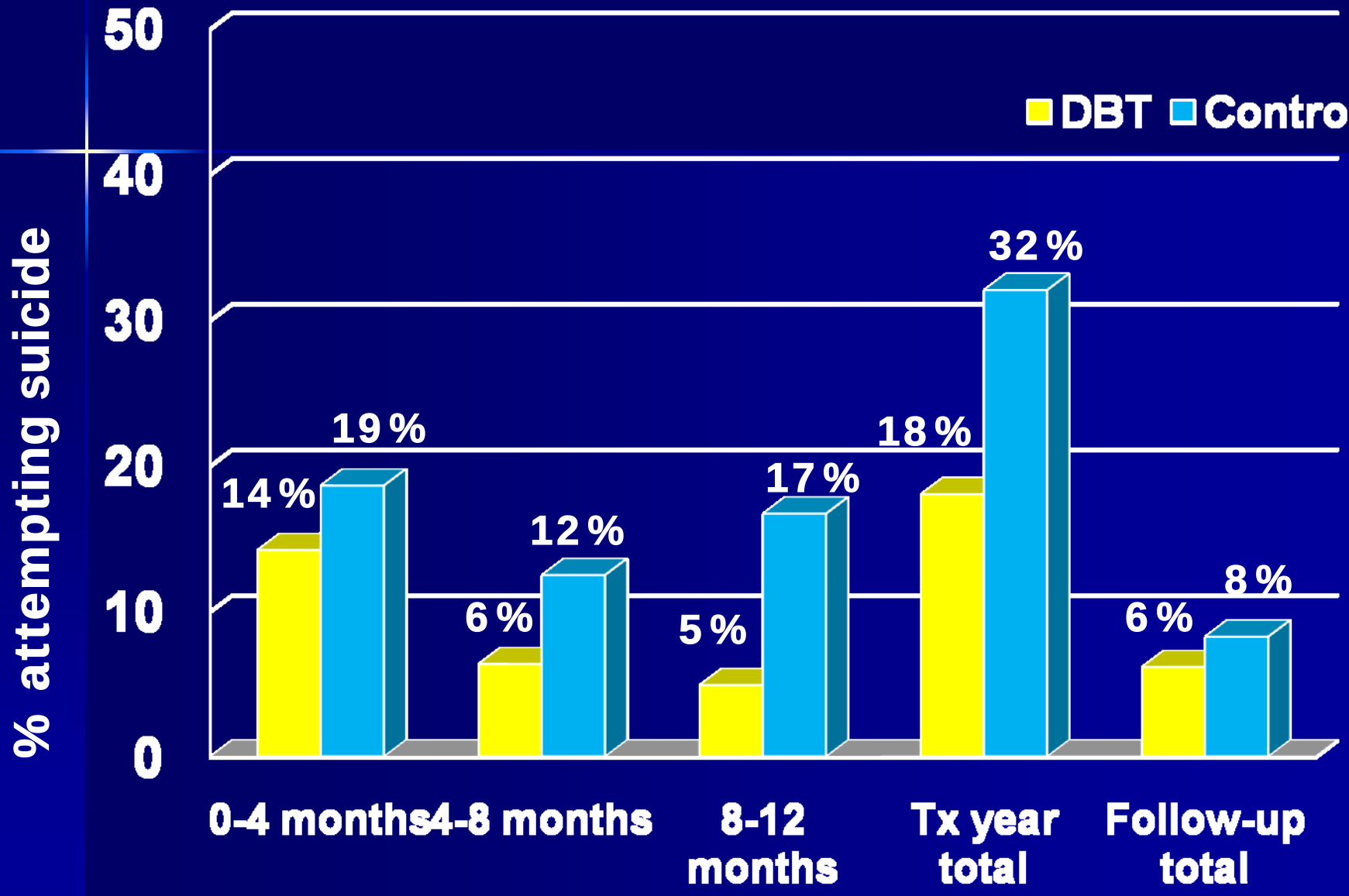


Linehan, M. M. et al. Arch Gen Psychiatry 2006;63:757-766.

Combined Data from 5 DBT RCTs

(3 suicidal BPD, 2 substance abusing BPD)

PERCENT ATTEMPTING SUICIDE



Linehan et al., 1991, 1999, 2002, 2006; van den Bosch et al., 2005

Conclusion

Suicide Management Protocols in DBT are Effective at Reducing Suicidal Behaviors

CT and DBT: Similarities

- Conceptualize suicidal behavior as problematic coping behavior
- Target suicidal behavior directly
- Use timeline/chain analysis
- Teach problem-solving skills
- Use a team approach
- Use cognitive and behavioral strategies
- Focus on relapse prevention (imaginal rehearsal)

CT and DBT: Differences

- Comprehensiveness of treatment
  - CT targets suicide vs. DBT targets all problem behaviors
- Duration of treatment
  - CT = 10 sessions vs. DBT = 1 year
- Use of ancillary treatments
  - CT as add-on tx vs. DBT as stand-alone tx
- Treatment modalities
  - CT uses individual vs. DBT uses individual + group

Current Randomized Controlled Trials Relevant to Military Service Members and Veterans

Treating PTSD in High-Risk Patients with Borderline Personality Disorder

Melanie S. Harned, Ph.D.
University of Washington

Funding provided by the National Institutes for Mental Health (#1 R34MH082143-01A2)

PTSD and Suicide

- Individuals with PTSD are: (Kessler, 2000)
  - 6x more likely to attempt suicide
  - 5x more likely to report suicidal ideation
- Compared to other mental disorders, PTSD has the: (Bernal et al., 2007)
  - highest lifetime rate of suicidal ideation (32.9%)
  - 3rd highest lifetime rate of suicide attempts (10.7%)

PTSD Treatments Typically Exclude Suicidal and High-Risk Clients

- Meta-analysis of PTSD RCTs found the following common exclusion criteria: (Bradley et al., 2005)
  - Suicide risk (42%)
  - Substance abuse/dependence (62%)
  - “Serious comorbidity” (62%)
- Both Prolonged Exposure and Cognitive Processing Therapy exclude patients with:
  - Imminent risk of suicidal behavior
  - Recent suicide attempt or self-injury (past 3 months)

How to Treat Suicidal and/or Self-Injuring PTSD Clients?

- "If significant suicidality is present, it must be addressed before any other treatment is initiated."

  International Society for Traumatic Stress Studies PTSD Treatment Guidelines (2009)

- "[T]he approach of DBT...offers useful strategies for addressing the needs of patients considered poor candidates for exposure therapy."

  VA/DoD Clinical Practice Guideline for the Management of Post-Traumatic Stress (2004)

DBT + PTSD Protocol

- Standard DBT (1 year)
  - Individual DBT therapy
  - DBT skills training group
  - Telephone coaching
  - Therapist consultation team
- Modified Prolonged Exposure
  - Occurs concurrently with standard DBT
  - Administered by the individual DBT therapist

Treatment Structure

- Treatment starts with standard DBT targeting:
  - Higher-priority behaviors
    - Life-threatening behaviors (e.g., suicidality, NSSI)
    - Therapy-interfering behaviors
    - Other more severe quality-of-life behaviors
    - Behaviors that might interfere with exposure (e.g., severe dissociation, substance dependence)
- PTSD protocol has typically started after 4-8 months of DBT
  - Average of 13.6 PTSD protocol sessions (range 6-25)

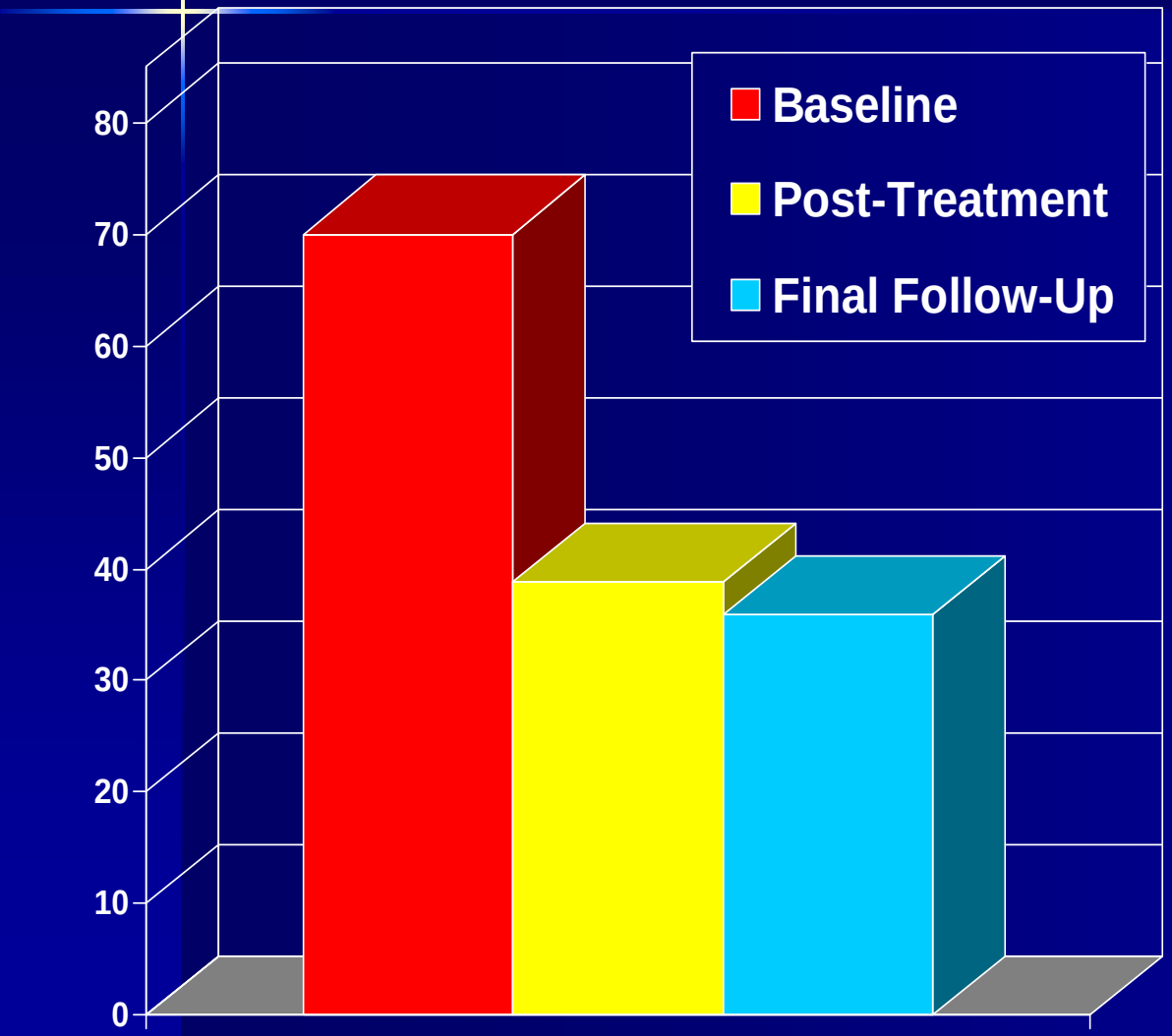
Deciding when to start the PTSD Protocol

- Ability to come into contact with cues for higher-priority behaviors without engaging in those behaviors
  - Abstinence from suicidal behavior and NSSI (range=2-4 months)
- Ability to experience intense emotion without escaping
- Actively engaged in treatment
- Learning and use of DBT skills
- It is the client's goal to treat PTSD *now*

Pilot Data (n=6)

- Inclusion criteria: 1) BPD, 2) chronic PTSD, 3) plus at least one of:
  - Active suicidality (n=4)
  - Recent self-injury (n=5)
  - Substance dependence (n=2)
  - Severe dissociation (n=2)
- Index traumas:
  - Childhood sexual abuse (n=2)
  - Adolescent rape (n=1)
  - Adult rape (n=2)
  - Motor vehicle accident (n=1)

PTSD Checklist scores (n=6)



PTSD remission = 83% (n=5)

Pre-post *d* = 1.98

Pre-FU *d* = 2.02

Suicide and Self-Injury Urges

	Urge to Commit Suicide	Urge to Self-Injure
Increase in urges	11.9%	22.9%
No change in urges	69.2%	54.2%
Decrease in urges	18.9%	22.9%

Note. Urges were rated immediately before and after each exposure task.

Current Study

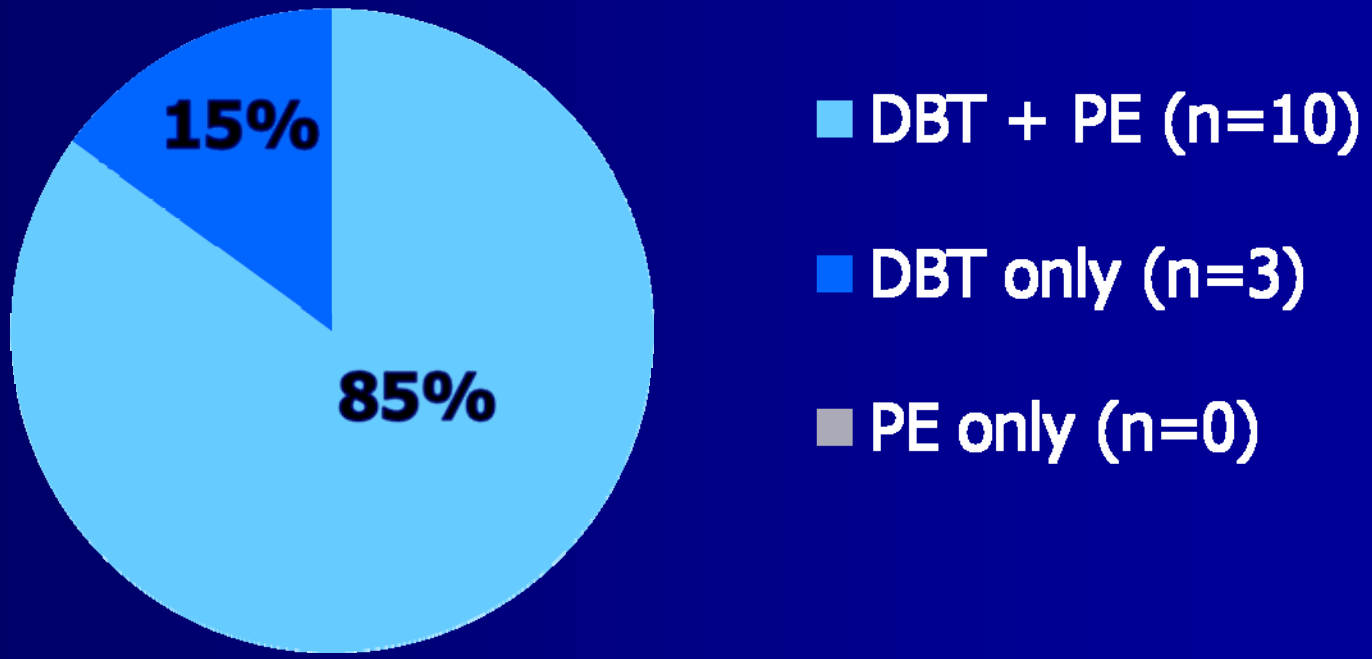
- Phase 1: Clinical Pre-Testing
  - Develop and finalize DBT+PTSD Protocol
  - Open case series design (n=13)
- Phase 2: Pilot RCT
  - DBT+PTSD Protocol (n=24) vs. DBT (n=12)
  - Focus on evaluating feasibility, acceptability, and safety of treatment
  - Preliminarily compare outcomes between conditions

Inclusion/Exclusion Criteria

- Inclusion criteria:
  - Borderline Personality Disorder
  - Chronic PTSD
  - At least one PE exclusion criterion:
    - Recent suicide attempt/NSSI (past 3 months)
    - Imminent suicide risk
    - Severe dissociation
  - Female
  - Ages 18-60
- Exclusion criteria:
  - Bipolar or psychotic disorder, mental retardation, mandated to treatment

Treatment Preferences

What treatment do high-risk BPD+PTSD patients prefer?



Why Do They Want PE?

- “Haven’t had PE, and haven’t had a chance to tell my story and am derailed by it. I feel like a hamster running in circles because I haven’t been able to talk about it.”

- “Suffering from PTSD so much...Need to get on with my life. I have been stuck forever. (PE)”

A New Suicide Treatment Strategy?

Offer an Effective PTSD Treatment

AND….

Make it Contingent on Stopping Suicidal Behavior!

Pilot Trials of Post Admission Cognitive Therapy (PACT)

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Study Aims

- To develop a targeted, brief inpatient cognitive behavioral treatment, titled, *Post Admission Cognitive Therapy* (PACT) to address the unique treatment needs of individuals with suicide behavior.
  - Prevent Repeat Suicide Attempts
  - Reduce Severity of Established Risk Factors

Figure 1. Flow of Participants in the Pilot Trial for *Post Admission Cognitive Therapy* (PACT)

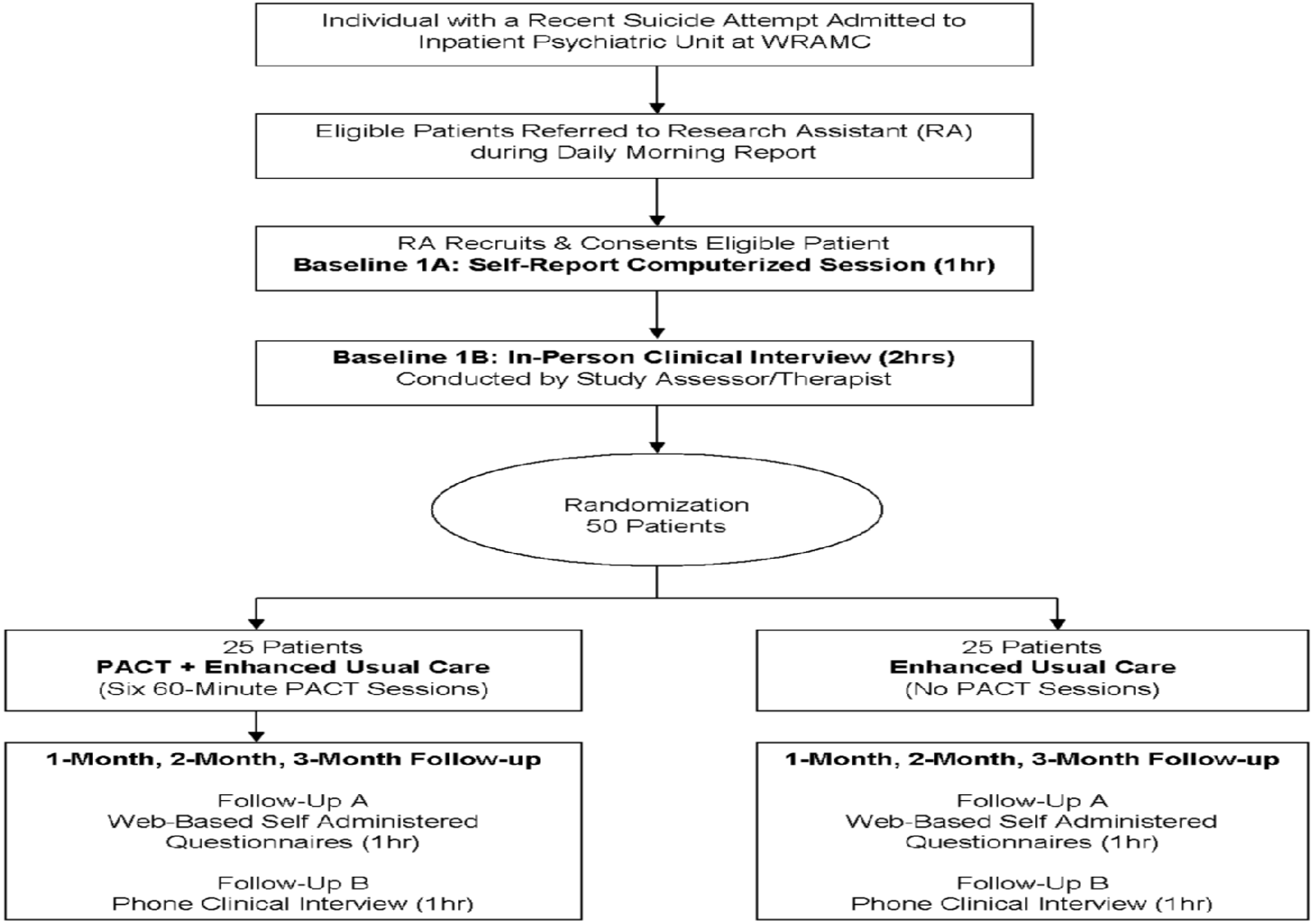

Table D.5.1. Preliminary Outline of Inpatient Cognitive Treatment for the Reduction of Suicide Attempt Behavior

Intervention Stage	Intervention Goals	Sample Activities
Stage I Sessions 1 & 2	1) Psychoeducation 2) Engage Patient in Treatment 3) Develop Cognitive Case Conceptualization for Suicide Attempt	Chain Analysis "Suicide Story"
Stage II Sessions 3 & 4	1) Modify Negative Suicide-Related Automatic Thoughts & Core Beliefs 2) Teach Problem-Solving Skills 3) Identify & Practice Healthy Behavioral Coping Skills	Coping Cards Hope Box Relaxation Skills
Stage III Sessions 5 & 6	1) Relapse Prevention 2) Safety Planning	"Procrastinate" Suicide Role Play

A Brief Intervention to Reduce Suicide Risk in Military Service Members and Veterans

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Study Objectives

To adapt and evaluate a brief, readily accessible, and personalized intervention, **safety planning**, that will reduce suicide risk in military and veteran populations by:

(1) evaluating suicide risk using a structured assessment measure

(2) enhancing suicide-related coping strategies

(3) Increasing acceptability and initiation of appropriate mental health/substance use treatments

Safety Planning: 6 Steps

1. Recognizing warning signs
2. Employing internal coping strategies without needing to contact another person
3. Socializing with others who may offer support as well as distraction from the crisis
4. Contacting family members or friends who may help to resolve a crisis
5. Contacting mental health professionals or agencies
6. Reducing the potential for use of lethal means

Project 1: SAFE MIL Study Design

Project 1 – Walter Reed Army Medical Center

- The safety plan intervention will be specifically adapted for military service members who are at risk for suicide.
- A randomized controlled trial will be conducted to determine the efficacy of the safety planning intervention for hospitalized military personnel.
- Outcomes include suicide ideation, suicide-related coping, and attitudes toward help seeking at discharge, 1-month, and 6-month post discharge.

Project 2: SAFE VET Study Design

Project 2 - Buffalo, Denver, Manhattan, & Philadelphia VAMCs + 4 Control VAMCs

- A quasi-experimental design will be used to examine the effectiveness of the safety plan intervention for veterans at risk at VA Emergency Departments (ED).
- Outcomes include suicide attempts, suicide ideation, and suicide-related coping at 1, 3, and 6 months following the index ED visit as well as attendance at an outpatient mental health or substance abuse treatment appointment within 30 days post the index ED visit.

Conclusions

- Suicide/suicide attempts can be prevented via psychosocial interventions!
- Several interventions including DBT, CT, ED/Inpatient follow-up are effective.
- Improving coping/problem-solving skills is a primary treatment strategy.

Evidence-based Interventions for Military Service Members or Veterans

- There is a paucity of RCTs that have examined the efficacy of interventions for military service members or veterans.
- Why haven't more RCTs been conducted in the military or the VA that focus on reducing suicidal behavior?

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