Moving Healthcare From Addiction To Substance Use Disorders

Why and How?
Parts of the Talk

1. Facts about addiction
   • Prevalence, Genetics, Brain changes

2. How is addiction treated
   • Treatment concepts and treatment evaluation

3. A different approach
   • A new model of treatment – PHPs
Part I

Substance use, abuse & addiction

- Genetics
- Brain Changes
Prevalence of “Substance Use Disorders”

- In Treatment ~ 2,300,000
- Diabetes ~ 24,000,000
- “Harmful Use” > 60,000,000 (Focus on Early Intervention)
- Little or No Use (Focus on Prevention)

Prevalence of Diabetes ~ 24,000,000

Focus on Prevention

Focus on Early Intervention

Focus on Treatment
Biology of Addiction

Very Frequent Use

In Specialty Treat. ~ 2,300,000

Very Rare Use
Genetic Heritability in Three Chronic Medical Illnesses

Hypertension
Diabetes
Asthma
# Heritability Estimates Twin Studies

<table>
<thead>
<tr>
<th>Trait</th>
<th>Heritability Estimate</th>
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<tbody>
<tr>
<td>Eye Color</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>ASTHMA (adult only)</strong></td>
<td>0.35 - 0.70</td>
</tr>
<tr>
<td><strong>DIABETES (insulin dep)</strong></td>
<td>0.70 - 0.95 (males)</td>
</tr>
<tr>
<td><strong>HYPERTENSION</strong></td>
<td>0.25 - 0.50 (males)</td>
</tr>
<tr>
<td><strong>ALCOHOL (dependence)</strong></td>
<td>0.55 - 0.65 (males)</td>
</tr>
<tr>
<td><strong>OPIATE (dependence)</strong></td>
<td>0.35 - 0.50 (males)</td>
</tr>
<tr>
<td><strong>COCAINE (dependence)</strong></td>
<td>0.40 - 0.55 (males)</td>
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</table>
Addiction Produces Lasting Brain Changes

MRI and FMRI Imaging
Cocaine Abuse and Brain Glucose Metabolism

normal subject

cocaine abuser (10 days post)

cocaine abuser (100 days post)
Addiction Produces Lasting Brain Changes

But these changes will eventually go away …

Right??
Laboratory Studies of Drug Craving

Role of Classical Conditioning

People, Places & Things Associated with Drug Use –

Produce Craving and Withdrawal Years after stopping use.
1. Drug use is not the same as Drug addiction

2. Substance use is due largely to availability

3. Addiction is due to use, genetics, and resulting, long lasting brain changes:

4. Thus most addictions are chronic illnesses

OK – So what?
Part II

Contemporary Addiction Treatment

- Treatment Concepts
- Treatment Evaluation
- Contrast with rest of medicine
A “Bad Habit” not an Illness Leads to a Special Approach
A Nice Simple Rehab Model

Substance Abusing Patient

Treatment

Non-Substance Abusing Patient
ASSUMPTIONS

• Some fixed amount or duration of treatment will resolve the problem

• Clinical efforts put toward correctly placing patients and getting them to complete treatment

• Evaluation of effectiveness should occur following completion
  – Poor outcome means failure
Studies show few differences between...

- Brief and Intensive Treatments
- Inpatient and Outpatient Treatments
- Conceptually Different Treatments
- “Matched” and “Mismatched” Trt.
- Gender or Culturally Oriented Trt.
How Do Treatments For Other Illnesses Work?

Chronic Illness & Continuing Care
A Continuing Care Model

Primary Care

Specialty Care

Primary Continuing Care
In Chronic Illnesses…..

1 – There is no Cure - the effects of treatment do not last very long after care stops

2 – Patients who are out of contact are at elevated risk for relapse: Retention is essential
3 – Early, intensive stages prepare patients for less intensive care:
   – ultimately Self-Management

4 - Evaluation is a clinical duty:
Good function = continue care
Poor function = change care
The treatment premises lead to the evaluation model.
Outcome In Hypertension

Pre - During - Post

Pre:

During:

During:

During:

Post:

Treatment Research Institute
Outcome In Addiction

Pre - Post

Pre
During
During
During
Post

Treatment Research Institute
Maybe this is why...
Studies show few differences between...

- Brief and Intensive Treatments
- Inpatient and Outpatient Treatments
- Conceptually Different Treatments
- “Matched” and “Mismatched” Trt.
- Gender or Culturally Oriented Trt.
Part III
Why Physicians Should Treat Substance Use Disorders
Improving Treatment Of Most Chronic Illnesses
Disorders with Higher Prevalence Among Substance Abusers


Substance abusing patients = 747
Matched controls = 3,690
PRISM Systematic Reviews

**Diabetes:**

**Hypertension:**

**Chronic pain:**

**Breast cancer:**
- Terry et al. *Ann Epidemiol.*

**Sleep:**
- Dinges et al. *JAMA*
Intervening in Substance Use Dis.

Very Frequent Use

Very Rare Use

In General Pop.
~ 60,000,000
Major Advances in Brief Interventions

• “Harmful substance use” is accurately identified with 2 – 3 questions.
  – Prevalence rates of 20 – 50% in healthcare
  – 60% of all ER admissions (10 million/yr)

• Brief counseling (5 – 10 minutes) produces lasting changes & savings
Washington’s Screening Brief Intervention & Treatment Evaluation

- SBIRT in 9 Emergency Depts.
- Case Control Study of 1557 pts
  - Matched group – got ER care but no BI
- Measured healthcare utilization and costs for one year
Medicaid Costs Following SBIRT in Washington State

$4,000 Savings Per Patient
Addiction Treatment

A New Model of Treatment
Addiction Treatment

Very Frequent Use

In Specialty Treat.
~ 2,300,000

Very Rare Use
Physician Health Plans

• 49 PHPs
  • All authorized by state licensing boards
  • Most treat many types of health professionals

• Do NOT provide treatment
  • Assess, Intervene, Evaluate, Refer, Monitor, Report and Advocate
  • All under authority of Board

DuPont et al., 2008, (in review).
Evaluation and Contracting

- **Phase 1 - Evaluation (1 – 2 mos.)**
  - Evaluate/diagnose referred physician
  - Explain PHP and Contract

- **Result is signed contract**
  - 3 – 5 years in duration
  - Protection from immediate adverse actions
  - Monitoring with report to Board – 4 yrs
Treatment and Monitoring

- **Phase 2 – ~1 yr**
  - Selected residential treatment 30 – 90 days
  - Referral to IOP or OP ~ 6 months
    - Return to practice ~ month 3
  - Aftercare program ~ 3-6 months

- **Phase 3 – 4 yrs**
  - AA attendance - Caduceus Society meetings
  - Family Therapy

- **Urine Drug Screenings - throughout**
  - Weekly - monthly (random during weekdays)
  - Worksite visits
Results During Contract

904 Physicians
Consecutively Enrolled into
16 state Physician Health Programs

Completed

448 - No Longer Being Monitored
67 - Completed but monitored voluntarily

515 (57%)

Continuers

132 - Still being monitored

132 (15%)

Non-Completers

85 – Voluntarily stopped / Retired
48 – Failed, License Revoked
22 - Died (6 suicides)
102 – Transferred/Moved

257 (28%)
Results Through Five Years

No Positive Urine Over 5 Years

78%
Results *Through* Five Years

Second Positive Urine After One Slip

26%
Results *After* Five Years

**Revoked License**

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Completers</td>
<td>2%</td>
</tr>
<tr>
<td>Continuers</td>
<td>11%</td>
</tr>
<tr>
<td>Non-Completers</td>
<td>32%</td>
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Concluding Points

1. Drug “Addiction” treatment will become integrated into healthcare.
2. Care for “Substance Use Disorders” will involve different patients, providers, and methods
3. Model is Patient Centered Medical Home – diabetes example
Thank You