

Screening and Brief Intervention for Substance Abuse: Toward a Public Health Approach to Secondary Prevention

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Objectives

- Discuss SBIRT in relation to a public health approach to substance abuse
- Describe how translational research has contributed to progress made in the past 25 years in the development of screening tools, intervention techniques, and implementation strategies
- Discuss implementation issues and future directions

Preconditions for a Public Health Approach to Screening and Early Intervention

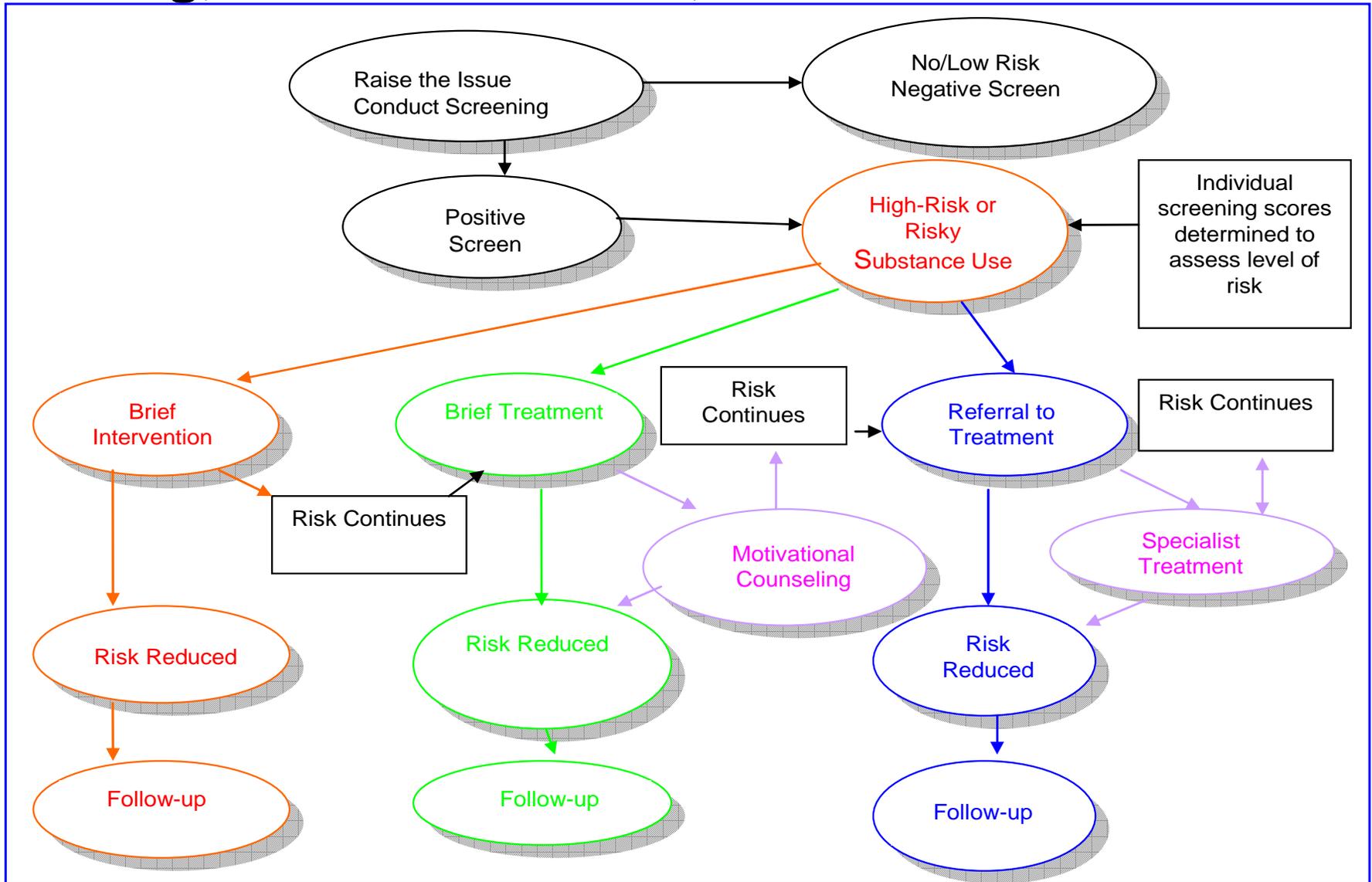
- Adequate definition of problem, as well as risk factors and populations at risk
- Screening tests available: brief, easy to administer, reliable, valid
- Effective intervention and treatment methods available
- Feasible enough to be used in health care system
- Have sufficient reach to affect population rates of alcohol, drug and nicotine problems

What is Screening, Brief Intervention and Referral (SBIRT)?

- **S**creening to find:
 - at-risk drug users
 - cases of drug dependence
- **B**rief **I**ntervention
 - Early detection
 - Time limited
 - Low cost, easy to use
- Referral of more serious cases to further diagnostic assessment specialized care
- Coordination, integration and dissemination activities

Conceptual Overview of SBIRT

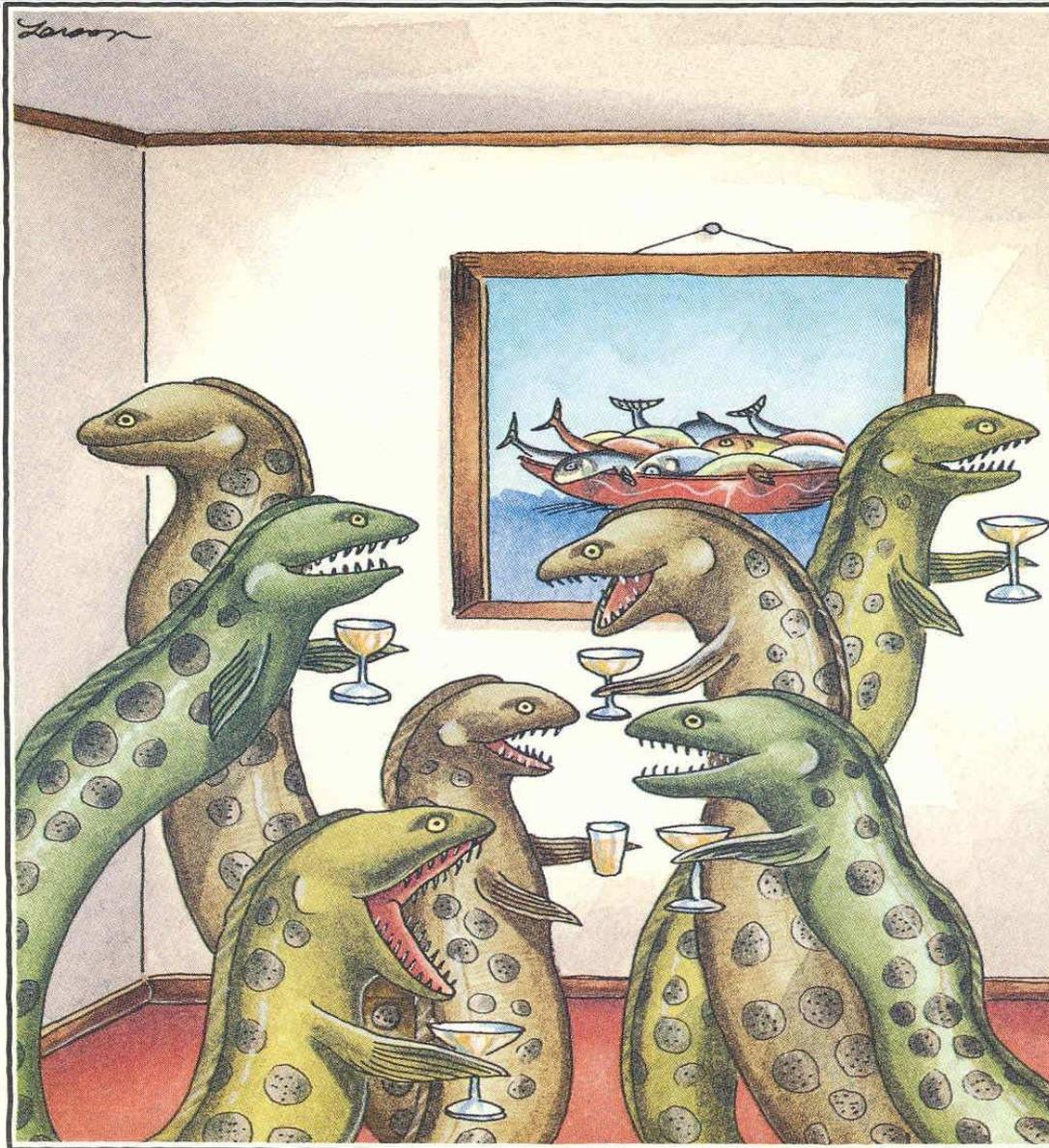
Screening, Brief Intervention, and Referral to Treatment



A Brief History of SBIRT

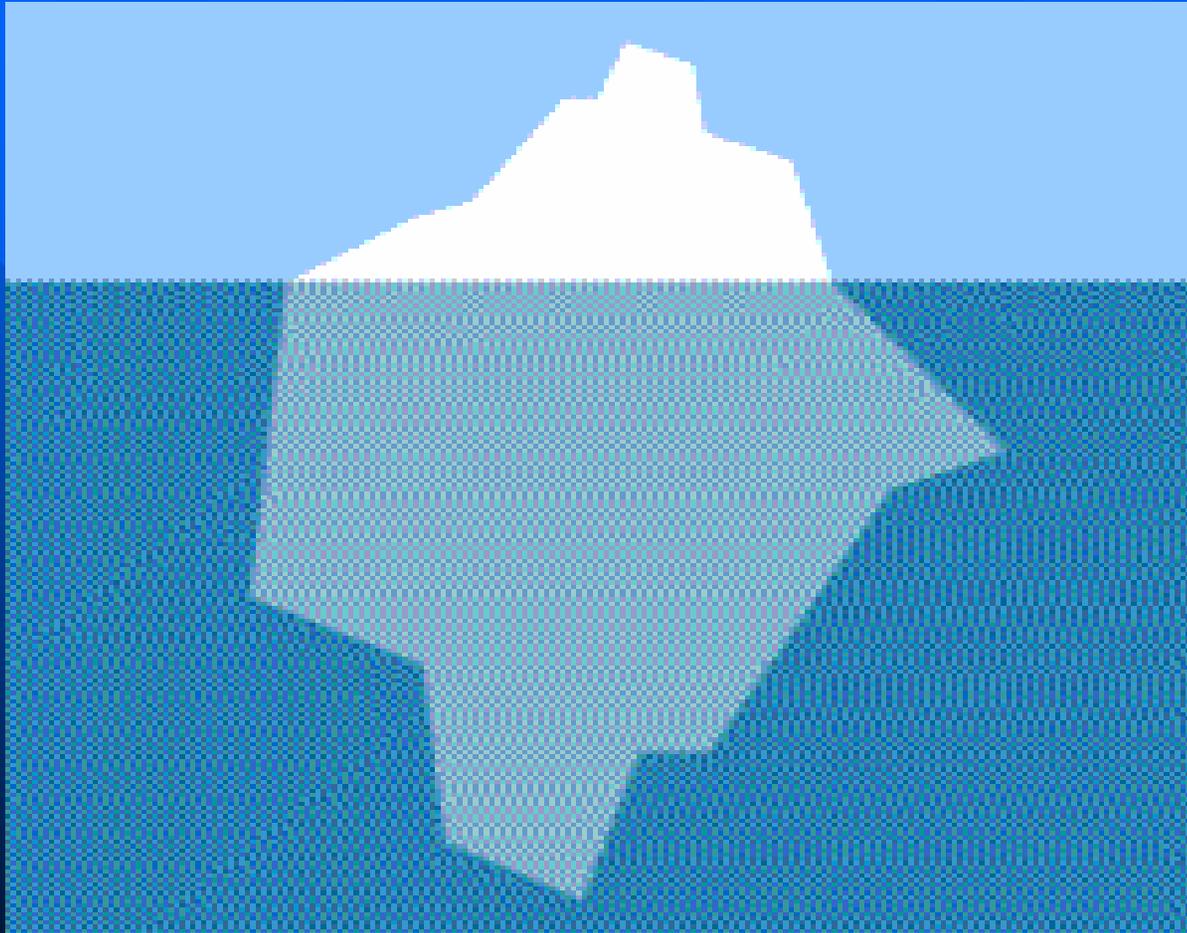
- 1704 Dissuasive Against the Horrid and Beastly Sin of Drunkenness
- 1800's Treatment and medical advice for alcohol, cocaine and opioid use
- 1970's Screening tests for alcoholism and drug dependence
- 1980's WHO Program: Managing Hazardous and Harmful Alcohol Use in Primary Care
- 1990's Development of AUDIT, ASSIST, and many other second generation screening tests; explosive growth in brief intervention research
- 2000's SBIRT concept introduced; SBIRT national demonstration programs in US and other countries





Social morays

Remember the Titanic!



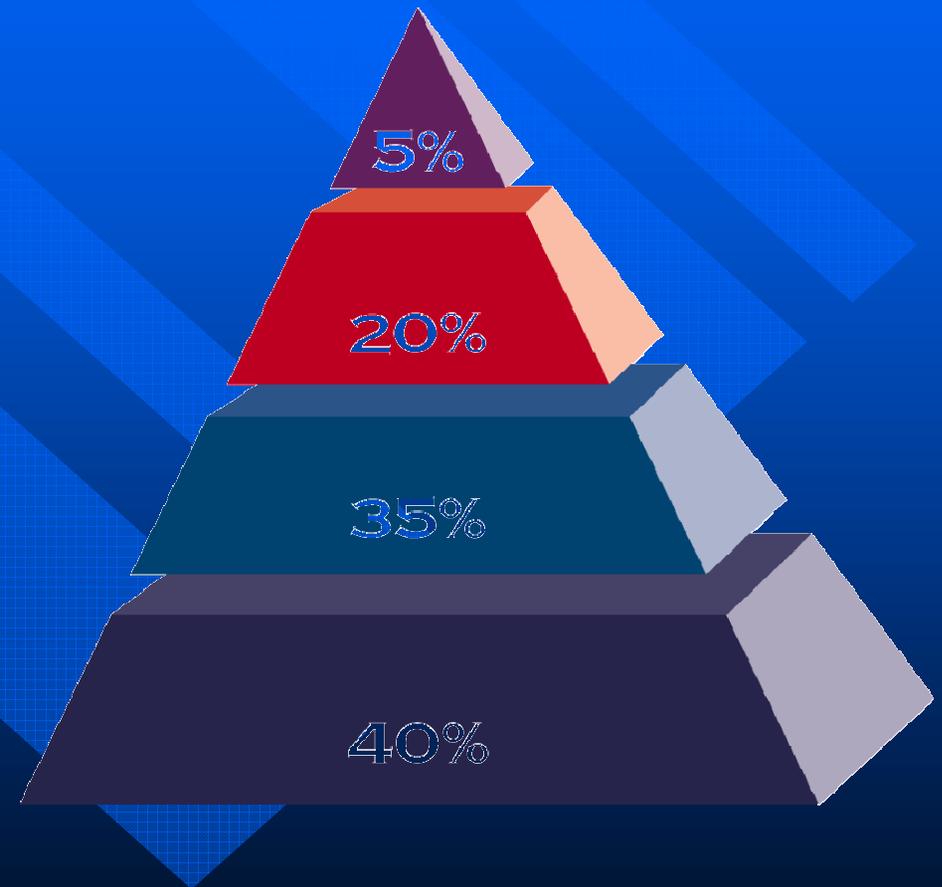
The Drinkers' Pyramid

Dependent Drinkers

Risky Drinkers

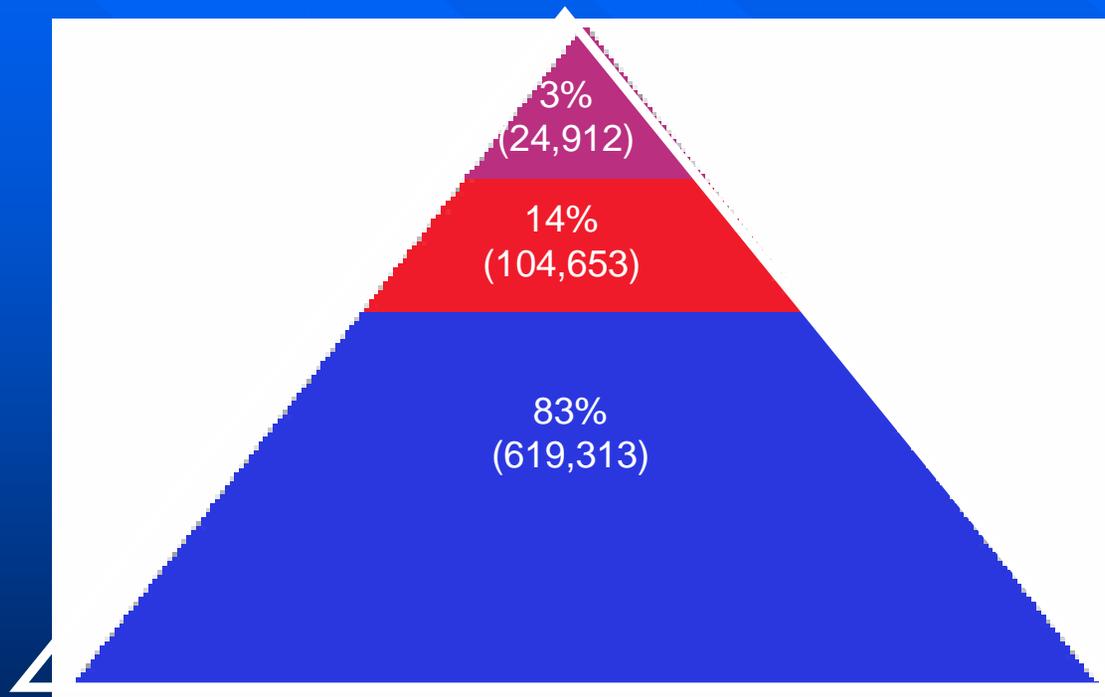
Low Risk Drinkers

Abstainers



Illicit Drug Use Pyramid

Connecticut Adults Age 18 to 39



Illicit drug abuse requiring formal treatment

Current illicit drug use

No illicit drug use

Note: Figures based on Connecticut 1996 adult household telephone surveys and 2000 US census of adults age 18 to 39.

An Abundance of Screening Tests

- MAST, SMAST, SSAST, DAST, LAST, FAST
- CAGE, CAGE-AID
- AUDIT, ASSIST
- LAST, TWEAK, T-ACE, CUGE, REPS, MSI-X, CRAFFT, RAFFT, DUSI, SASSI, POSIT, AAIS, SWAG, Trauma Scale
- GGT, MCV, CDT
- Urine drug screens, hair analysis, saliva test

AUDIT: Alcohol Use Disorders Identification Test

- Completed by patient in 2 to 3 minutes
- 10 questions; yields objective, numeric score
- Determines risk level; type of intervention needed, if any

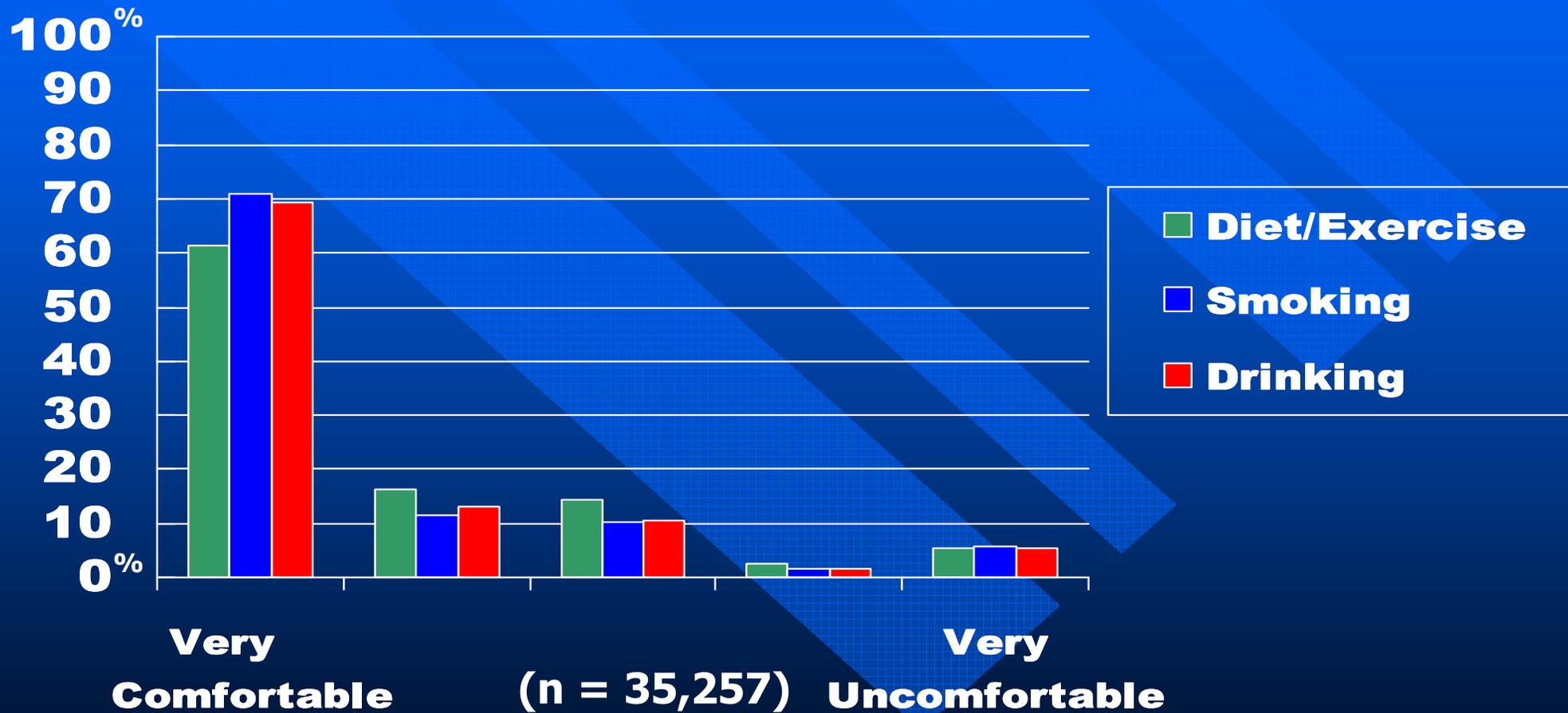
Domains and Item Content of the AUDIT

Domains	Question Number	Item Content
Hazardous Alcohol Use	1	Frequency of drinking
	2	Typical quantity
	3	Frequency of heavy drinking
Dependence Symptoms	4	Impaired control over drinking
	5	Increased salience of drinking
	6	Morning drinking
Harmful Alcohol Use	7	Guilt after drinking
	8	Blackouts
	9	Alcohol-related injuries
	10	Others concerned about drinking

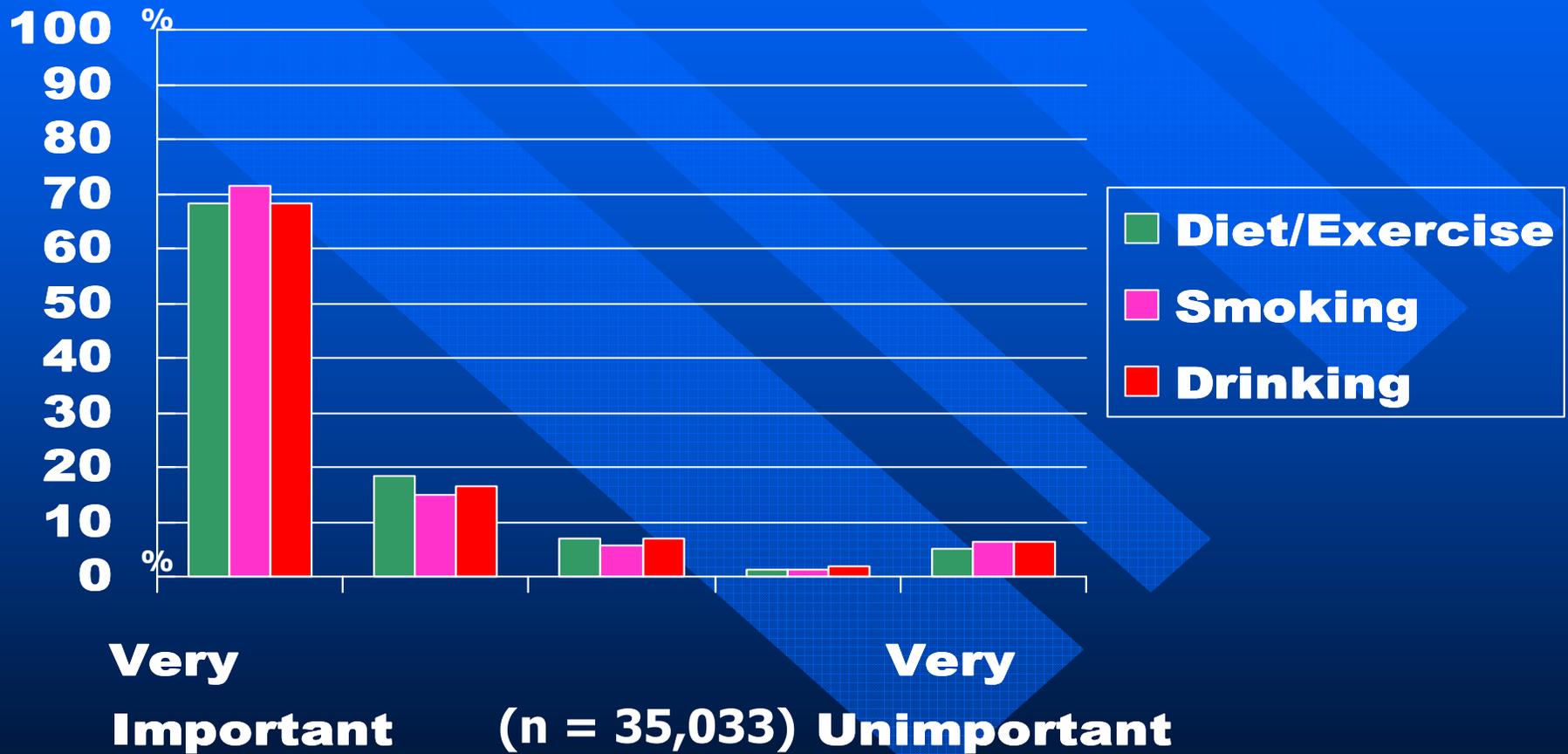
Alcohol, Smoking and Substance Involvement Screening Test

- **Developed by international group of researchers**
- **8 item instrument**
- **Screens for health risks & problems associated with any psychoactive substance use**
- **Provides lifetime and current (past 3 months) estimates of substance use and related risks**

Patient Comfort with Screening



Patients' Sense of Screening's Importance to Providers



SCREENING: What have we learned?

- Self-report tests are reliable and valid under most clinical conditions and cost very little to administer and score
- Response bias can be predicted, detected and minimized
- Biological tests are expensive, cumbersome, insensitive, difficult to interpret, but remain useful in employment and medical settings
- Use of screening tests depends on provider and patient characteristics
- A clever acronym may help dissemination and uptake as much as scientific evidence

Screening Tests:

What more do we need to know?

- How to integrate drug screening into routine medical practice, where it matches the needs of the population
- How to link drug screening with brief intervention and referral to treatment
- **What mode of screening should be used (e.g., face-to-face, computer, paper and pencil, biochemical)?**
- How to detect and minimize response bias

Brief Intervention

- *Definition:* Time-limited (5 minutes to 5 brief sessions) behavioral counseling; targets a specific health behavior (e.g. at-risk drinking or drug use)
- *Goals:*
 - a) reduce alcohol/drug consumption
 - b) facilitate treatment engagement, if needed
- Relies on use of screening data

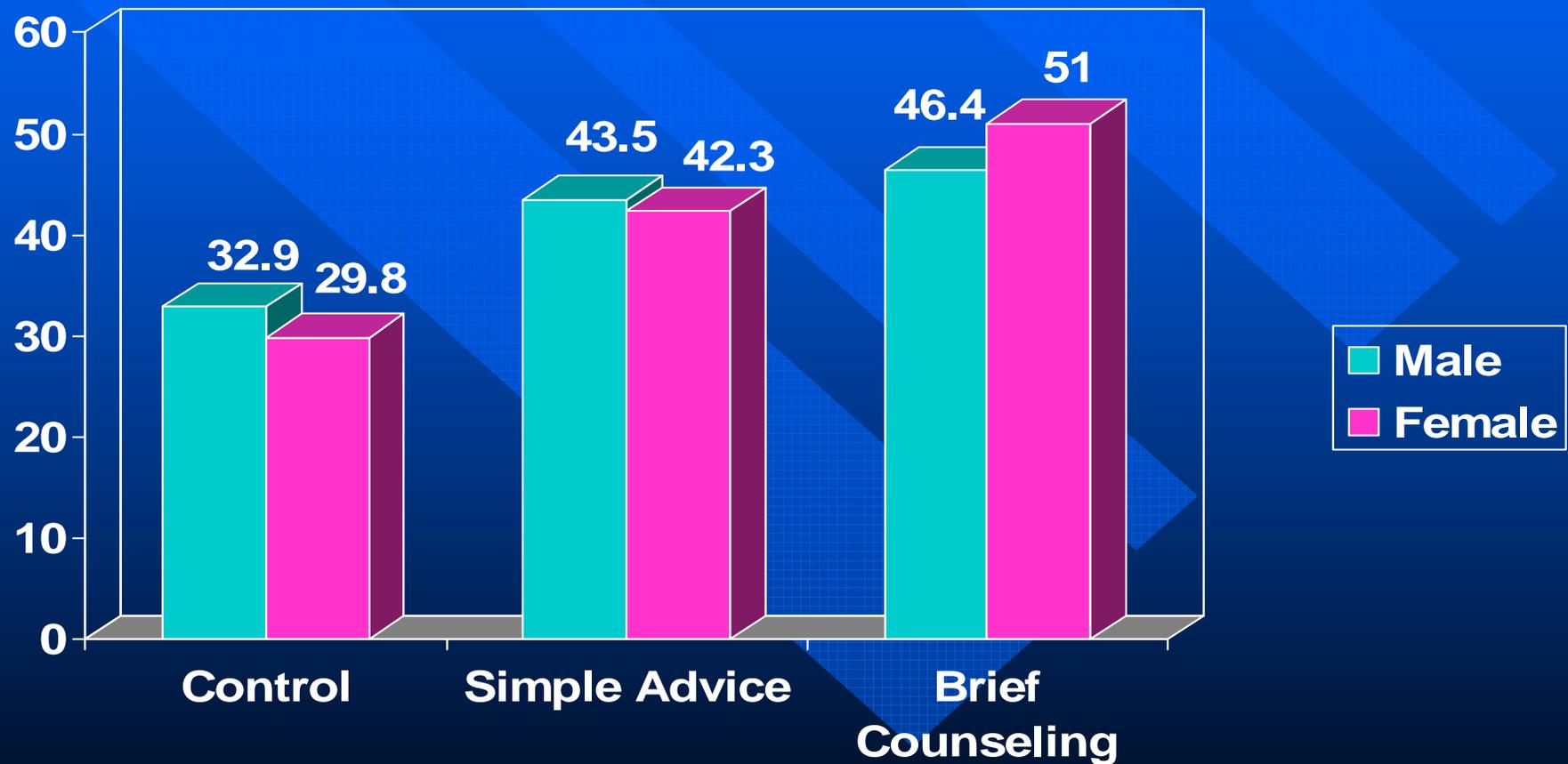
Key Elements of BI

- Present screening results
 - Identify risks and discuss consequences
 - Provide medical advice
 - Solicit patient commitment
 - Identify goals
 - Give advice and encouragement
-

WHO AMETHYST PROJECT

Alcohol
Misuse
Early
Treatment
Intervention
Study

Percentage of Male/Female Patients who Decreased Intensity of Drinking



Summary of Alcohol Brief Intervention Evidence from clinical trials with at-risk drinkers

- Participants reduced average number of drinks/week by 13% to 34% compared to controls
- Proportion of participants in intervention condition drinking at moderate or safe levels was 10% to 19% greater than controls

(from Whitlock, et al, 2004 and individual studies)

Health and Related Outcomes (cont.)

■ Quality of life measures

- Improved quality of life related to alcohol problems for those who decreased consumption by 20% or more (Maisto et al. 1998)

■ Long-term health outcomes

- Fewer hospital days at 48 months by intervention group (429 vs. 664 days; $p < .05$) (Fleming, et al, 2002)
- Significantly greater reductions in alcohol use by intervention group over 48 months (Fleming, et al, 2002)

Health and Related Outcomes (cont.)

■ Long-term health outcomes

- Brief, single contact BI had no long-term effect (10 years) on morbidity, mortality, or consumption (Wutzke, et al, 2002)
- **Malmo Screening and Intervention Study**
 - » Men who participated had significantly lower total mortality (24/100,000 person years) than controls (30/100,000; $p < .02$), and significantly reduced alcohol-related mortality after 3 and 21 years (Berghlund, et al, 2000)

Brief Intervention and Brief Treatment Trials with Drug Users

- Brief intervention trials with at-risk drug users (cannabis, benzos, etc.)
- Combined health behavior risk factor brief intervention research

Smoke Screen

Smoking Cessation as an Entrée for Managing Risky Drinking and Drug Use in Health Care Settings



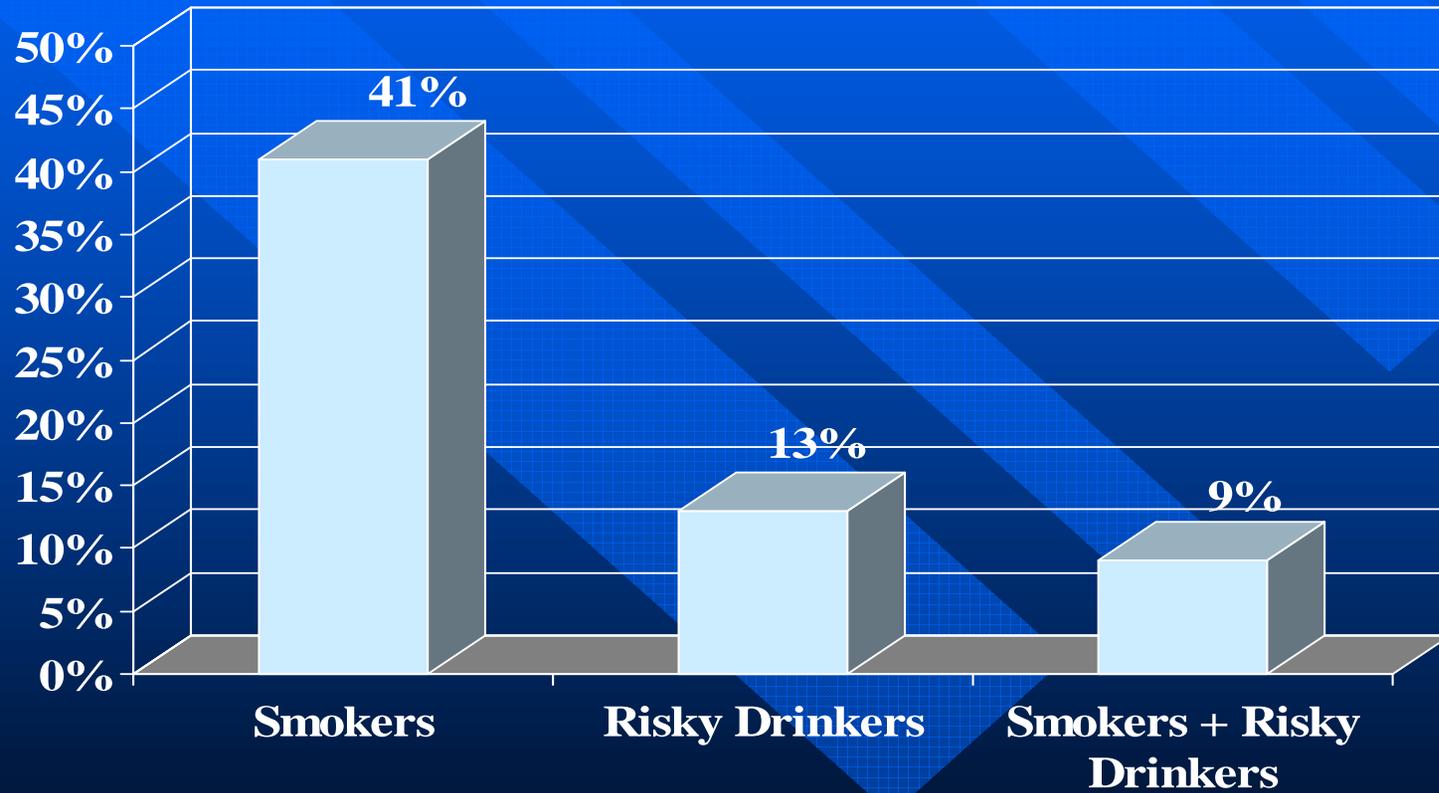
Rationale for Multiple Risk Factor Behavior Change

- Smoking is very common in heavy drinkers and drug users, thereby creating economies of scale in detection and intervention.
- Smoking cessation has gained wide acceptance in primary care. Brief intervention packages are similar, making it efficient to train health care providers to target related health risk behaviors at the same time.
- Smoking, drinking and drug use provide reciprocal cues, making it difficult to change one behavior without modifying the others.

Vital Signs Project

- To evaluate the efficacy of brief interventions for smokers and risky drinkers when delivered separately and in combination

Screening Prevalence Rates (n=6,687 screened)



Randomized 280 Risky Drinking Smokers (79% follow-up rate)

- 56 received smoking only brief intervention
- 54 received drinking only brief intervention
- 60 received combined smoking and drinking brief interventions
- 51 received no intervention (wait-list control group)

Preliminary Outcomes:
Non-verified Smoking Abstinence Rates

	3-month	
Smoking Only BI Group	19%	
Smoking + Drinking BI Group	19%	
Drinking Only BI Group	17%	
Control Group	2%	

% Non-hazardous drinking at 3-month follow-up (AUDIT negative)

	3-month	
Smoking Only BI Group	50%	
Smoking + Drinking BI Group	50%	
Drinking Only BI Group	43%	
Control Group	24%	

Recent Advances in Brief Treatment

- Manual-guided brief psychotherapies (cognitive-behavioral, motivational enhancement)
- New pharmacotherapies for GPs (e.g., buprenorphine; naltrexone)

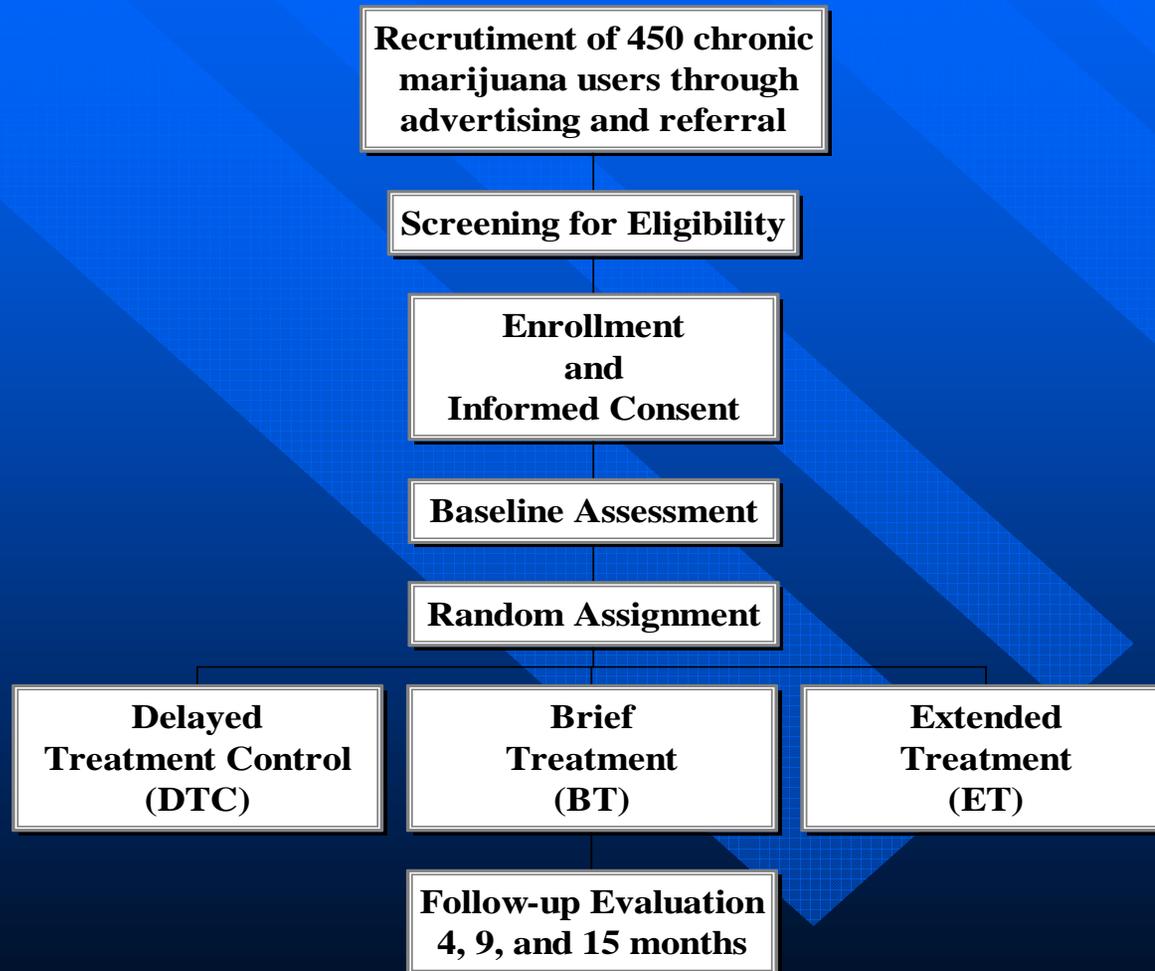
MTP

Marijuana Treatment Project

**A Multi-site Study of the Effectiveness
of Brief Treatment for Cannabis Dependence**

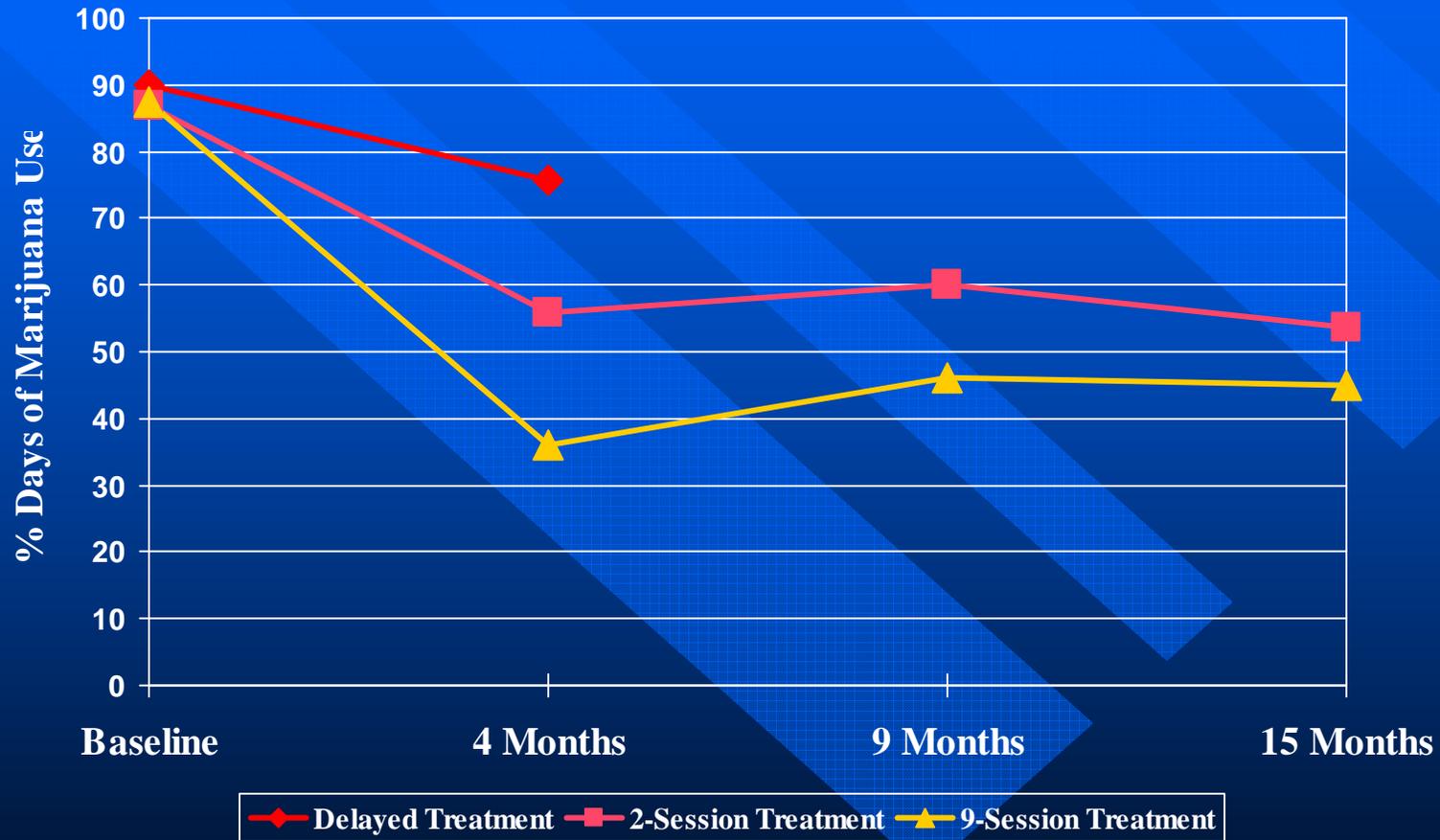
**A Cooperative Agreement
funded by
SAMHSA-CSAT**

Study Design



Outcomes: Baseline, 4, 9 & 15-months

% of Days Smoked Marijuana



Referral to Treatment: The Neglected Component of SBIRT

- The earlier patients are engaged in treatment, the better the long term outcomes
- Randomized studies show non-treatment seeking referred cases can be effectively engaged in treatment
- Attendance at first appointment is 10 times higher for referred cases relative to un-referred
- Little research on process that maximizes successful referral
- Why is referral important?

Time for SBIRT Implementation?

- Brief interventions and brief treatments are effective with smokers, drinkers and results are promising with marijuana users.
- SBIRT poised for implementation
 - Two decades of clinical research, program development
 - Effective screening tests, brief intervention and brief treatment protocols available
 - Training programs developed
- There is general agreement on the need to “broaden the base” of treatment (expand treatment and early intervention services to less severe cases and populations at risk)

Barriers to implementation of SBIRT

- Lack of time by health care providers
- Insufficient screening and diagnostic skills
- Negative attitudes, stigma
- Role incompatibility
- Lack of implementation models
- Organizational inertia

(Modesto-Lowe and Boormazian, 2000)

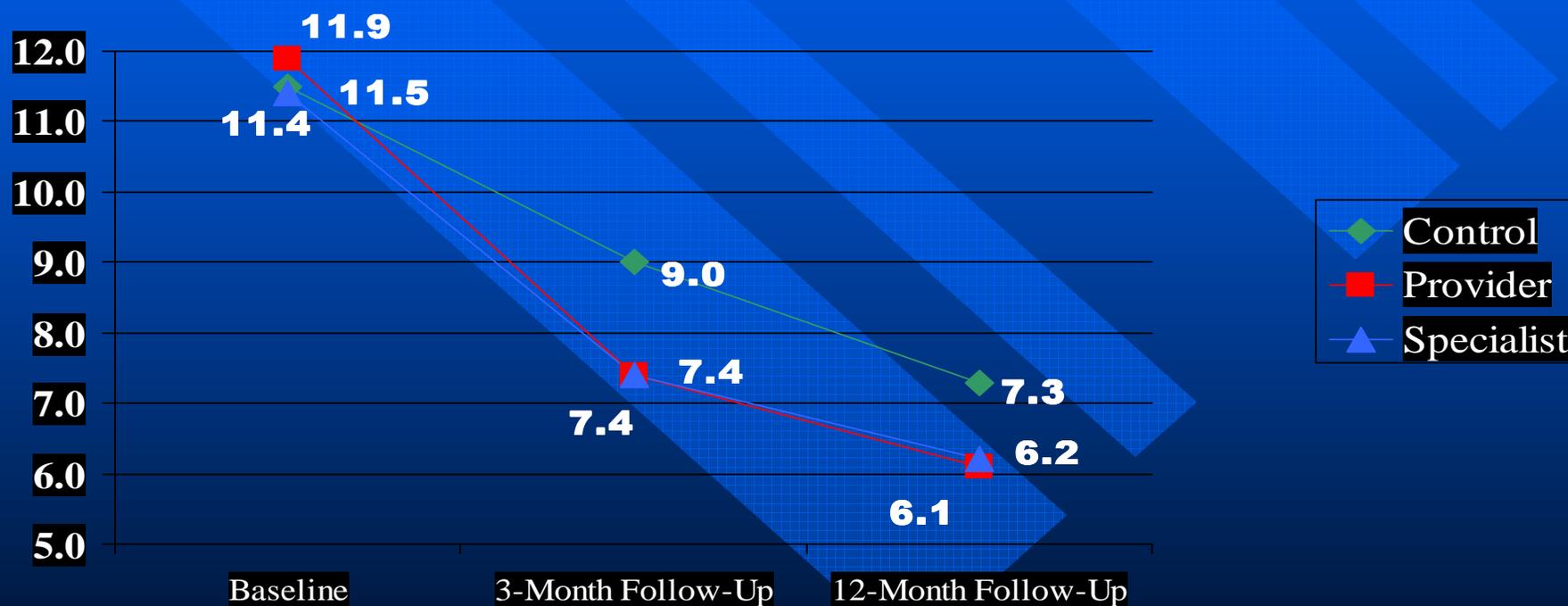
Cutting Back Study: An Example of alcohol SBIRT implementation research

- Can alcohol SBI be implemented in primary care settings within managed care environments?
- Does SBI reduce at-risk drinking?
- What are costs/benefits to managed care organizations (MCOs)?

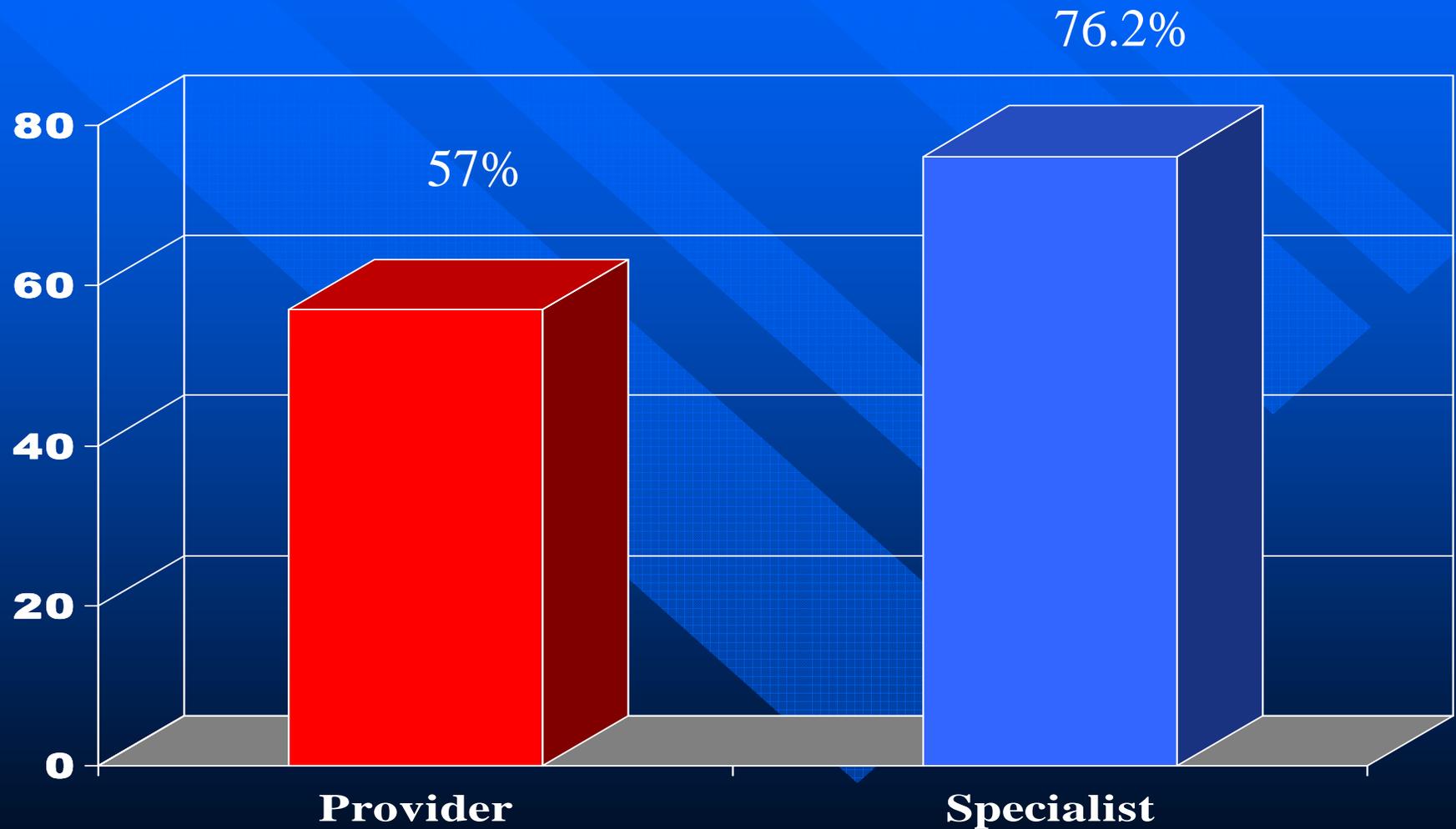
Research Design

- 5 MCOs: each with 3 primary care clinics
- Plan system, train providers, operate 6 months or more
- Test 2 conditions plus one control at each MCO
 - -- Doctors
 - -- “Specialists” - nurses, health educators
- 3-month; 12-month patient follow-up by telephone

Changes in Drinks per Week: Baseline to 3- and 12-Month Follow Up



Percent At-Risk Drinkers Receiving Intervention by Provider & Specialist Models



Factors influencing success/failure: Cutting Back Study (Babor et al., 2005)

■ Predisposing Factors

- Stable patient membership
- Organizational stability

■ Enabling Factors

- Provider time available
- Few competing organizational priorities
- Influential leadership
- Staff involvement in planning
- Technical assistance

■ Reinforcing Factors

- Organizational Support

What is being learned from implementation research?

- SBIRT for alcohol can be done, but it's not easy
- Staff participation in planning is critical
- Training changes beliefs and builds capacities
- Practice reinforces change
- Many factors contribute to success & problems
- Outcomes may be somewhat less than in controlled trials
- Costs are low compared to many services

POLICY IMPLICATIONS OF SBIRT

Translational Research

- A successful example of translational research
- Meets requirements of a public health approach to secondary prevention, but needs to focus on high risk groups in high volume settings for maximum effect
- Consistent with IOM vision of “Broadening the Base” of treatment, and SAMSHA/CSAT Access To Recovery Initiative
- Could serve as a major feeder to treatment system, AND as an additional secondary prevention component
- Alcohol/tobacco SBI as a Trojan Horse to drug SBI

Horse called "SBIRT FOR HEALTHY LIFESTYLES"



Trojan GPs

Greek drug researchers hidden in Trojan Horse

Addressing Multiple Behavioral Health Risk Factors in Primary Care:
Broadening the Focus of Health Behavior Change Research and Practice
A Robert Wood Johnson Foundation Initiative

- The Big Four:
 - Smoking
 - Risky drinking
 - Sedentary lifestyle
 - Unhealthy diet
- Review of epidemiological evidence
- Summary of effective screening, intervention and system-based strategies
- Recommendations for research, practice and policy

Full Report: American Journal of Preventive Medicine, August, 27 (2S), 2004

Integration into PHC and other settings: Implementation Issues

- ❖ **Training providers of primary health care**
- ❖ **Organizational factors: resources, competition, administrative support**
- ❖ **Logistical issues: time, stigma, staff motivation; alternative delivery models**
- ❖ **System dynamics**
- ❖ **Social marketing direct to patient**

Conceptual Model of Alcohol/Drug Treatment System and Its Connections With Other Sectors



Study the Benefits of a Systems Approach

- Systems concepts and research may help to improve access, efficiency, economy, effectiveness, continuity of care, thereby improving the population impact of treatment services.
- Focus attention on components having greatest impact on morbidity and mortality
- Cost implications and resource allocation
- Making the system fit the needs of the community, rather than the professional group

SBIRT Model Matrix

