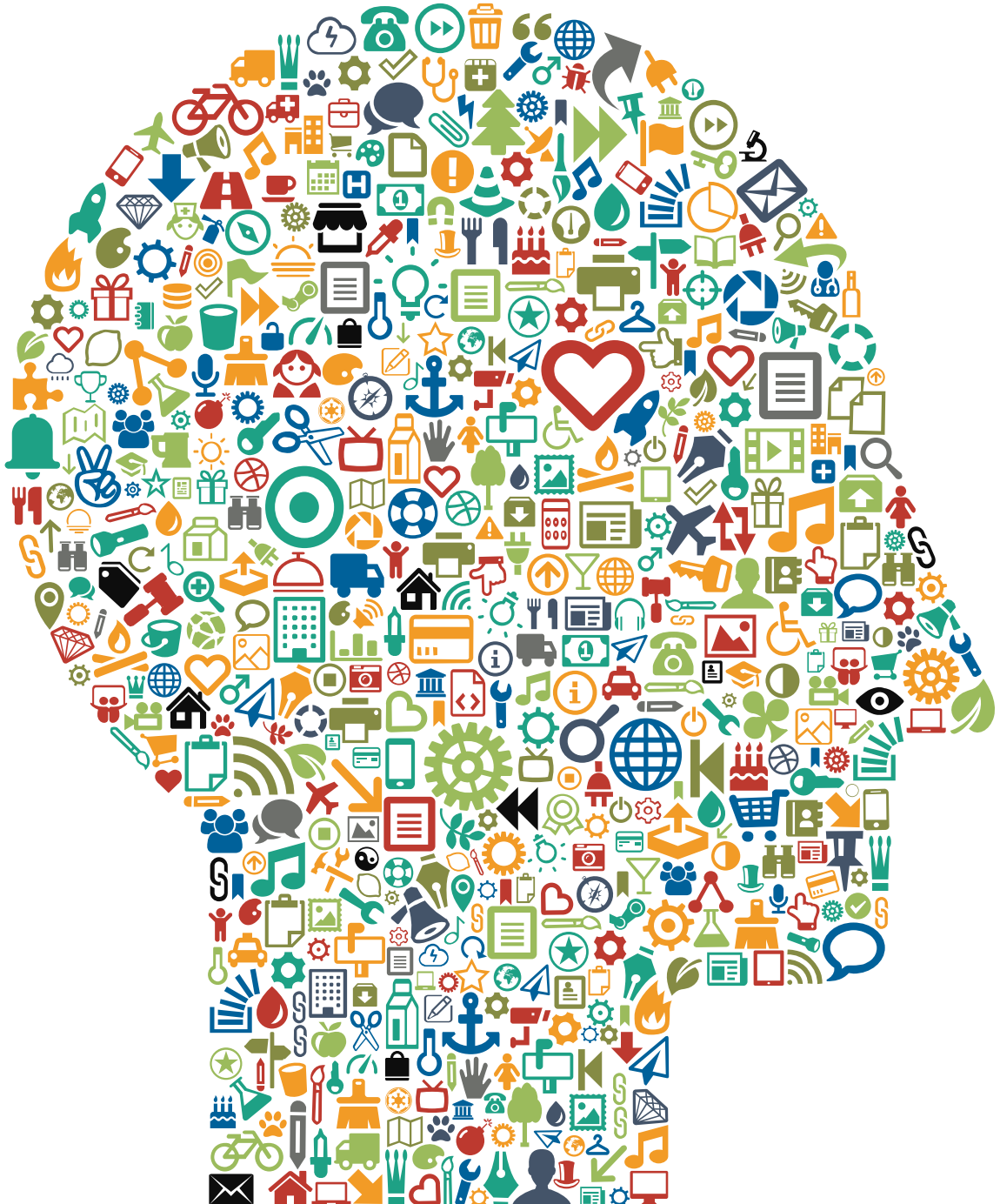

Substance Misuse and Acquired Brain Injury:

Evidenced-based Techniques to Prepare People for Lasting Change

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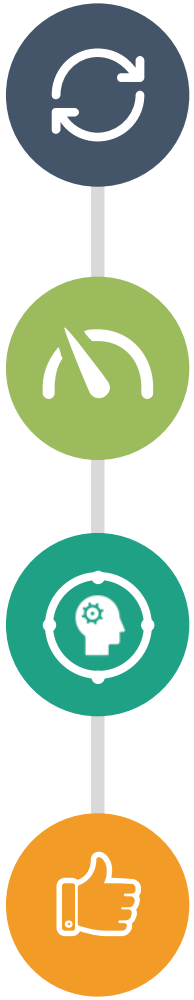
Gary S. Seale, PhD, LCDC
Regional Director of Clinical Services

“If I had six hours to chop down a tree, I would spend four hours sharpening the axe…”

- Abraham Lincoln


LIGHT

Substance Misuse - Defined



- Patterns of misuse are repeated and become predicable in their regularity and excess
- Use is characterized by poor self-regulation, continues despite negative feedback (consequences), and often appears “out of control”
- Reinforcers for engaging in the behavior are very strong and the behavior is an integral part of the person’s life and way of coping
- Frustrating because change is possible and in the best interest of the person

Scope of the Problem

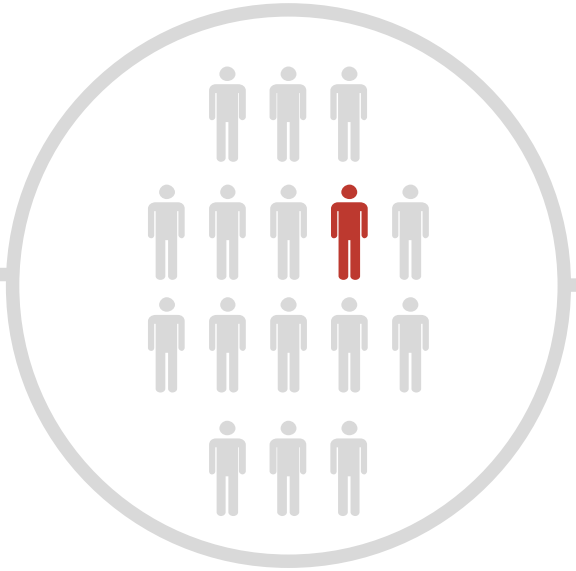
Alcohol (ETOH) is THE most frequently used depressant and the cause of considerable morbidity and mortality

In the United States, as many as 90% of adults have had some experience with alcohol

Of those adults who have used alcohol 60% of males and 30% of females report an adverse life event related to alcohol use

Most people learn from their experiences and moderate or stop drinking

Scope of the Problem



15 million Americans age 18 and older misuse alcohol or are alcohol dependent (1 in 16)

Alcohol misuse and dependence are more common in men than in women (5:1 ratio)

Men start drinking early; women start drinking heavily later in life; misuse and dependence progress more rapidly in women, causing more health-related problems

Size matters - differences in blood alcohol concentrations (BAC)

Scope of the Problem

Social-cultural differences exist (family, religious, etc.)

Alcohol misuse and dependence rates are about equal in Caucasian and African-American populations

Slightly higher misuse and dependence rates in Latino males

Very low in Asian populations (due to adverse physical affects of ETOH at low doses)

Scope of the Problem

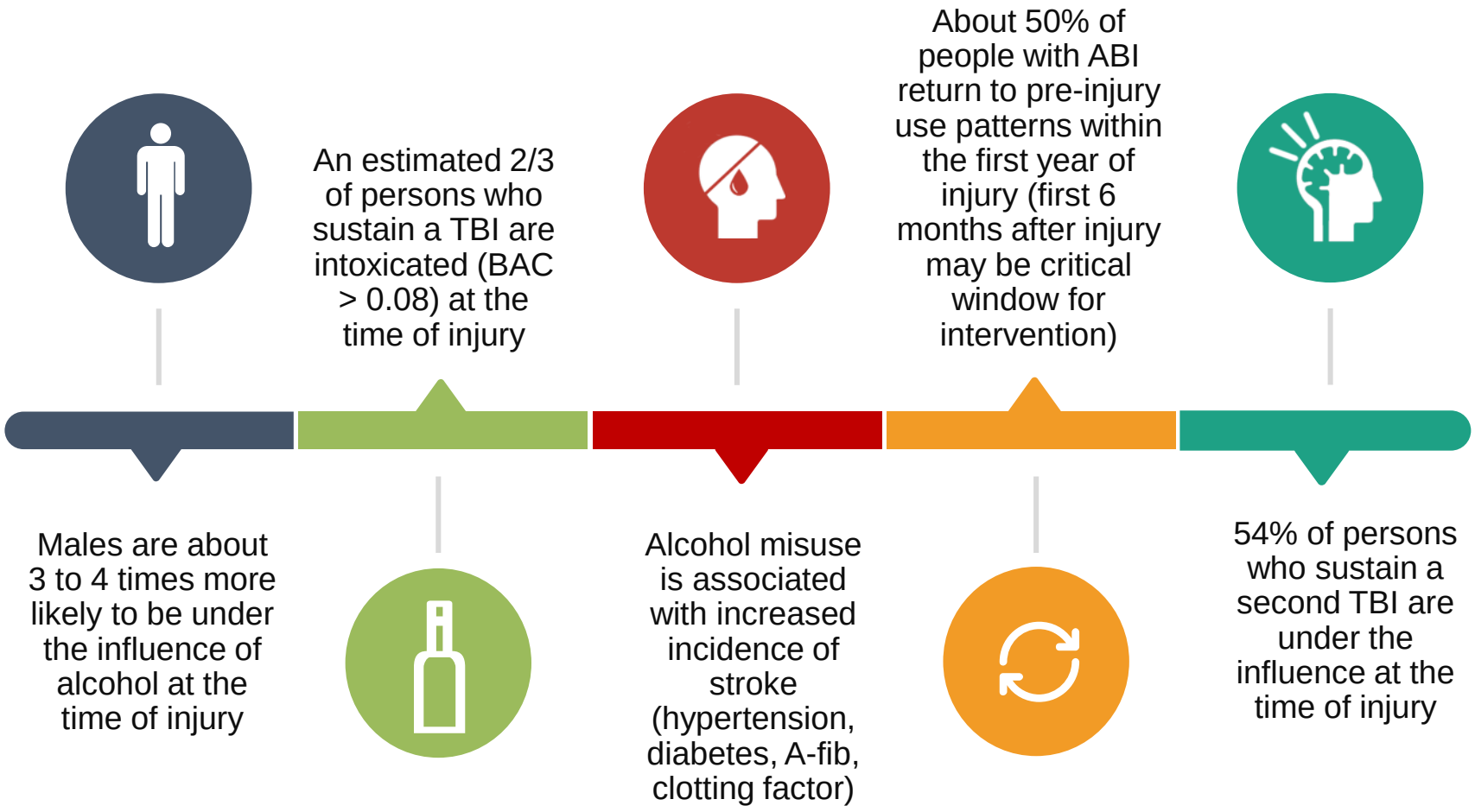
The earlier one starts drinking, the greater the risk for developing alcohol misuse/ dependence (those drinking at 15 are 7x more likely to develop alcohol use problems compared to those that begin at 21)

Health-related problems associated with drinking include cancer, brain damage, immune system dysfunction, fetal alcohol syndrome, etc.

31% of fatal traffic accidents involve alcohol

Many assaults, homicides and suicides involve ETOH

Scope of the Problem: Substance Misuse and ABI



Cost of the Problem: Substance Misuse and ABI

ABI is among the leading killers and disablers of all young adults under the age of 35

Medical and rehabilitation costs associated with ABI exceed 100 billion dollars annually

Alcohol related problems exceed $249 billion annually (ER/Hospital costs, rehabilitation costs, law enforcement/ incarceration, lost wages/productivity)

In human terms, the cost can not be calculated!

Treatment Challenges

- More frequent complications in the acute medical phase of recovery (i.e., respiratory, vascular, edema and ICP, etc.) resulting in longer lengths of stay in acute phase
- Lower levels of consciousness (lower GCS scores) and longer lengths of coma
- Greater agitation when emerging from coma
- Greater levels of non-compliance and increased risk of leaving acute and post-acute care AMA
- Greater risk of “losing” patient during follow-up

Treatment Challenges

- 30% to 40% of persons with ABI had substance abuse problems pre-injury
- A large number of persons who were not problem drinkers before injury (> 20%) are at risk for developing abusive patterns after injury
- Persons who present for post-acute rehabilitation may be “dry” but not “sober”
- Persons with ABI, because of multiple and complex changes associated with brain injury, may feel they have a “reason” to use
- Drug seeking, relapse & leaving treatment are frequent occurrences that impact outcomes

Treatment Challenges

- Persons with ABI report that very small amounts of alcohol can have a big impact on cognition and behavior
- Family members and persons with ABI report that cognitive, physical, and emotional deficits stemming from injury are exaggerated with alcohol use

Traditional Treatment Approaches

- Traditional approaches to substance misuse treatment influenced by Jellenik's disease concept of "alcoholism"
- Emphasizes group work to help patients understand the nature of their disease/illness
- Recovery is dependent upon complete abstinence
- Resistance is seen as denial of the problem and must be confronted
- Uses 12-step principles in recovery

Traditional Treatment Approaches Substance Abuse and TBI

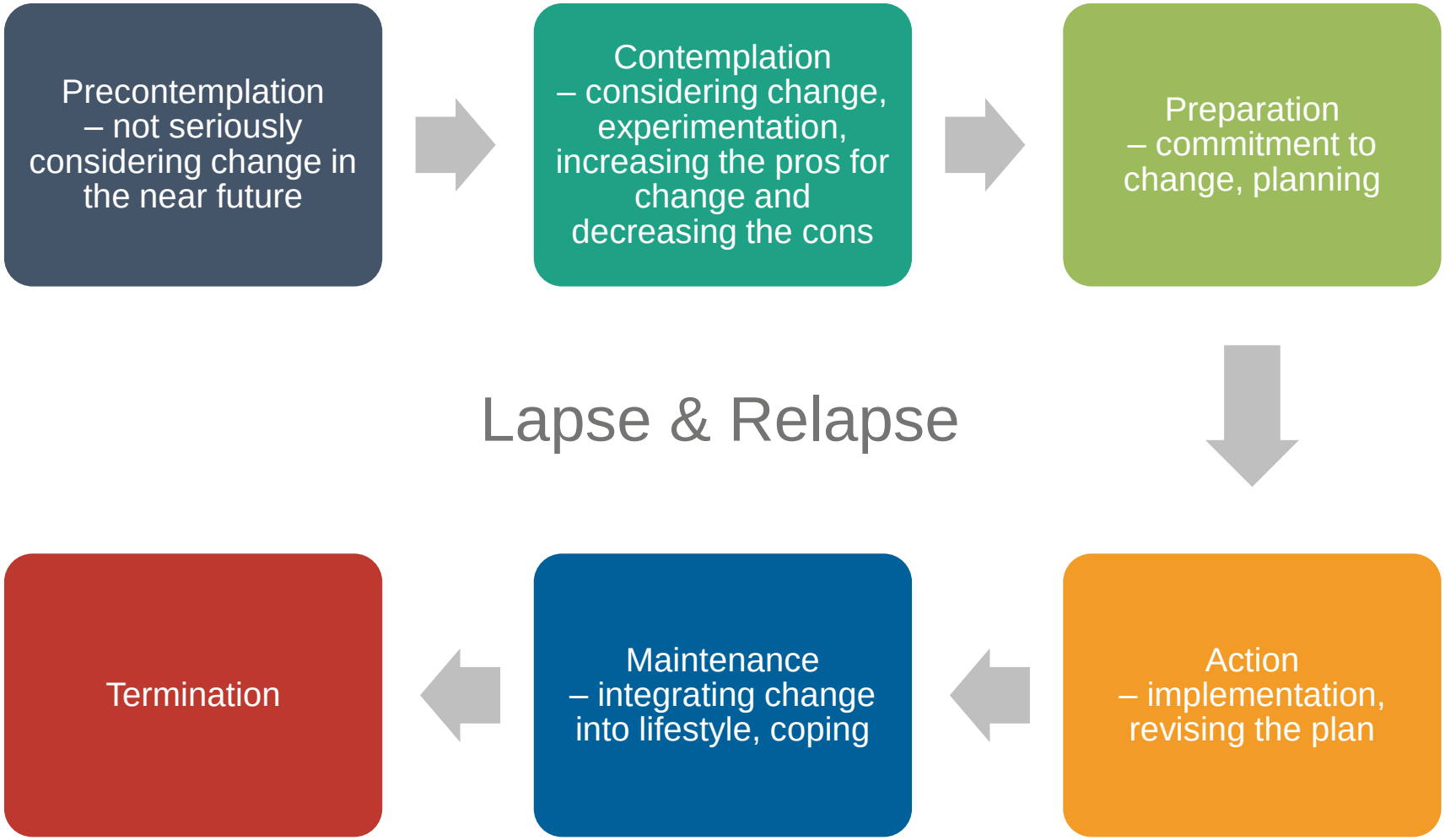
- Persons with ABI may resist traditional approaches due to negative initial experiences with 12-step programs
- Requires patient to accept yet another diagnostic label
- Difficulty with concepts central to 12-step programs (i.e., “higher power”, “spiritual awakening”, “first things first”, “one day at a time”, etc.)
- Heavy handed confrontation results in defensiveness
- Conflicts between recommendations of treatment team and advice from “old timers”

An Alternative Treatment Approach – Stage Change

Transtheoretical Model (TTM) of intentional behavior change focuses on:

1. how individuals change and,
2. identifies key change dimensions involved in this process.

TTM Model of Intentional Behavior Change



How Substance Misuse and Dependence Develops

- **Precontemplation** – person is not seriously considering engaging in the behavior (i.e., drinking) in the near future. Lack of interest can be due to:
  1. little information or knowledge,
  2. value system that excludes consideration of behavior, or
  3. a conscious decision not to engage in behavior

- Protective factors include: religious involvement, good family relations/ interactions, parental monitoring, peers with similar views/ values, good self-regulation, economic and social stability

How Misuse & Dependence Develops (continued)

- **Contemplation** – person begins to consider engaging in behavior (i.e., drinking); begins to consider positive/negative aspects of behavior (i.e., images, media messages, modeling, etc.); experimentation

- Task of this stage is to gather information and weigh pros/cons

- Experiments with behavior until a decision is made to move ahead to Preparation or back to Precontemplation

How Misuse & Dependence Develops (Continued)

- **Preparation** – continued experimentation and gradual (but deliberate) setting of the stage for regular engagement of the behavior (i.e., drinking).
- Based on experiences and positive/negative consequences, person may modulate or stop behavior, or develop less controlled (out of control) use
- Powerful physiological and psychosocial reinforcers; pros for continuing behavior increase and cons decrease; hard to believe negative messages from peers, parents, media, etc.

How Misuse & Dependence Develops (Continued)

- **Action** – regular and predictable engagement in behavior (i.e., drinking); behavior can be well controlled/modulated with few or no negative consequences. Negative consequences triggers re-evaluation and self-regulation

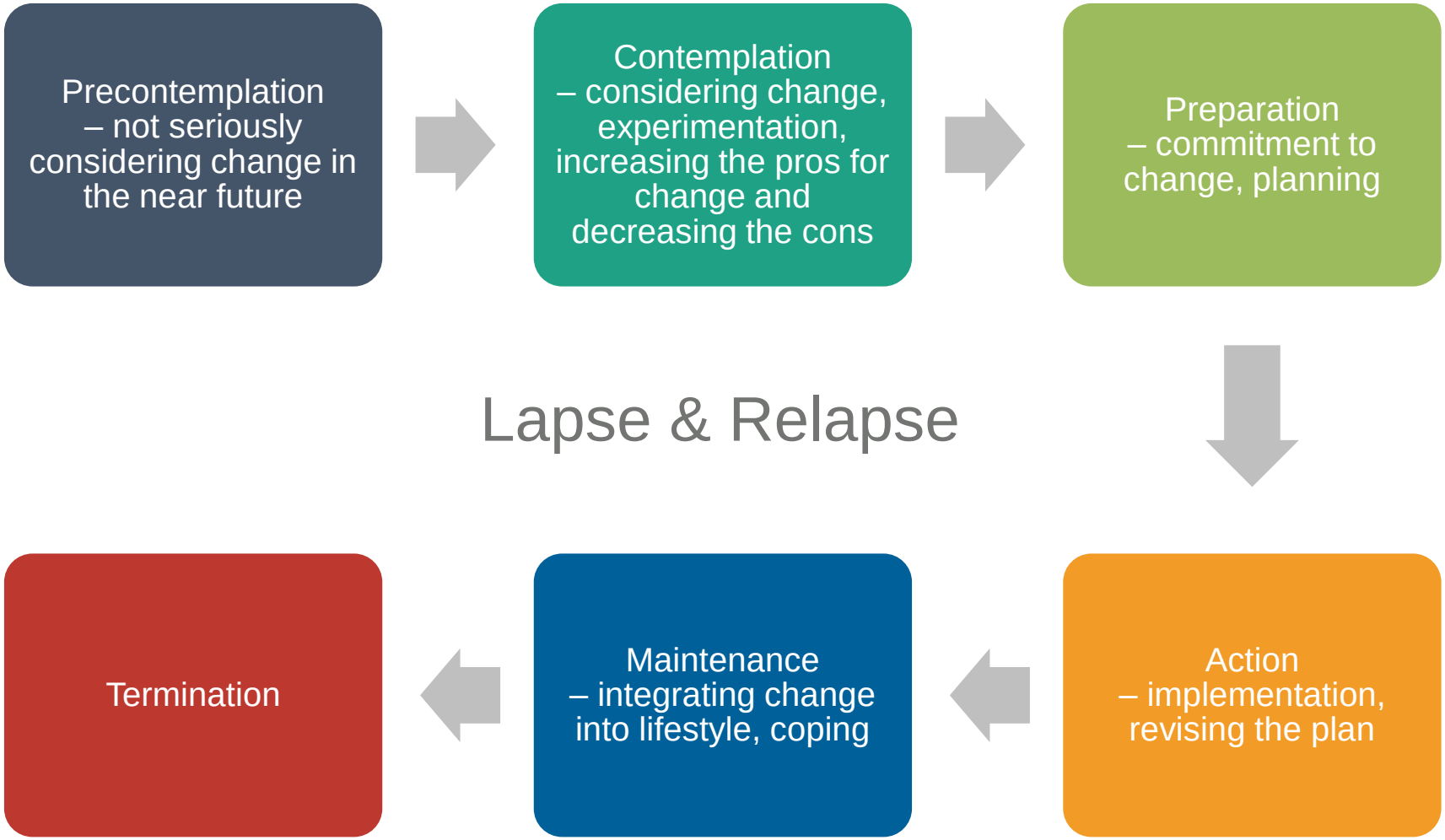
- Behavior may be poorly regulated with negative consequences. Behavior occurs in many situations (more cues); over use becomes normalized and peer group, attitudes & beliefs shift to support behavior

- Alterations in self-regulatory feedback; negative consequences normalized

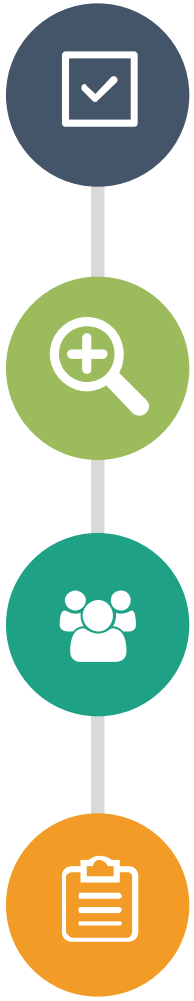
How Misuse & Dependence Develops (Continued)

- **Maintenance** – the behavior is an integral part of the persons life (can be well regulated; “social drinking”)
- Poor self-regulation; out of control behavior; behavior continues despite negative consequences; failure to change despite change is possible and in the best interest of the person
- Deflections (negative consequences = technical problems) and Disconnections (between behavior & consequences)

How People Recover



Screening & Evaluation



- Establish criteria to determine who should receive substance abuse treatment
- Record review (positive blood chemistry at the time of accident; positive history of CD treatment)
- Clinical interview with patient and family (pre/post injury use patterns, substance of choice, consequences of use, previous treatment or attempts to stop, patient/family view of substance use)
- Formal assessment (SASSI, CAGE, AUDIT)

Evaluate Readiness to Change

Pre-contemplation

not aware a problem exists

Recovery Goal: problem recognition; accurate appraisal

Contemplation

“turning point”/ “hitting bottom”

Recovery Goal: decisional balance favoring change

Preparation

what is the plan? what are the resources?

Recovery Goal: develop a plan; ID resources

Action

commitment to plan; strategies

Recovery Goal: teach strategies; implement plan

Maintenance

lapse & relapse prevention

Recovery Goal: sustaining change in many contexts

Termination

Goals and Strategies for PreContemplation Planting Seeds for Change

- Precontemplation = not seriously considering change in the near future. Usually due to one of the following “R’s”
  - Reluctance
  - Rebellion
  - Rationalization
  - Resignation
  - Revelry

Goals & Strategies for PreComtemplation (continued)

- Revelry – having too much fun. Consequences have not accumulated or are not severe; decisional balance not tipped toward change

- Goal: arouse concern; help person see negatives of behavior and positives of change

- Strategies: how behavior affects others; engage emotional arousal (portrayal of consequences: example, new smoking commercials); “YET”

Goals & Strategies for PreContemplation (continued)

- Rebellion – passionate about their ability to make choices; don’t want anyone telling them what to do.

- Goal: link freedom and autonomy with change; shift energy dedicated to the behavior to Contemplation and Preparation stages of change

- Strategy: point out they are not free, but slaves to the behavior (Motivational Enhancement therapies and Motivational Interviewing techniques)

Goals and Strategies for PreContemplation (continued)

- Resignation – hopeless and helpless about change; overwhelmed by problems (including drinking); have tried to change and failed; “been addicted too long – it’s too late for change”

- Goal: infuse hope and a vision of the possibility of change

- Strategies: focus on resilience in other areas of life; show data that “bad addicts” recover; “letter from the future”

Goals and Strategies for PreContemplation (continued)

- Reluctance – hesitant about prospects of change; change means leaving comfort zone (friends, routines, etc.)

- Goal: increase confidence in the ability to change; provide reassurance they will be able to function without drinking.

- Strategy: focus on past successes with difficult tasks; enlist support of individuals who have made similar changes (and been successful)

Goals and Strategies for PreContemplation (continued)

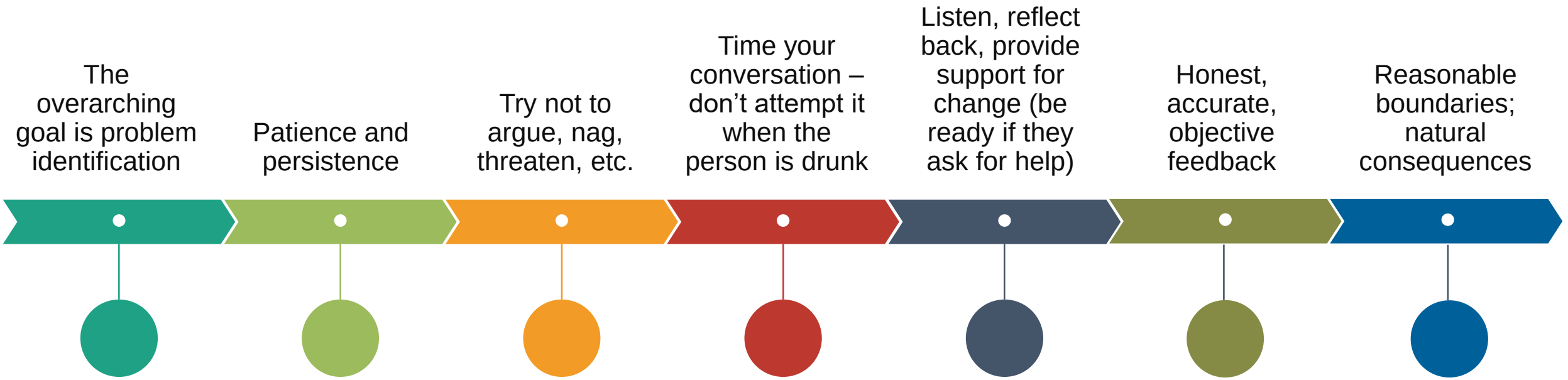
- Rationalizing – the person with all the answers, for example “..might be a problem for others, but not me”, “I’ll quit when I have serious responsibilities like a wife and kids”, “I only drink beer and never drink before noon”

- Goal: more accurate self-appraisal and recognition of consequences

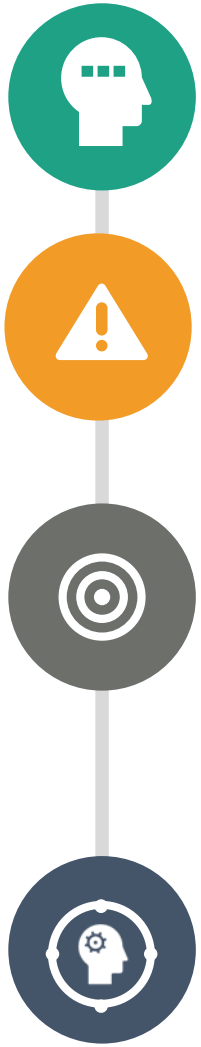
- Strategies: don’t argue; reflect back looking for ambivalence or discrepancies with the behavior and the person’s values beliefs; provide resources and have them research for themselves; natural consequences

General Strategies for PreContemplation

REMEMBER…



Goals and Strategies for Contemplation



- Contemplation – thinking about change
- Caution: rushing in without considering costs, or getting stuck in chronic contemplation
- Goal: gathering information, examining the information, engaging in a comparative process (while moving toward pros for change)
- Strategy: Decisional Balance Exercise; reinforce self-efficacy (they have the “stuff” necessary for change – BAT exercise)

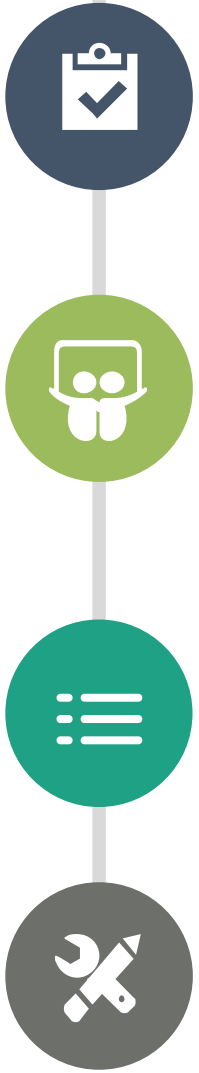
Goals and Strategies for Preparation

- Preparation – preparing for action = planning

- Goal: making and strengthening the commitment to change; developing a sound, reasonable plan for action that is likely to be successfully implemented by the individual

- Strategy: conduct risk assessment; ID strengths and weaknesses; develop strategies and assess resources; complete change plan work sheet

Goals and Strategies for Preparation (Continued)



- Plan should be built around the person – self knowledge and patterns of behavior
- Consider social relationships, role expectations, recreational activities, vocational pursuits, living arrangements
- Complete a Brief Situational Confidence Questionnaire – arrange scenarios in a hierarchy
- Determine skills needed for success in each scenario (relaxation, assertiveness, etc.)

Goals and Strategies for Action

- Action – taking action to interrupt the habitual pattern of the behavior; person separates from the old pattern of behavior and begins to create a new one (establish a new pattern of behavior)

- Goal: break free from the behavior by using the strategies of the plan; revise the plan in the face of difficulties; manage temptations and slips that can provoke relapse

- Strategy: Implement the Change Plan

Strategies for Action (continued)

Set a start (target) date for implementation

Change routines and manipulate environment where possible

Teach coping strategies until mastery is reached (ok to use technology – Tactical Breathing Trainer)

Instructions may need to be specific (written scripts); therapist may need to model behavior

Reward approximations

Manage slips (lapses) as an “event” not a failure

Goals and Strategies for Maintenance

- Maintenance – making change permanent; not engaging in the behavior becomes established as the norm
- Goal: actively counter any threats and temptations; check and renew commitments; ensure decisional balance remains negative for re-engaging in the behavior; establish protective environment and satisfying lifestyle
- Strategies: revisit reasons to change; recognize progress and success; generalize behavior across settings

Other Skills Training

Engaging the treatment team to establish positive everyday routines

Advanced activities of daily living (ADL's)

Social Communication Skills

Leisure/ Recreation

Productive Activities

Compensatory Strategies

Adjustment to disability

Homework

- Homework tasks provide a link between clinical intervention in structured settings and the “real” world
- Objective is to promote generalization
- Examples of homework assignments include: using relaxation techniques in a stressful situation; using assertive responses on a job trial; practicing problem-solving in a dispute with a room-mate, etc.
- Provides opportunities for team interaction (i.e., putting homework assignments on “to do” list)

Structured Generalization

- Allows opportunities to practice strategies in actual community settings where substance abuse might occur (involve other disciplines)
- Therapist accompanies patient to a setting where use might occur
- Therapist coaches patient to engage in competing behavior or use strategies practiced in therapy sessions
- Patient is heavily reinforced for appropriate behavior
- Patient experiences success

Patient Education

- Typically takes place in a group setting
- Information on a variety of topics is presented/discussed: common myths and fallacies about substance use; relationship of substance use and ABI; effect of substances on brain and behavior, and recovery; identifying triggers; and relapse prevention
- Identification of community supports (including attending a support group meeting - AA, SMART Recovery)
- Placement of written materials in a notebook

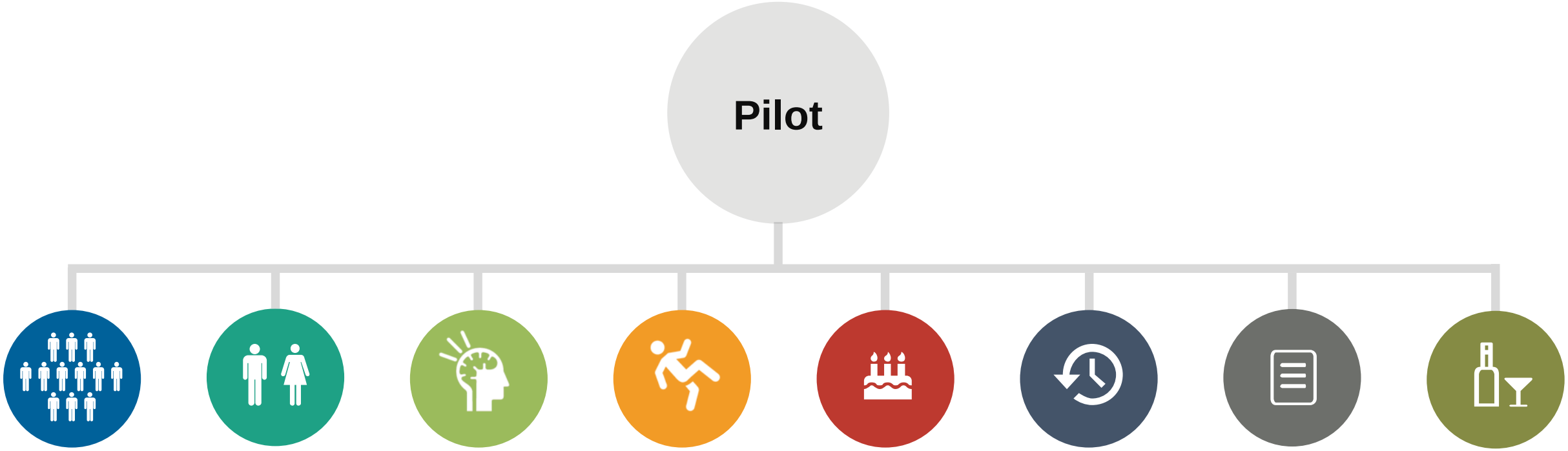
Family Education

- Information provided on a variety of topics: the relationship between substance abuse and ABI; effect of substances on the brain and behavior; medication interactions, etc.
- Signals of impending lapse (relapse)
- Sharing of the Change Plan
- Identification of community supports (for both patient and family)

Follow-up

- Follow-up contact is made at identified intervals following discharge (ex. 1, 6, and 12 months post discharge).
- Patient and/or family can contact the facility at any time between scheduled follow-up if a problem occurs.

Pilot Project



Pilot Project Outcomes – 6 Month Follow-up

- Alcohol use since discharge:
  75% reported no use; 25% reported some use
- Of those who reported use after discharge,
  2 reported “controlled drinking”; one resumed heavy illicit drug use and was jailed; one was referred for inpatient detox and treatment
- Living status improved: 1 living in own home,
  9 in the family home, 1 in a treatment center,
  1 in jail
- Productive activity improved with 4 patients engaged in work/school, and 6 seeking work

Pilot Project Outcome Analysis

- Analysis of 6-month outcomes revealed only 2 patients were attending AA meetings regularly and attributed abstinence to 12-step support meetings
- Other patients who were abstinent reported using other strategies: exercising; meditation/relaxation; attending church; and attending alternative community support groups (i.e., Rational Recovery)

What if they won’t stop drinking?

Harm Reduction

- limit intake to a “safe” level
- eat before/during drinking
- hydrate between drinks (water, juice, etc.)
- Thiamine and B12 supplementation
- try a “holiday” from drinking
- plan your ride home before going out (never drink and drive)

Substance Misuse and ABI Conclusions

- There is no single method of treatment for substance misuse that is universally applicable and successful
- Counselors and therapists should be familiar with traditional as well as alternative treatment models and methods
- Cognitive-behavioral techniques and comprehensive treatment approaches that incorporate Stage Change Theory (TTM) and Motivational Interviewing have demonstrated some success for persons with ABI

Resources

- The Council on Alcohol and Drugs

  1444 Wazee Street, Denver, CO 80202

  303-825-8110
- The Office of Behavioral Health, Colorado Dept. of Human Services

  http://www.colorado.gov/cdhs
- Substance Abuse and Mental Health Services Administration (SAMHSA)

  http://www.samhsa.gov
- Substance Abuse/Brain Injury (SUBI) Bridging Project
  (140-page workbook with exercises)
- Ohio State University Brain Injury Substance Abuse Education Project
  – John Corrigan, PhD
- Rethinking Drinking – NIH Project

Questions?

(hopefully, some answers)

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