“Memo to Self” and Recovery Management:
Protecting Sobriety with the Science of Safety

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Senior Fellow
The Meadows of Wickenburg

3rd Annual Idaho Conference on Alcohol & Drug Dependency
Boise State University
May 2017
Predictors of recovery success: Listen to the experts

www.protectingsobriety.com
VMFAT-101 Sharpshooters  MCAS El Toro, CA

- Naval Flight Surgeon: best time of my life
- Extremely delicate clinical challenge (pilots don’t like doctors)
- Patients are charismatic and highly capable heroes (we want them to succeed)
- A “Culture of Safety” is a shared and over-riding value
- We do whatever works; we learn from our mistakes
Treatment Outcome Variance in Pilots Treated for Alcoholism:

“The United States Navy enjoys a 95-97% return to flying status rate in its pilots treated for alcoholism.”
- Joseph A. Pursch, M.D.

“Since the inception of its impaired pilot program in conjunction with the FAA and ALPA EAPs, UAL has an 87% return to flight status rate in pilots treated for alcohol problems.”
- Stanley Mohler, M.D.
The “Blueprint Studies”

Robert L. DuPont, (M.D.)\textsuperscript{a}, A. Thomas McLellan, (Ph.D.)\textsuperscript{b,*}, William L. White, (M.A.)\textsuperscript{c}, Lisa J. Merlo, (Ph.D.)\textsuperscript{d}, Mark S. Gold, (M.D.)\textsuperscript{d}

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Abstract

A sample of 904 physicians consecutively admitted to 16 state Physicians’ Health Programs (PHPs) was studied for 5 years or longer to characterize the outcomes of this episode of care and to explore the elements of these programs that could improve the care of other addicted populations. The study consisted of two phases: the first characterized the PHPs and their system of care management, while the second described the outcomes of the study sample as revealed in the PHP records. The programs were abstinence-based, requiring physicians to

Dupont RL, McLellan AT, White WL, Merlo LJ, Gold MS.
Setting the standard for recovery: physicians’ health programs.
Culture of Safety: the worse mistake is not learning from a mistake ...
Aviation Safety Practices

1. Checklists
2. Sterile Cockpit (distraction avoidance)
3. Briefings, Standardized Comm, Read-backs
6. Shared-value safety slogans
   (“Aviate, Navigate, Communicate”)
   (“Confess, Climb, Conserve, Communicate, Comply”)
... applied to Recovery

1. Checklists: 12-Steps & 12-Traditions, Relapse Safety Plan
2. Sterile Cockpit: support during critical moments of sobriety - first hours after discharge, surgeries, court appearances
3. Standardized Comm: recovery vocabulary
4. Read-backs: calling my sponsor
5. CRM: Network Therapy
6. Non-hierarchical social structure: “the most important person at any meeting ...”
7. Protective devices: Extended-release NTX
8. Shared-value Slogans: “Keep coming back,” “Take the next indicated step,” “When we were wrong ...” etc.
Is Addiction Really a “Disease?”
Addiction is a disorder in the brain’s hedonic system (pleasure sense) …
... resulting in a failure to correctly assess future value and uncertainty (likelihood) ...
... undermining the individual’s decision-making capacity (choice) and self-awareness (insight).
In addiction, the brain’s ability to correctly calculate 1. value and 2. probability becomes severely biased. This means that people in early recovery have a hard time assessing likelihood of future harm... or RISK.
ASAM Addiction Definition (Aug 2011)

A stress-induced (HPA axis), genetically-mediated (polymorphisms, epigenetic mechs.) primary, chronic and relapsing brain disease of reward (nucleus accumbens), memory (hippocampus & amygdala), motivation and related circuitry (ACC, basal forebrain) that alters motivational hierarchies such that addictive behaviors supplant healthy, self-care behaviors.
Addiction is a disorder of ... 

5. **CHOICE** (motivation, insight)  
   OFC, ACC, PFC, IC

4. **STRESS** (anti-reward system)  
   HPA axis

3. **MEMORY** (habits, cues)  
   glutamate
   synaptic remodeling

2. **REWARD** (incentive salience)  
   dopamine
   dopamine receptors

1. **GENES** (vulnerability)  
   polymorphisms
   epigenetic changes
Orbitofrontal Cortex
Valuation
Anterior Cingulate Cortex
Social Cognition
Insular Cortex
Self-Awareness
Triple threat (risky situation)

1. My own brain (craving)

2. My treatment (divided loyalties)

3. The OC DA (zero tolerance, punishment as motivator)
The Problem:
How can I protect myself from relapse (decision-making) when my ability to assess relapse risk is itself impaired (loss of insight)?
ASAM Definition: Relapse

- Persistent relapse / and risk thereof
- Even after periods of abstinence
- Triggered by:
  1. Brief re-exposure to drug itself (DA release in NAc)
     drug-induced reinstatement
  2.
  3.
Addiction is a disorder of ...
Addiction Neurochemical #1: Dopamine

• All drugs of abuse and potential compulsive behaviors release Dopamine
• Dopamine is the first chemical in the cascade of chemicals that generate a rewarding experience
• DA is the chemical of salience (survival importance)
• DA is more about “wanting” than “liking”
• DA is more about expectation than consummation
• DA signals reward prediction error - it tells the brain when something is “better than expected”
Drugs cause Dopamine Surges in the midbrain reward system
The Full Spectrum of Addiction

- Alcohol & Sedative/Hypnotics
- Opiates/Opioids
- Cocaine
- Amphetamines
- Entactogens (MDMA)
- Entheogens/Hallucinogens
- Dissociants (PCP, Ketamine)
- Cannabinoids
- Inhalants
- Nicotine
- Caffeine
- Anabolic-Androgenic Steroids
- Food (Bulimia & Binge Eating)
- Sex
- Relationships
- Other People ("Codependency," Control)
- Gambling
- Cults
- Performance ("Work-aholism")
- Collection/Accumulation ("Shop-aholism")
- Rage/Violence
- Media/Entertainment
Functionally...

Dopamine D2 Receptors are Decreased by Addiction
Correlations Between D2 Receptors in Striatum and Brain Glucose Metabolism

Cocaine Abusers

OFC umol/100g/min

DA D2 Receptors (Ratio Index)


METH Abusers

OFC umol/100gr/min

DA D2 Receptors (Bmax/kd)

Strategies to deal with the DOPAMINE (REWARD) component of addiction

- Daily “dopamine load” assessment
- Take out the Dopamine “spikes”
- Nicotine cessation
- Avoid cross-addiction
- Put normal Dopamine releases (normal, competing rewarding activities) back in
- Judiciously chosen medications
ASAM Definition: Relapse

• Persistent relapse / and risk thereof
• Even after periods of abstinence
• Triggered by:

1. Brief re-exposure to drug itself (DA release in NAc)  
   drug-induced reinstatement

2. Exposure to drug cues (GLU release in Amygdala/Hipp)  
   cue-induced reinstatement

3.
Addiction is a disorder of ... 

|   | GENES      | (vulnerability)                      |   | OFC, ACC, PFC, IC  
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<thead>
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<tbody>
<tr>
<td>5.</td>
<td>CHOICE</td>
<td>(motivation, insight)</td>
<td></td>
<td>HPA axis</td>
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<tr>
<td>4.</td>
<td>STRESS</td>
<td>(anti-reward system)</td>
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<td>glutamate</td>
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polymorphisms  
epigenetic changes
Addiction Neurochemical #2: Glutamate

- The most abundant neurochemical in the brain
- Critical in memory formation & consolidation
- All drugs of abuse and many addicting behaviors effect Glutamate which preserves drug memories and creates drug cues
- And … glutamate is the neurochemical of “motivation” (it initiates drug seeking)
The hypofrontal/craving brain state represents an imbalance between 2 brain drives.

**Amygdalar-Cortical Circuit**
- “GO!”
- Impulsive
- Non-reflective
- Poorly conceived
- Socially inappropriate

**Cortico-Striatal Circuit**
- “DON’T GO!”
- Organized, Attentive
- Sensitive to consequences
- Well-planned
- Socially appropriate

**THERE’S TOO MUCH OF THIS**
(Behavioral Impulsivity)

**THERE’S TOO LITTLE OF THIS**
(Failure of Behavioral Inhibition)
Transcription Factor: $\Delta$FosB

- Mediates the structural plasticity induced in the NAc by cocaine
- Changes in number, shape and size of dendritic spines of NAc DAD1R-expressing MSNs
- Larger changes in spine density with self-admin over experimenter-admin of cocaine
- Also induced by chronic consumption of natural rewards (sucrose, high fat foods, sex, wheel running)
- “$\Delta$FosB is both necessary and sufficient for many of the changes in the brain after chronic drug exposure”

Strategies to deal with the GLUTAMATE (MEMORY) component of addiction

• Prepare for triggers

• Avoid triggers as much as it is possible to do so (avoiding old places, playmates, etc)

• Self-talk in moments of craving (CBTx)

• Peers, behavioral barriers, frequent monitoring

• Medications
ASAM Definition: Relapse

- Persistent relapse / and risk thereof
- Even after periods of abstinence
- Triggered by:
  1. Re-exposure to drug itself (DA release in NAc) 
     - drug-induced reinstatement
  2. Exposure to drug cues (GLU release in Amygdala/Hipp) 
     - cue-induced reinstatement
  3. Exposure to Envir Stress (CRF release in Amygdala) 
     - stress-induced reinstatement
Addiction is a disorder of ...

5. CHOICE  (motivation, insight)  OFC, ACC, PFC, IC

4. STRESS  (anti-reward system)  HPA axis

3. MEMORY  (habits, cues)  glutamate
            synaptic remodeling

2. REWARD  (incentive salience)  dopamine
            dopamine receptors

1. GENES  (vulnerability)  polymorphisms
            epigenetic changes
HPA Axis

Hypothalamus → CRH → Anterior Pituitary → ACTH → Adrenal Cortex → CORT

Negative Feedback
CRF
Stress
Dopamine
Strategies to deal with the STRESS component of addiction

- Safe housing
- Recognize unconscious aspects of relapse
- Ritualistic, daily (hourly) stress management activities
- Supportive peers
- Medication (alpha- and beta-blockade)
- Minimize social dominance
The Problem:
How can I protect myself from risk when my ability to assess risk is itself impaired?
Solution: *this is a safety problem*
Aviation Safety Practices

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The Reason Model and Accident Causal Chain

1. Organizational Influences
2. Unsafe Supervision
3. Preconditions for Unsafe Acts
4. Unsafe Acts
5. Latent Failures
6. Active Failures

Failed or Absent Defenses

Source: Adapted from Reason, 1990
What are my “Slices of Cheese?”
Addiction Recovery Management
Research and Practice
Humana Press
The “Blueprint Studies”

Abstract

A sample of 904 physicians consecutively admitted to 16 state Physicians’ Health Programs (PHPs) was studied for 5 years or longer to characterize the outcomes of this episode of care and to explore the elements of these programs that could improve the care of other addicted populations. The study consisted of two phases: the first characterized the PHPs and their system of care management, while the second described the outcomes of the study sample as revealed in the PHP records. The programs were abstinence-based, requiring physicians to

PHPs: 6 lessons 

1. Treatment & Ongoing Support  
2. Abstinence  
3. Relapse Plan  
4. Testing  
5. Mutual Support Groups  
6. "Leverage"
The Problem:
How can I continuously protect myself from relapse (decision-making) when my ability to assess relapse risk is itself impaired (loss of insight)?
“Memos to Self”

1. “In the times that we’re strong …“
2. “... We plan for the times we might be weak.”
Benefits of residential treatment

Medical detoxification
Baseline psychiatric evaluation & treatment
Intensive daily structure
Solidification of abstinence
Removal from codependent family/social system
Incapacitation of use
Patient “takes it seriously”

Finney et al. Addiction 1996 91(12), 1773-1796
Recovery Management Check-ups
Recovery Management Checkups (RMCs) (Dennis & Scott)

Studying effects of on-going monitoring & early re-intervention
Quarterly Recovery Management “check-ups”
Four year outcomes, 446 subjects
Over controls, RMC participants showed:
- reduced time to readmission (from 45 to 13 mo.)
- greater likelihood of receiving more treatment
- reduced substance use frequency and problems
- more total days abstinent

Dennis ML, Scott CK. Four-year outcomes from the early re-intervention (ERI) experiment using recovery management checkups (RMCs). Drug and Alcohol Dependence 121 (2012) 10-17.
Recovery Management Check-Ups (weekly)
Tenarife runway incursion mishap (1997)
KLM 4805 & Pan Am 1736
Recovery-Oriented System of Care (ROSC)
“Memos to Self”

1. “In the times that I’m strong … “
2. “ ... I plan for the times we might be weak.”
3. “Where I live matters”
A Model for Sober Housing during Outpatient Treatment

Douglas L. Polcin, Ed.D., MFT
Public Health Institute, Alcohol Research Group, 6475 Christie Avenue, Suite 400, Emeryville, CA 94608-1010, Phone (510) 597-3440 Extension 277, FAX (510) 985-6459, E-Mail: DPolcin@ARG.org

Abstract

Finding a living environment that supports recovery is a major challenge for many clients attending outpatient treatment. Yet it is important because family, friends, and roommates who encourage substance use or discourage recovery can undermine the progress made in treatment. Destructive living environments are most problematic for clients who have limited incomes and reside in urban areas where housing markets are tight. Individuals who are homeless face constant threats to their sobriety and often lack the stability necessary to attend treatment consistently. Options Recovery Services is an outpatient program in Berkeley, California that uses sober living houses (SLHs) to provide an alcohol and drug free living environment to clients while they attend the outpatient program. This paper describes the structure and processes of the houses along with six month outcome data on 46 residents. Improvements included the number of months using substances, maximum number of days of substance use per month, arrests, and employment. Seventy six percent of the residents remained in the house at least 5 months and 39% reported being employed at some point during the past 30 days. Outpatient programs should consider establishing SLHs for clients who lack a living environment supportive of sobriety.

Keywords

sober living houses; recovery; drug-free housing; outpatient

Introduction

CONTAINING THE COSTS OF ALCOHOL AND DRUG TREATMENT HAS BECOME A MAJOR GOAL FOR STATE AND LOCAL GOVERNMENTS THAT FUND TREATMENT (INSTITUTE OF MEDICINE, 1997; McELHAN, 2006). ONE REASON THIS HAS BEEN AN INCREASE IN LESS EXPENSIVE OUTPATIENT SERVICES AND A DECREASE IN MORE COSTLY RESIDENTIAL AND IMPATIENT TREATMENT. DESPITE INCREASING POPULARITY, OUTPATIENT TREATMENT PROGRAMS HAVE THE SERIOUS LIMITATION OF NOT BEING ABLE TO CONTROL THE SOCIAL AND ENVIRONMENT OF CLIENTS. THEY ARE PARTICULARLY LIMITED IN TERMS OF ADDRESSING THE NEE
NARR Affiliates
“Memos to Self”

1. “In the times that I’m strong … “
2. “ ... I plan for the times we might be weak.”
3. “Where I live matters”
4. “Who my friends are matters”
Lance Dodes, MD

- AA doesn’t work
- No evidence to support AA
- “Surrender” and “powerless” concepts are harmful
- People with SUD have “character defects”
- Denial is the central feature of addiction
- SUD is a symptom of underlying, unresolved emotional problems
- Individual counseling is the best treatment
John Kelly, MD
Does A. A. work?

- A.A. confers short- and long-term therapeutic benefits on a par with professional interventions
- A.A. decreases health-care costs
- A.A. improves treatment outcomes
- A.A. attendance during the first three months of sobriety was associated with recovery-related benefits one year later over and above treatment effects.

AA Mediating Variables

1. Depression (decreased)
2. Spirituality
3. Self-efficacy in coping with negative affect
4. Self-efficacy in coping with high-risk social situations
5. Social network: number of pro-abstinence members
6. Social network: number of pro-drinking members
AA: using NON - Rational Concepts

• **TRIBE** ("the fellowship of alcoholics")
• **MYTH** (Bill’s Story, etc.)
• **RITUAL** ("what it was like, what happened, and…")
• **FAITH** ("Keep coming back, it works")
• **HOPE** (The Promises)
• **ACCEPTANCE** ("…the answer to all my problems")
“Memos to Self”

1. “In the times that I’m strong … “
2. “ ... I plan for the times we might be weak.”
3. “Where I live matters”
4. “Who my friends are matters”
5. “Plan for relapse”
RELAPSE SAFETY CHECKLIST

☐ 1. CALL MY SPONSOR (555-1212)
☐ 2. CALL MY THERAPIST (666-3434)
☐ 3. MEET MY SPONSOR AT Baywood MEETING
☐ 4. HAVE HIM TAKE ME TO DETOX (345 W. MAIN STREET, DOWNTOWN)
☒ 5. CALL MY OLD TREATMENT CENTER, ASK THEIR ADVICE
☒ 6. GET NALTREXONE SHOT BEFORE LEAVING DETOX
Air France flight 447 (2009)

Triple airspeed indicator failure (frozen pitot tubes)
“Safety Stance”

85% power, 5 degrees upward pitch
Relapse Plan

- “DO NOT PANIC!”
- Have an Automatic Relapse Plan
  (previously agreed upon/no discussion)
- Detox (incapacitation)
- Return to Treatment (residential vs. outpatient)
- Review Testing Protocol
- Validate success
Immunoassay & Breathalyser

• daily screening tests
# Two Kinds of Tests in Addiction Medicine

<table>
<thead>
<tr>
<th>SCREENING Tests</th>
<th>CONFIRMATION Tests</th>
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<tbody>
<tr>
<td>Immunoassay</td>
<td>GC/MS</td>
</tr>
<tr>
<td>Very sensitive</td>
<td>Very, very specific</td>
</tr>
<tr>
<td>Not very specific</td>
<td>Not very sensitive</td>
</tr>
<tr>
<td>Not an insignificant false positive rate</td>
<td>Forensic standard</td>
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</table>
“Memos to Self”

1. “In the times that I’m strong … “
2. “ ... I plan for the times we might be weak.”
3. “Where I live matters”
4. “Who my friends are matters”
5. “Plan for relapse”
6. “Build a paper trail”
Collegiate Recovery Communities

COLLEGIATE RECOVERY PROGRAM MEMBERS

Universities and colleges across the nation are leading the way in supporting students in recovery from addiction. Each member University or College listed below incorporates recovery on their campus in a way that is unique to their population and culture.

A collegiate recovery program can be implemented in many ways, utilizing many services, models and tools. The main point of a CRP is that it focuses on student support in higher education.

Please feel free to contact the member University/College directly.
“Memos to Self”

1. “In the times that I’m strong … “
2. “... I plan for the times we might be weak.”
3. “Where I live matters”
4. “Who my friends are matters”
5. “Plan for relapse”
6. “Build a paper trail”
7. “Get back in the cockpit”
“Memos to Self”

1. “In the times that I’m strong … “
2. “... I plan for the times we might be weak.”
3. “Where I live matters”
4. “Who my friends are matters”
5. “Plan for relapse”
6. “Build a paper trail”
7. “Get back in the cockpit”
8. “Get a doc, Doc”
Addition Medicine Specialist

• Certified by the American Society of Addiction Medicine
• Understand the special needs of recovering patients
• Not likely to make stupid mistakes
• Doctors who \textit{LIKE} addicts, Offices that are safe places

• www.asam.org  www.abam.net
• www.csam-asam.org
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9/13/2013
115th Meeting of the National Advisory Council on Drug Abuse at NIDA
Last Wednesday, September 4,
“Memos to Self”

1. “In the times that I’m strong … “
2. “... I plan for the times we might be weak.”
3. “Where I live matters”
4. “Who my friends are matters”
5. “Plan for relapse”
6. “Build a paper trail”
7. “Get back in the cockpit”
8. “Get a doc, Doc”
9. “You need to quit”
Enforced Abstinence from Tobacco During In-Patient Dual-Diagnosis Treatment Improves Substance Abuse Treatment Outcomes in Smokers

Elizabeth B. Stuyt, MD.1,2

1Department of Psychiatry, University of Colorado, Denver, Colorado
2Circle Program, Colorado Mental Health Institute, University of Colorado, Denver, Colorado

Background and Objectives: Although the prevalence of tobacco use in those in substance abuse treatment is known, the literature is divided as to whether enrolling patients with tobacco use in a fully integrated treatment program provides better outcomes than a treatment program in which patients are required to quit smoking as an additional requirement. This study was conducted to determine whether substance abuse treatment that does not include quitting smoking leads to better outcomes than a fully integrated substance abuse treatment program.

Methods: This study was a randomized, controlled trial comparing two treatment groups: (1) a comprehensive integrated treatment program that includes smoking cessation and (2) a standard treatment program that does not include quitting smoking.

Results: After 90 days of follow-up, patients in the comprehensive integrated treatment group had significantly better outcomes than those in the standard treatment group. Patients in the comprehensive integrated treatment group were more likely to quit smoking and less likely to relapse compared to patients in the standard treatment group.

Conclusion: The results of this study suggest that enrolling patients in substance abuse treatment programs that include smoking cessation are associated with better treatment outcomes compared to programs that do not address smoking cessation.
Functionally...

Dopamine D2 Receptors are Decreased by Addiction

Cocaine

Meth

Alcohol

Heroin

Control

Addicted

DA D2 Receptor Availability
Naltrexone depot

Extended-release injectable suspension of a Mu-opioid receptor antagonist (blocker) to …

1. prevent relapse to opioid dependence after detox
2. treat alcohol dependence

Administered monthly

To be effective, must be used with recovery programs or counseling
“I wonder if you/we need to learn new ways to celebrate and to reward ourselves?

Work is easy, but play… ?”

- LeClair Bissel, MD (1928 – 2008)
“Memos to Self”

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3. “Where I live matters”
4. “Who my friends are matters”
5. “Plan for relapse”
6. “Build a paper trail”
7. “Get back in the cockpit”
8. “Get a doc, Doc”
9. “You need to quit”
10. “Learn to play”
Recovery Management Plan

1. Treatment (Residential or IOP)
2. Therapist/Counselor/Coach/Advocate
3. Recovery Residence
4. Mutual Support Groups
5. Relapse Plan
6. Testing
7. Job/School/Future
8. Addiction Medicine Specialist
9. Medication
10. Hedonic Rehabilitation
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