Belvedere of Albany
Substance Abuse Program

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TBI & SA Facts

- Each year in the United States, over 1 million emergency department visits are due to traumatic brain injury.

  (Guerrero, Thurman et al., 2000).
TBI & SA Facts

- CDC has recently estimated that 5.3 million Americans live with disability due to these injuries.

(Thurman, 1998)
TBI & SA Facts

- 44 to 66% of persons with a TBI have histories of alcohol abuse in comparison to 24% of the general population.

(Bogner; Corrigan; Kolakowsky-Hayer)
TBI & SA Facts

• 21 to 37% report a history of illicit drug use.

(Kolakowsky-Hayner; Kreutzer; Ruff).
TBI & SA Facts

• 1,248 patients admitted for hospitalization with a TBI:
  – 911 or 73% had detectable levels of alcohol;
  – Of these 911 83% had blood alcohol levels beyond the legal limit.

(Rimel, Giodani, Barth and Jane)
The National Head Injury Foundation Task Force on Substance Abuse

- 50% of individuals with TBI return to using drugs and alcohol post-injury; and
The National Head Injury Foundation Task Force on Substance Abuse

- 15% of those who were abstinent or social/light drinkers pre-injury were moderate/heavy drinkers one year post injury.
Alcohol and the Brain

- Difficulty walking
- Blurred vision
- Slurred speech
- Slowed reaction time
- Impaired memory
Alcohol and the Brain

Heavy drinking may have extensive and far-reaching effects on the brain, ranging from simple “slips” in memory to permanent and debilitating conditions.
Alcohol and the Brain

Alcohol produces negative effects on complex, or executive, brain function such as:

- Abstract reasoning
- Planning
- Ability to monitor own behavior in response to external feedback
Alcohol and the Brain

- These areas are affected even after the concentration of alcohol in the blood has dipped to the point that people were no longer aware of its affect.
Alcohol and the Brain

In fact, the effect on these “higher order” brain functions are more pronounced as alcohol concentration begins to decline from its peak.
Marijuana and the Brain

- How does marijuana affect nerve cells in the brain?
- Marijuana causes some parts of the brain - such as those governing emotions, memory and judgment -- to lose balance and control.
Marijuana and the Brain

- As THC enters the brain, it causes a user to feel euphoric - or "high" - by acting in the brain's reward system, areas of the brain that respond to stimuli such as food and drink as well as most drugs of abuse.
Marijuana and the Brain

THC activates the reward system in the same way that nearly all drugs of abuse do, by stimulating brain cells to release the chemical dopamine.
Marijuana and the Brain

- One region of the brain that contains a lot of THC receptors is the hippocampus, which processes memory. When THC attaches to receptors in the hippocampus, it weakens short-term memory.
Marijuana and the Brain

- The hippocampus also communicates with other brain regions that process new information into long-term memory.
Marijuana and the Brain

- In the brain, under the influence of marijuana, new information may never register - and may be lost from memory.
Why a Specialized Treatment Program?

The right tools make the job easier!

SUBSTANCE ABUSE AND BRAIN INJURY TOOLBOX
Why a Specialized Treatment Program?

- Brain injury with co-occurring substance abuse problems only complicates rehabilitation.
  
  (Guerrero, Thurman et al., 2000).
Why a Specialized Treatment Program?

- Relapse usually occurs somewhere between one and three years into rehabilitation/post-injury;

  (Guerrero, Thurman et al., 2000).
Why a Specialized Treatment Program?

- Relapse, continued episodic use, or development of an addictive disorder can negate years of rehabilitation progress.

  (Guerrero, Thurman et al., 2000).
Traditional SA Treatment vs. TBI/NRP SA Treatment

Traditional Treatment
- Moderate Cognitive ability.
- Consequential/Reactive responses.
- Medical Model – here is your plan.
- Generalize information group to group.
- Abstinence based.

TBI/NRP SA Treatment
- Many face cognitive challenges.
- Proactive antecedent supports.
- Mature person-centered model – what is meaningful to you.
- Failure to generalize.
- Progressive decrease in use.
Traditional Treatment

• Here is what is proven to work.

• If you don’t get sober you will lose everything

• Failure to comply with the treatment plan created may result in premature discharge from the traditional treatment setting.

• Rigid plans and goals.

TBI/NRP SA Treatment

• Let’s see what works for you

• What is meaningful to you that you will lose if you continue to use

• “In the absence of meaningful engagement in chosen life activities, all interventions will ultimately fail.”

• Flexibility and hypothesis testing are critical in providing quality and effective treatment.
Traditional Treatment

- The clinician is the expert he/she has all the knowledge – learn it – do as they say.
- Here are your weaknesses – you need to change them.
- Goals are either met or not met.
- Relies on declarative memory.
  - You know what you need to do.

TBI/NRP SA Treatment

- Make the survivor the expert through the development of projects – “Let them teach.”
- Here are your strengths – together let’s build on them.
- Compensatory strategies are made
- Challenges with declarative memory.
  - Development of routines and scripts are necessary.
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<td>ONE MODALITY FITS ALL</td>
<td>MULTIPLE MODALITIES OF TREATMENT</td>
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Combining TBI(NRP)/SAP
Evidence-Based SA Treatments Integrated and Modified Within TBI(NRP)/SA Program

- Stages of Change – expanded;
- Motivational Interviewing;
- Motivational Enhancement Therapy;
- Cognitive Behavioral Therapy;
- Group end reviews;
- Repetition, Repetition, and more Repetition;
- Note taking/video taping; and
- Medical, Psychiatric, and Nursing staff.
Evidence-Based SA Treatments Integrated and Modified Within TBI(NRP)/SA Program

MATURE
PERSON-CENTERED
MODEL
Mature Person-Centered Model

**Support** – not help;

**Choice** - not demand;

**Hypothesis testing** – not inflexible;
Mature Person-Centered Model

Creation of the “Expert Role”

What worked ~ What didn’t work

Finding and implementing “meaningful and purposeful activity” into each individualized treatment plan.
“Team” Makes a Difference

- The participant is the most important member of the team;
- Knowledge and understanding of brain injury;
- Communication among service providers;
- Collaborative efforts;
- Making treatment meaningful;
- Creation of natural and professional supports;
- Antecedent supports; and
- Remaining flexible and optimistic.
OASAS

“CHANGES IN PARADIGM”

- Progressive reduction in use;
- Use of video taping;
- Use of recording devices;
- Flexibility in treatment models;
- Collaboration with state and local offices;
- Reduced caseloads and group sizes;