YOUNG ADULTS IN DUAL DIAGNOSIS TREATMENT: COMPARISON TO OLDER ADULTS AT INTAKE AND POST-TREATMENT

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Recent policy and legislative changes have increased access to care for many young adults. This presentation will identify differences revealed in this population: in their presentation, retention in residential treatment and their outcomes following treatment. Data are drawn from several years of research at Foundations Recovery Network residential facilities. Additional information will be provided specific to opiate using young adults. Implications for practice will be reviewed.
Young adults (18-25 years old) have the highest rate of substance abuse of any age group.

- The rate of substance dependence or abuse among adults aged 18 to 25 (18.6%) was higher than that among youths aged 12 to 17 (6.9 %) or among adults aged 26 or older (6.3%) (SAMHSA, 2012).
- The median age of onset for substance abuse disorders in the United States is 20 years of age (Kessler, 2005).
- Alcohol use prevalence and episodes of heavy drinking are highest among college age adults (Smith, 2010).
- In 2011, 22% of full time college students were estimated to be current illicit drug users, similar to the rate of illicit drug use for all 18-22 year olds nationally (23.4%) (SAMHSA, 2012).
Siobhan A. Morse is a fully employed staff member at Foundations Recovery Network. This work was performed as part of her position responsibilities as the Director of Research.

Samuel MacMaster (co-author on original work) performed this work as a paid consultant to Foundations Recovery Network.
Individuals with substance disorders experience mental health disorders at high rates

- Of individuals who will experience a mental health disorder during their lifetime, 75% will be diagnosed by age 24 (Park, 2006).
- Young adults also have triple the suicide rate of their adolescent (12-17 year old) counterparts (Park, 2006).
- Nearly half of all young adults are estimated to have had a psychiatric disorder in the prior year (Blanco, 2008).
Percent of Claims Dollars By Age

**Plan A**


**Plan B**

Research Setting

- Private / For profit
- Abstinence-based
- Individualized
- Dual Diagnosis treatment
  - Michael’s House – Palm Springs, CA
  - La Paloma – Memphis, TN
  - The Canyon – Malibu, CA
To develop and communicate reliable, valid and timely information to support decision-making by consumers, clinicians, organizational leadership and policy-makers.
Research Process

- At intake all patients are offered the opportunity to participate in a research project to measure outcomes.
- All research reviewed by an Institutional Review Board.
- All research results independently verified by third party.
- All patients sign additional Informed Consent to participate in research.
Research Population

- 1,972 patients entering treatment
- Analyses were made to measure differences between individuals 18 to 25 years of age at baseline with a comparison group of individuals older than 25 years of age at baseline, (individuals who were age 26 to 78).
- Comparisons were made at baseline and follow-up measures taken at 30 days (one-month) and six-months post discharge.
- 75.8% \((n=1,495)\) of patients who provided data at baseline also provided follow-up data
Instruments

- Addiction Severity Index
- University of Rhode Island Change Assessment
- Treatment Service Review
- 36-item Satisfaction Survey
Addiction Severity Index (ASI)

Measures problem severity in each of seven areas*:
- Alcohol Use
- Medical Health
- Employment/Self-Support
- Illegal Activity
- Drug Use
- Psychiatric Health
- Family Relations

Each question within a given problem area is given the same weight in calculation of the composite score. This scoring yields a score from 0-1 in each composite measure where 1 is highest level of severity**

• The University of Rhode Island Change Assessment (URICA) is a measure of readiness to change.

• 32 statements that subjects endorse on a five-point scale from strongly agree to strongly disagree.

• Yields scores on each of four scales; Precontemplation, Contemplation, Action, and Maintenance (Allen, 2003),

• Approximates four of the five stages of change described by DiClemente, Prochaska, & Norcross (1992).

• The Readiness to Change score was derived for this study in the same manner used in Project MATCH (Project MATCH Research Group, 1997, 1998) to yield an overall score.
Treatment Service Review

- Measures the types and frequencies of service
- Used in concert with the ASI to evaluate service usage before and after substance abuse treatment
- Covers a host of professional and peer support services (McLellan A. A., 1992).
- Participants recorded their service usage in all follow up interviews related to informal support group meetings, as well as professional medical, substance use, and mental health services.
### Patient Satisfaction

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<tr>
<th>Component 1 – Patient Dignity</th>
<th>Component 2 – Clinical Services</th>
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<tr>
<td>Safety and privacy</td>
<td>Individual therapist</td>
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<tr>
<td>Level of respect with which I was treated</td>
<td>My therapist’s knowledge of dual diagnosis</td>
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<td>Respect for my cultural or ethnic needs</td>
<td>Weekly sessions with my individual therapist</td>
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<tr>
<td>Professionalism of the staff</td>
<td>My involvement with my treatment plan</td>
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<tr>
<td>Communication between staff and patients</td>
<td>Continuing care and relapse prevention</td>
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<td>Communication among staff</td>
<td>Opportunity for family participation plan</td>
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<tr>
<td>Usefulness of the resident handbook</td>
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<tr>
<td>Consistency of program rules and policies</td>
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<td>Fairness of house rules</td>
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<thead>
<tr>
<th>Component 3 – Other Therapeutic Services</th>
<th>Component 4 – Program Schedule</th>
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<tr>
<td>Availability of medical staff appointments</td>
<td>Quality of program schedule</td>
</tr>
<tr>
<td>Availability of psychiatrist/nurse practitioner</td>
<td>Communication of changes to the schedule</td>
</tr>
<tr>
<td>Availability of staff in emergency/crisis</td>
<td>Availability of daily psychical activities</td>
</tr>
<tr>
<td>Psychiatric appointments meeting my needs</td>
<td>Weekend recreational activities</td>
</tr>
<tr>
<td>Quality of psycho-educational sessions</td>
<td>Amount of alone time</td>
</tr>
<tr>
<td>12 step meetings</td>
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<th>Component 5 – Milieu</th>
<th></th>
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<tbody>
<tr>
<td>My initial impression of the facility</td>
<td>The intake assessment and process</td>
</tr>
<tr>
<td>Housing arrangements</td>
<td>The grounds</td>
</tr>
<tr>
<td>Meals</td>
<td>Maintenance and cleanliness</td>
</tr>
<tr>
<td>Maintenance and cleanliness</td>
<td></td>
</tr>
<tr>
<td>The grounds</td>
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</table>
What are differences between young adults (18-25 years of age) and other participants in residential substance abuse and mental health treatment?

Specifically, are there differences between young adults and older participants in regards to:

1. demographic and other personal characteristics;
2. on levels of treatment motivation, completion, and engagement;
3. on levels of retention in treatment;
4. levels of treatment satisfaction;
5. on improvements in substance use outcomes;
6. on improvements in mental health outcomes;
7. on improvements in other psychosocial outcomes; and
8. on rates of engagement with other post-treatment services?
Demographics and Employment

- Approximately a quarter (24.1%), of all program participants 25 years old or younger.
- These individuals were more likely to be Caucasian (94.4% vs. 87.4%), and male, (61.9% vs. 58.3)
- Statistically fewer young adults reported being employed (43.1% versus 54.8%).
- The percent of young adults (43.1%) who were working at entry into treatment was substantially lower than the national average for similarly aged adults (50.7%) (US Dept. of Labor, 2013).
- Young adults also reported a lower number of average days working and more involvement in illegal activities for money.
- Young adults were less likely to have access to an automobile, but just as likely to have a license than their older peers.
Substance Use at Baseline

- In the thirty days prior to treatment, in comparison to older participants, young adults reported
  - significantly higher number of days of drug use (18.7 versus 11.8 days),
  - significantly fewer number of days of alcohol use (7.5 versus 13.3 days).

- Young adults also reported more money spent on substance use, and more frequent use of marijuana, heroin, other opiates, hallucinogens, and sedatives.

- There were no statistical differences found in the frequency of cocaine, methadone, barbiturates, inhalants, and methamphetamine use.
Mental Health Status at Baseline

- There were fewer differences at baseline for mental health measures than substance use measures for the two groups.
- As a group, young adults were less likely to have experienced depression, and more likely to have experienced trouble controlling violent behaviors in the thirty days prior to treatment entry.
- There were not any statistically significant differences in the levels of anxiety, hallucinations, thinking problems, thoughts of suicide, attempted suicide, prescribed medication in the thirty days prior to treatment entry.
- There were not any differences in the level of the perception of being troubled by psychological problems or the importance of services for psychological problems.
Legal, Family, and Medical Status at Baseline

- Young adults had significantly more legal problems at baseline than other program participants.
  - As a group, they were more likely to be awaiting trial or sentencing, and they reported more days involved in illegal activity. They also reported a higher level of seriousness of their legal problems, and perceived a greater importance of counseling for legal problems as part of treatment.

- In terms of family issues, young adults were also more likely to report disturbances in their family relationships than other participants.
  - They reported higher levels of serious family conflict, and reported that they were more troubled by family problems. As a group, they reported higher levels of significant recent conflict with both parents, siblings, other family members, close friends, and neighbors; and lower levels of conflict with children, significant others, and co-workers. However, there was not a statistically significant difference in the perceived importance of family counseling.

- Young adults were less likely to have medical problems.
  - They reported lower levels of experiencing trouble by medical problems, and lower levels of perceived importance for counseling for medical issues.
There were statistically significant lower scores for young adults on the alcohol and medical composite scores.

Statistically significant higher scores were found on the drug, employment, and legal composite scores for young adults.

Statistically significant differences were not found on comparisons between family and psychiatric composite scores.
Treatment Motivation, Completion, and Engagement

- Levels of treatment motivation and engagement were lower for young adults.
- Levels of readiness for change as measured by the URICA at baseline were significantly lower for young adults (10.6 vs. 11.0, t=3.52, p < .000).
- Young adults were less likely to complete treatment (87.4% vs. 91.0%, p ≤ .007).
- But young adults stayed an average of 3 days longer (34.3 vs. 31.2 days, t=.273, p ≤ .006).
Addiction
Severity
Outcomes

• All ASI composite score measures are positive and statistically significant for changes between baseline and the six-month measures for both groups, with the exception of employment.

• Statistically significant differences existed between young adults and other participants on baseline measures of five composite scores (medical, legal, alcohol, drug and employment). Young adults had significantly worse scores on legal, drug, and employment measures.

• At six-months, statistically significant differences were found between three composite scores (medical, drug, and legal). Young adults again, had significantly worse scores on drug and legal scores.
ASI Scores

YOUNG ADULTS

OLDER ADULTS
### Substance Use and Mental Health Outcomes

<table>
<thead>
<tr>
<th>Substance use</th>
<th>Young Adults</th>
<th>Older Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Baseline</td>
<td>1-month</td>
</tr>
<tr>
<td>Alcohol</td>
<td>7.8^b</td>
<td>1.3</td>
</tr>
<tr>
<td>Alcohol to intoxication</td>
<td>6.1^b</td>
<td>0.6</td>
</tr>
<tr>
<td>Any drug</td>
<td>18.7^b</td>
<td>1.1</td>
</tr>
<tr>
<td>Cocaine</td>
<td>2.9^b</td>
<td>0.1</td>
</tr>
<tr>
<td>Cannabis</td>
<td>9.7^b</td>
<td>0.3</td>
</tr>
<tr>
<td>Heroin</td>
<td>5.4^b</td>
<td>0.1</td>
</tr>
<tr>
<td>Nonmedical methadone</td>
<td>0.5^b</td>
<td>0.0</td>
</tr>
<tr>
<td>Other opiates</td>
<td>7.4^b</td>
<td>0.1</td>
</tr>
<tr>
<td>Sedatives</td>
<td>4.3^b</td>
<td>0.1</td>
</tr>
<tr>
<td>Amphetamines</td>
<td>0.9^b</td>
<td>0.1</td>
</tr>
<tr>
<td>Psychological symptoms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>.668^b</td>
<td>.390</td>
</tr>
<tr>
<td>Anxiety</td>
<td>.828^b</td>
<td>.543</td>
</tr>
<tr>
<td>Cognitive</td>
<td>.535^b</td>
<td>.330</td>
</tr>
<tr>
<td>Days experiencing</td>
<td>20.4^b</td>
<td>11.8</td>
</tr>
</tbody>
</table>

^aStatistically significant difference between groups based on repeated measures analysis. ^bStatistically significant difference between baseline and 6 months based on bivariate analysis. ^cStatistically significant change from baseline to follow-up based on repeated measures analysis.
Substance Use in Prior 30 Days

YOUNG ADULTS

OLDER ADULTS

- Alcohol
- Alcohol to intoxication
- Any drug
• At six months post-treatment, significant portions of young adults remained alcohol free (59.5%) and drug free (72.5%) for the prior thirty days, while older participants remained alcohol (75.2%) and drug free (91.5%) at higher rates for the prior thirty days.

• Six-month abstinence rates post treatment, were slightly lower. The majority of young adults had remained alcohol free (52.0%) and drug free (65.8%) since their discharge, these rates were slightly lower than for older participants, with remained 68.0% remaining alcohol free and 88.7% drug free since their discharge.

• All differences in abstinence rates between younger and older participants were statistically significant.
Days Experiencing Mental Health Symptoms in past 30 days

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>1-month</th>
<th>6-month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Young</td>
<td>20.4</td>
<td>11.8</td>
<td>10.7</td>
</tr>
<tr>
<td>Older</td>
<td>21.8</td>
<td>11.9</td>
<td>9.6</td>
</tr>
</tbody>
</table>
Are there differences on demographic and other personal characteristics?

• Typically younger users are assumed to be a more challenging population for substance abuse treatment services. There were significant differences in the array of both substance abuse and mental health symptoms. Young adults reported spending more money on their use, less use of alcohol and more use of marijuana, heroin, other opiates, hallucinogens, and sedatives, experiencing less depression and more trouble controlling violent behaviors, as well as higher levels of legal and family issues and lower levels of medical issues.
Are there differences on levels of treatment motivation and engagement?

- There were differences found on both treatment motivation and completion rates. Moreover, there were significant differences initially found in the length of stay, with young adults staying on average approximately three days longer in treatment.

- The lower levels of readiness for change and motivation among younger people underscore the importance of stage-wise programming that includes motivation-enhancing interventions.

- These differences appeared to impact satisfaction with treatment.
• There were not statistically significant differences in universal measures of satisfaction.
• There were, however, statistically significant differences in the following ten items with young adults being less satisfied on all ten items:
  • availability of medical staff appointments (p ≤ .000);
  • availability of psychiatric nurse practitioners (p ≤ .000);
  • availability of staff in an emergency situation, (p ≤ .024);
  • availability of daily physical activities (p ≤ .027);
  • level of respect with which I was treated, (p ≤ .002);
  • professionalism of the staff, (p ≤ .003);
  • communication between staff and patients (p ≤ .044);
  • communication among staff (p ≤ .009);
  • usefulness of residential handbook, (p ≤ .009);
  • and meals (p ≤ .030).
Are there differences in improvement in substance use outcomes?

- All substance use measures are statistically significant for changes between baseline and follow-up.
- There are differences in the rates of change on the two alcohol use measures and cannabis, heroin and opiate measures, but ultimately at the 6 months following treatment use patterns are very similar with both groups experiencing very low and nearly identical levels of substance use in almost every category.
Are there differences in mental health outcomes?

- All psychological measures demonstrated statistically significant improvement for both groups and there were no significant between group differences.
- Importantly, improvements continued not only from baseline to one month, but also improved from the one month to the six month measure.
Are there differences in improvement in other psychosocial outcomes?

- It is important to note that both groups demonstrated significant positive change following treatment.
- Young adults as a group at baseline were significantly more impaired when compared to older participants on in the areas of employment, legal, and drug.
Are there differences in post-treatment service use and engagement?

- There were not any statistically significant differences in the use of emergency room services or overnight hospitalizations for medical, mental health or substance use related reasons at either time point.

- At one month young adults reported more days of halfway house services (9.3 versus 3.2, p < .000), outpatient substance abuse treatment (5.2 versus 3.4 p < .023), and outpatient mental health services (5.0 versus 3.1 p < .026).

- At six months young adults reported more days of residential substance abuse treatment (3.9 versus 1.8, p < .037), halfway house services (2.7 versus 1.2, p < .039), and outpatient substance abuse treatment (12.5 versus 9.1 p < .023).

- Young adults and other participants reported attending groups at about the same rates at both one and six months post-discharge; 86.0% for young adults and 81.7% for other participants at one month, and 76.0% for young adults and 73.4% for other participants at six months.

- There were interesting differences between the groups in measures of engagement with 12-step recovery groups at the six-month time period. More than half of both groups reported attending meetings weekly or more frequently, although young adults reported statistically significant lower rates of attendance (51.1% for young adults and 60.0% for older); and reported lower rates of obtaining a sponsor (44.4% young adults and 50.1% for older participants).
Young adults enter treatment at a significantly diminished readiness compared to their older counterparts and this needs to be considered in treatment planning and group counseling strategies.

The relevance of tailored motivational interviewing and enhancement techniques to enhance engagement and support treatment retention is demonstrated as well.

Focus on relational issues, even as they relate to individual attention in treatment (e.g., staff availability and attentiveness) is key in treating young adults.

Life skills and vocational rehab focusing on employment issues would benefit both groups.

Attention needs to be paid to the shorter length of stay and perhaps extending continuum by including transition to outpatient since younger patients more likely to leave residential early but also to participate in outpatient services.

Interventions to engage younger adults in self-help

Addressing medical issues in older adults
Co-Author on original papers

- Sam MacMaster, PhD, University of Tennessee School of Social Work