

**SBIRT**

**TRANSLATIONAL RESEARCH  
PAR EXCELLENCE**

**OR POETRY THAT IS LOST IN  
TRANSLATION?**

# TRIP: TRANSLATING RESEARCH INTO PRACTICE

- Applying what we have learned from research
- Making scientific knowledge accessible and relevant to practitioners
- Improving the health of the population in a community by broad dissemination of effective medical and health promotion technologies

# T1 – Bench to Bedside

- Basic science research leads to new clinical investigation
- Examples:
  - Biomarkers for alcohol and drug screening;
  - Opioid antagonists to dampen alcohol craving or block opiate effects

# T2 – Bedside to Community

- Clinical investigation leads to improved medical practice and enhanced population health
- Examples: Research on
  - SBI training,
  - Program implementation
  - Cost effectiveness

# Why is TRIP important?

- Scientific evidence can influence practitioners
- Scientific evidence can influence policymakers to allocate resources and change policies
- Research can improve practice
- Research can facilitate training and guide implementation

# WHO PROGRAM

## Management of Substance Abuse in Primary Health Care: An example of TRIP

- Phase I (1982-1989)
    - Development of AUDIT
    - International Feasibility and Reliability Study
  - Phase II (1985-1996)
    - Cross-national Clinical Trial of Brief Intervention for alcohol
    - Development of the ASSIST
  - Phase III (1997-...)
    - International collaborative research on implementation of Brief Interventions Linked to the AUDIT
- Phase IV (2003- )
- Development and evaluation of national plans for SBIR training and program implementation within healthcare systems in both developing and developed countries.

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

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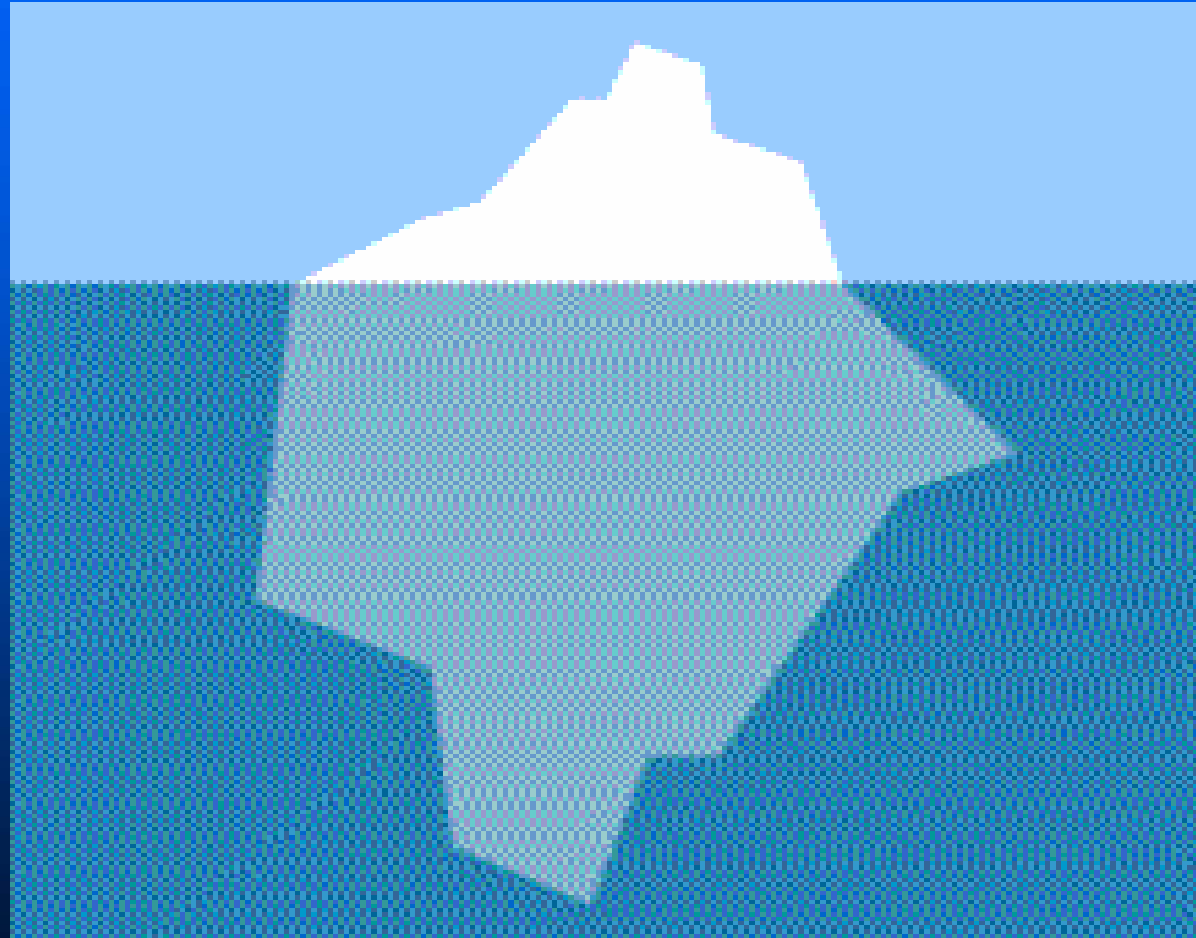
- **S**creening to find:
  - at-risk drinkers
  - possible alcohol dependence
- **B**rief **I**ntervention
  - Early detection
  - Time limited
  - Low cost, easy to use
- Referral of more serious cases to further diagnostic assessment specialized care





Social morays

Remember the Titanic!



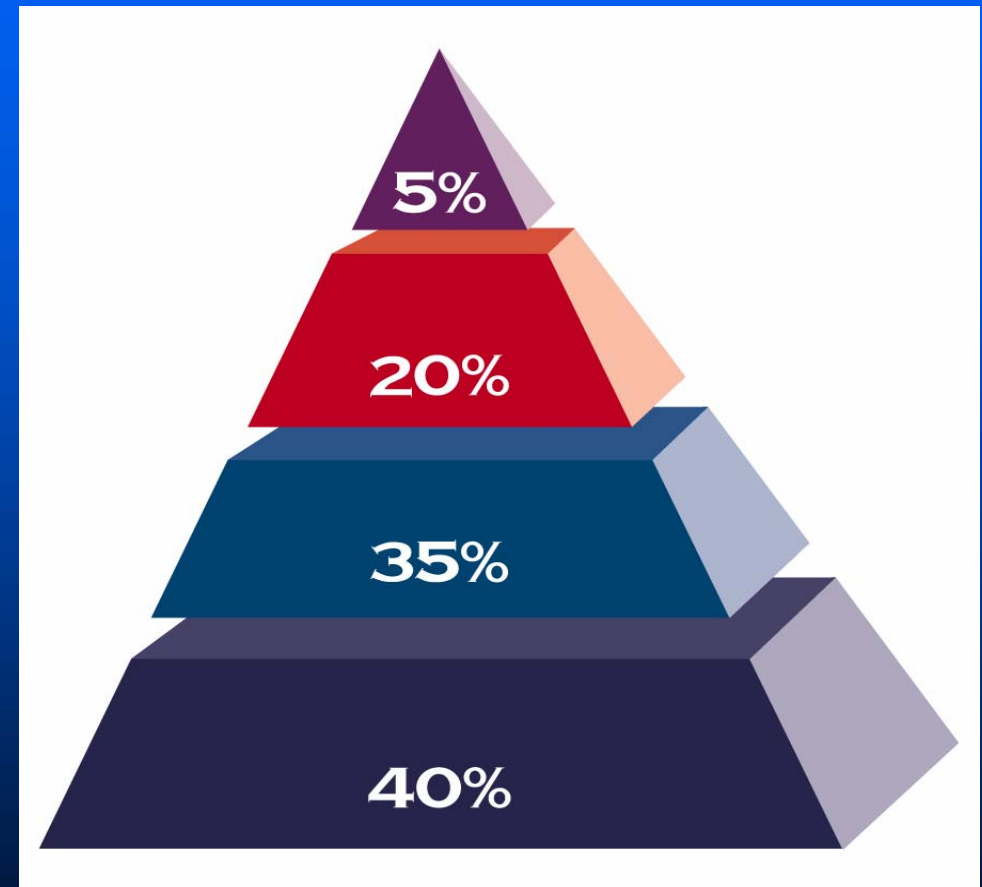
# The Drinkers' Pyramid

**Dependent Drinkers**

**Risky Drinkers**

**Low Risk Drinkers**

**Abstainers**



# SBIRT and the 5 A's

Screening

Brief Intervention

Referral to Diagnostic

Evaluation and Treatment

Assess

Advise,

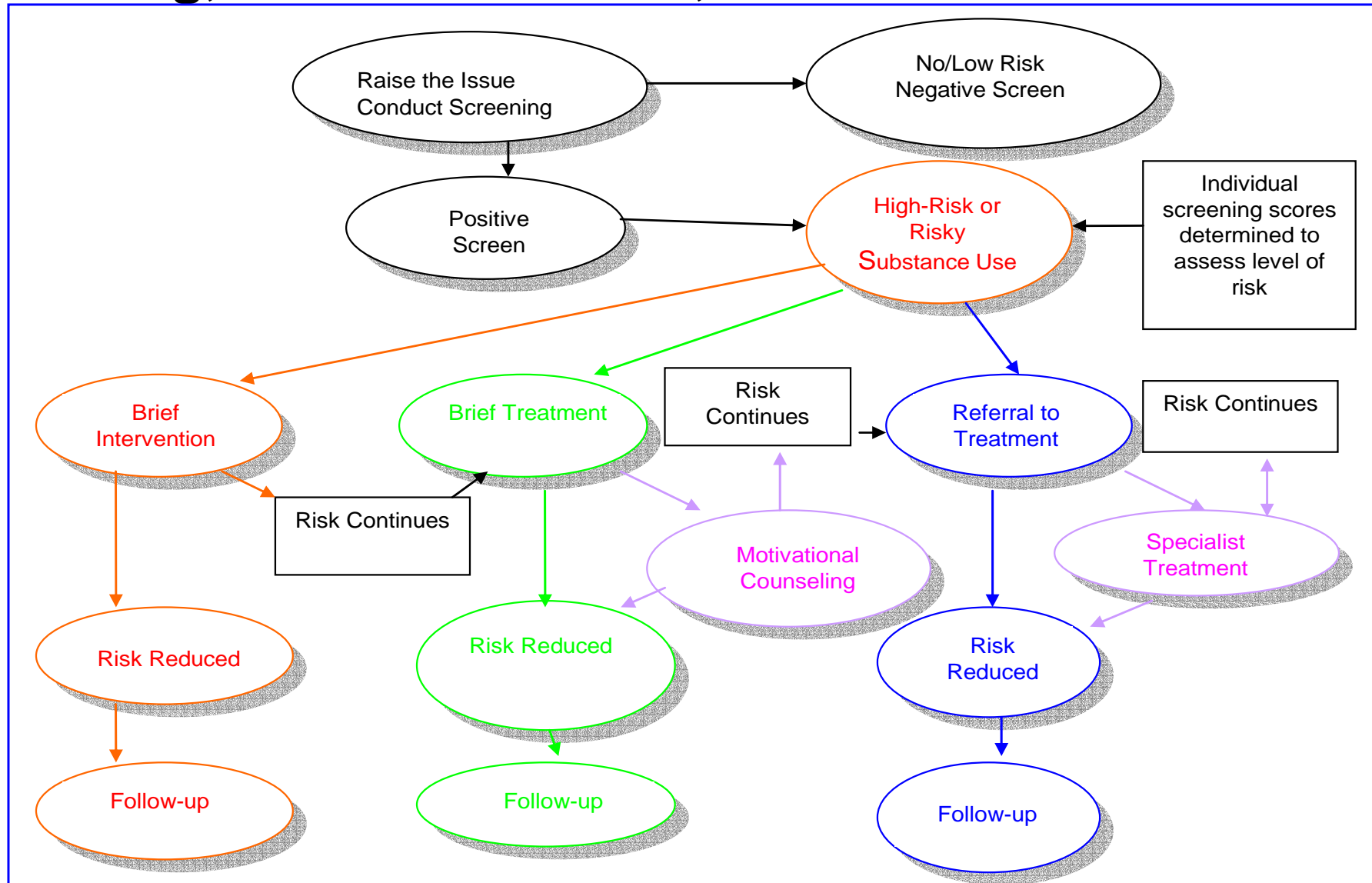
Agree,

Assist

Arrange

# Conceptual Overview of SBIRT

## Screening, Brief Intervention, and Referral to Treatment



# What is the TRIP research base for SBIRT?

- Since 1980, several hundred empirical studies on screening, brief intervention, referral and integration of SBIRT into health care settings
- Over 25 screening tests developed and validated
- Scores of randomized controlled trials of brief intervention in a wide range of countries
- 15+ integrative literature reviews
- A growing literature on provider training, SBI implementation, and new applications

# An Abundance of Screening Tests

- MAST, BMAST, SMAST, SSAST, DAST
- CAGE, CAGE-AID
- AUDIT, AUDIT-C
- FAST, LAST, TWEAK, T-ACE, CUGE, REPS, MSI-X, CRAFFT, RAFFT, DUSI, SASSI, POSIT, AAIS, SWAG, Trauma Scale, LAST
- GGT, MCV, CDT

# SCREENING: What have we learned?

- Self-report tests are reliable and valid under most clinical conditions
- 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: Is more TRIP research needed?

- There is a distinct Anglo-American dominance
- How to overcome barriers to use of screening
- How to determine the best place to screen – needs assessment
- How to increase the rate of screening
- How to combine alcohol, drug and tobacco screening with screening for other behavioral risk factors
- How to tailor screening to fit the needs of a population and of a health care system

# 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 SBI Emerging from Clinical Trials

- Present screening results
  - Identify risks and discuss consequences
  - Provide medical advice
  - Solicit patient commitment
  - Identify goals
  - Give advice and encouragement
- 
- **Additional staff/system supports needed for screening/assessment**
  - **Provider training varies (one hour to one day)**

# **Summary of 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.1)

## ■ 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)

# Results Across Reviews/Meta-Analyses of Alcohol Studies

- ↓ Brief Interventions (BI) can reduce alcohol use for at least 12 months among younger and older adults
- Approach is acceptable to younger and older adults
- Results mixed on longer-term utilization and reduction of alcohol-related harm
- Cost-effectiveness has been demonstrated in several countries

# Evidence for BI with other substances

- Significant literature for smoking cessation
- MTP Research Group et al. (2004) – cannabis (USA)
- Copeland et al. (2001) cannabis (Australia)
- Heather et al. (2004) benzos (UK)
- McCambridge and Strang (2004) cigarettes and cannabis (UK)
- Bernstein et al (2005) cocaine and heroine (US)

# Practical Issues

**Q. Does it make a difference if the intervener is the personal physician, nurse, counselor, health educator?**

**A. Probably not**

**Q. What is the appropriate length/complexity of interventions?**

**A. Keep it short and simple, with follow-up visits if necessary.**

# Practical Issues

- ❖ **Effectiveness of SBI with special populations** (e.g. adolescents, older adults, pregnant women, alcohol/drug dependent persons), alcoholics, drug addicts?
- ❖ **Covariate effects** (e.g. nicotine dependence, anxiety, depression) ?
- ❖ **Can interventions be combined or sequenced?**
- **Stepped care strategies** for patients who do not respond to initial BI: e.g. brief therapies, case management

# Do we know enough about SBI implementation?

- Good theory but weak in practice (Roche and Freeman, 2004)
- Barriers to implementation: lack of time, diagnostic skills, negative attitudes, and perceptions of role incompatibility (Modesto-Lowe and Boormazian, 2000)

# Do we know enough about implementation?

- Gomel et al (1998) compared 3 strategies to market and train primary care physicians. Tele-marketing was more cost-effective than academic detailing and direct mail in promoting uptake of an SBI package
- Kaner et al (2003) compared written guidelines with outreach training and training plus telephone-based support in promoting BI by nurses in PHC. Cost effectiveness was similar per patient, so written guidelines were considered best to promote SBI
- Saitz et al (2003) RTC showed that screening can prompt physicians to increase discussions and provide advice

# Factors influencing success/failure: Cutting Back Study (JSA, 2005)

## ■ Predisposing Factors

- Stable patient membership
- Organizational stability

## ■ Enabling Factors

- Provider lack of time
- Competing organizational priorities
- Influential leadership
- Staff involvement in planning
- Technical assistance

## ■ Reinforcing Factors

- Organizational Support

# SBIRT Training programs: Are they available and effective?

- McRee et al (2002) Training package for PHC plus training tapes
- Roche et al (1997) compared two educational programs to train medical students; interactive training was no more effective than traditional didactic lectures in developing knowledge and skills.
- Saitz et al. (200) telephone survey of physicians, nurses etc after a CME course; most reported course had positive effect on clinical practice
- Wilk and Jensen (2002) use of standardized patients to train residents to use SBI; after training more residents conducted screening and BI
- Todd (2002) resource kit for ED-based SBI
- Adams et al (1998) 2.5 hr. training doubled rate of alcohol interventions in high-risk PHC patients

# Time for A Public Health Approach?

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- Brief interventions are effective with smokers and risky drinkers, and there is some evidence that they work well with marijuana users
- SBIRT poised for next step in dissemination
  - two decades clinical research, program development
  - effective screening tests available
  - training programs developed
- SBIRT risk reduction information, journals, materials exist in diverse formats
- There is general agreement on the need to “broaden the base” of treatment, i.e., expand treatment and early intervention services to less severe cases and populations at risk

# What have we learned?

## Some flawed assumptions

- Professional training improves outcomes
- Severity determines outcomes
- Skills training improves outcomes
- Motivational readiness improves outcomes
- Science shapes practice

# Integration of SBIRT into PHC: Conceptual Issues

- ❖ **Conflicting paradigms: health promotion vs curative medicine**
- ❖ **Focus on health vs focus on disease**
- ❖ **Low technology vs high technology**
- ❖ **Population health as a goal: reduced morbidity and mortality VS acute care demands to deal with presenting problems**

# Integration into PHC: Structural Issues

- ❖ Solo practice vs clinic-based care
- ❖ Fee-for-service vs private insurance vs universal, free or affordable health care
- ❖ Substance-specific vs behavioral risk factors
- ❖ Shared care vs dedicated health educator responsible for SBIRT
- ❖ Adaptation to patient demographics
- ❖ Adaptation to substance use patterns

# Integration into PHC and other settings: Transfer 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
- ❖ Reaching the Tipping Point: Stickiness, Mavens, Salespeople

# Social Marketing and the Tipping Point

- Contagiousness of practice behavior
- Small causes can have big effects
- Change is dramatic rather than gradual
- The Tipping Point is the moment when a critical mass is achieved and change accelerates
- Examples from SBIRT: AUDIT Screening Test; Motivational Interviewing, Stages of Change

# Marketing Success Stories

- Depend on the influence of a few select carriers
- The Stickiness factor causes ideas and behavior to catch on in a contagious way
- Context has enormous power

# CONTRASTING MODELS

## ■ TRADITIONAL

- Acute care
- Treat disorder
- Accountable for individual patients
- Fill treatment slots
- Separate programs
- Case management

## ■ PUBLIC HEALTH

- Continuum of care
- Health promotion/disease prevention
- Accountable for defined populations
- Provide care at most appropriate level
- Integrated delivery systems

# Population Health Care Management

- Defined by geographic boundaries as well as age, sex and other characteristics
- Allocation of resources to preventive, curative, restorative and rehabilitative services
- Design interventions and monitor services for entire population
- Organize providers into networks
- Shift utilization to lower cost settings or most appropriate level of care

# Conclusions

- Implementation models are currently inadequate to achieve adequate population reach
- Screening is the linchpin of SBI
- Carve out models may work better in some settings
- Fit the program to the population, rather than the population to the program
- Evaluate population impact
- Combine alcohol SBI with other risk factors

# **The Diffusion of Innovations to Prevent Disease, Disability and Death: An Historical Perspective**

- Longitude – 75+ years
- Scurvy – 50 years
- SBIR – 25 years

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