The Integrated Co-Occurring Treatment (ICT) Model: An Innovative Approach to Treating Youth with Co-Occurring Substance Use and Mental Health Disorders

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Co-Occurring Disorders

• The term “co-occurring” describes two or more disorders or illnesses occurring in the same person.

• Co-occurring disorders also implies interactions between the illnesses that can worsen the course of both (NIDA).

• Each disorder can be established independent of the other and is not simply a cluster of symptoms resulting from [a single] disorder”. (CSAT, 2005)
Youth with Co-Occurring Disorders: Problems are Multiple and Complex

• Multiple problems (5+) are the norm (Dennis, 2005)
• 2/3 of youth and adults seeking substance use treatment also had a co-occurring mental health condition (Chan, Dennis, & Funk, 2008)
• Trauma and victimization in 62 to 80% of youth (Dennis; Hussey)
• Treatment engagement and retention are difficult, and intervention outcomes tend to be poor, (Hawkins, 2009, p.206).”
• Gender: higher rates of internalizing disorders and trauma with adolescent girls, and higher rates of externalizing disorders and juvenile justice involvement with adolescent boys
Survey sources
CDC YRBS: HS students 2016-2017

• Sad/hopeless: 31.5% felt so sad/hopeless for at least two weeks to the point of decreasing at least one activity

• Suicide
  • 17.2% seriously considered suicide
    • Females had much higher rates
    • Gay, lesbian and bisexual students had significantly higher rates
  • 13.6% made a plan for how they would kill themselves
  • 7.4% made at least one attempt
    • Females at higher percentage – but black females and males had higher rates than white or Hispanic counterparts
Estimates that in the last year:

- 12.8% of all teens experienced a Major Depressive Episode
- 4.3% of all teens suffered from an identifiable Substance Use Disorder
- 1.4% of all teens experience co-occurring MDE and SUD
  - A past year MDE predicted a much greater likelihood of an SUD
MTF 2017: 8th, 10th and 12th grade students

- 33.4% of all students reported trying an illicit drug (this does not include alcohol or tobacco) at least once in their lifetime.
  - Good news: this number falls to 14.0% when marijuana is removed from consideration: *the lowest percentage measured in nearly 2 decades*
  - Bad news: this number climbs to 36.5% when inhalants are added (and including marijuana)
# MTF: Alcohol and Marijuana

<table>
<thead>
<tr>
<th></th>
<th>Alcohol</th>
<th>Marijuana</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lifetime:</strong></td>
<td>41.7% - historic low</td>
<td>29.3%</td>
</tr>
<tr>
<td><strong>Annual:</strong></td>
<td>36.7%: historic low</td>
<td></td>
</tr>
<tr>
<td><strong>Current (Last 30 days):</strong></td>
<td>19.9%: near historic low</td>
<td>14.5%</td>
</tr>
<tr>
<td><strong>Binge (5+ previous 2 weeks):</strong></td>
<td>• 9.9%: near historic low</td>
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<tr>
<td></td>
<td></td>
<td><strong>Daily:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(8th grade: 0.8%; 10th grade: 2.9%; 12th grade: 5.9%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Cannabis:</strong> 23.9%</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Synthetic cannabis:</strong> 2.8%</td>
</tr>
</tbody>
</table>

#LEADINGCHANGE
# MTF: Opioids

<table>
<thead>
<tr>
<th>Heroin (all 3 grades)</th>
<th>Narcotics other than heroin (12th grade only)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Lifetime: 0.6%: historically low</td>
<td>• Lifetime: 6.8%: 22-yr low</td>
</tr>
<tr>
<td>• Annual: 0.3%: historically low</td>
<td>• Annual: 4.2%: 22-yr low</td>
</tr>
<tr>
<td>• Current: 0.2% historically low</td>
<td>• Current: 1.6%: 22-yr low</td>
</tr>
</tbody>
</table>
MTF: Other Drugs - Annual

• Narcotics: 4.2% (22 year low)
• OTC cough medicine (DXM): 3.0%
• Hallucinogens: 2.7% historic low
• Ecstasy (MDMA or Molly): 1.7%
• Inhalants: 1.3%
• Steroids: 0.8% historic low
• Cocaine: 0.7%
• Heroin 0.3% historic low
• Methamphetamine: 0.2% historic low
NSDUH: Any use in the last 30 days

- Alcohol: 9.2%
- Marijuana: 6.5%
- Rx Pain Relievers: 1.0%
- Inhalants: 0.6%
- Hallucinogen: 0.5%

- Benzodiazepine (Rx Tranquilizers): 0.5%
- Cocaine: 0.2%
- Methamphetamine: <0.1%
- Heroin: <0.1%
CDC YRBS: Alcohol and Marijuana

**Alcohol**
- 60.4% of students reported trying alcohol (even a few sips) at least once in their lives; 15.5% before they 13 years
- 29.8% reported at least one drink in the last 30 days (Significant reduction: 50.8% in 1991 to 29.8% in 2017)

**Marijuana**
- 35.6% have tried at least once in their lives; 6.8% have tried before 13 years of age
- 6.9% reported trying synthetic cannabis at least once
- 19.8% reported use at least once in last 30 days
- No great variation in last quarter century overall (ranged 15%-25%)
CDC YRBS: Other drugs: every tried in *lifetime*

- Rx pain reliever: 14%
- Hallucinogen: 6.6%
- Inhalants: 6.2%
- Cocaine: 4.8%
- Ecstasy (MDMA/Molly): 4.0%
- Steroids: 2.9%
- Methamphetamine: 2.5%
- Heroin: 1.7%
CDC YRBS: other notable

• 20% of students have been offered, sold or bought drugs at school in the last year.

• Of the 28.7% of currently sexually active students:
  • Just over half said a condom had been used
  • 18.8% said they had used alcohol or drugs before having sex
ICT Core Assumptions
(Baltrinic, Shepler, & Fox)

1. Youth with COD present with complex sets of externalizing, internalizing & substance use symptom patterns and vary in their nature, onset, presentation, interaction and severity, even among youth with similar diagnoses.

2. COD presentation in youth is affected by brain development; and conversely, brain development is impacted by substance use.

3. Contextual factors (peers, family, school, neighborhood, and the risk and protective factors associated with them) play a mediating role in youth behaviors, use patterns, and recovery trajectory.
ICT Core Assumptions (Con.)

4. Traumatic stress experiences contribute to impaired emotional and behavioral functioning and to the adoption of risk behaviors, which in turn may lead to further exposure to victimization, violence, and trauma experiences.

5. Safety concerns and risk behaviors are elevated and need to be actively monitored.

6. The stressors associated with co-occurring disorders negatively strain family emotional, interpersonal, and material resources.
ICT Core Assumptions (Con.)

7. Multiple supports (youth and family) are necessary for resilience and recovery.

8. Culturally mindful and respectful partnerships are necessary for positive engagement.

9. Integrating substance use and mental health treatment is more effective and family friendly than services provided separately (parallel, sequentially).
Intentional Integration

• Planful incorporation of complex symptom patterns (MH, SU, Trauma), contexts, developmental factors, risk and safety factors, and system dynamics into an integrated assessment and treatment plan.
Influence, Interaction, and Manifestation of Multiple Occurring Conditions

- Contexts (Home, School, Peers, Community, etc.)
- Substance Use Disorder
- Mental Health Disorder
- Trauma Factors
- Risk & Resiliency Factors
- Developmental Factors

Youth

Family

Safety Concerns

Salient Behavior/Symptom
Integrated Co-Occurring Treatment

• ICT utilizes an integrated treatment approach, embedded in an intensive home-based method of service delivery, to provide a set of core services to youth with co-occurring disorders of substance use and serious emotional disability and their families.

• Addresses the reciprocal interaction of how each disorder affects the other, in context of the youth’s family, culture, peers, school, and greater community

• Prioritizes saliency and immediacy of need which may fluctuate from session to session
Culturally Mindful Engagement and Family Partnerships

Intensive Home-Based Service Delivery Modality

Multidimensional and Integrated Assessment and Conceptualization

Comprehensive and Integrated Treatment Array Matched to Needs and Strengths

Cross-System Partnerships and Supports

Resiliency-Oriented Developmental Perspective

ICT Model Components (Baltrinic & Shepler)
<table>
<thead>
<tr>
<th>Location of Service</th>
<th>Home and Community</th>
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</thead>
<tbody>
<tr>
<td>Intensity</td>
<td>Frequency: 2 to 5 sessions per week Duration: 4 to 8 hours per week</td>
</tr>
<tr>
<td>Crisis response &amp; availability; active safety planning and monitoring</td>
<td>24/7</td>
</tr>
<tr>
<td>Active safety planning &amp; monitoring</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Small caseloads</td>
<td>4 to 6 families per FTE; 8 to 12 for team of two</td>
</tr>
<tr>
<td>Flexible scheduling</td>
<td>Convenient to family</td>
</tr>
<tr>
<td>Treatment duration</td>
<td>3 to 6 months</td>
</tr>
<tr>
<td>Systemic engagement and community teaming</td>
<td>Child and family teaming; skillful advocacy; family partnering; culturally mindful engagement</td>
</tr>
<tr>
<td>Active clinical supervision &amp; oversight</td>
<td>24/7 availability; field support; individual &amp; group</td>
</tr>
<tr>
<td>Program structure and credentials</td>
<td>Licensed BSW and above; MA preferred Program size: 4 to 8; .5 to 1 FTE IHBT Supervisor</td>
</tr>
<tr>
<td>Comprehensive service array</td>
<td>Crisis stabilization, safety planning, skill building, trauma-focused, family-focused; resiliency &amp; support-building interventions; cognitive interventions</td>
</tr>
</tbody>
</table>
Integrated Assessment and Treatment
Multidimensional and Integrated Contextual Assessment

I. **Symptom Patterns and Diagnoses:** youth who meet the criteria for both Mental Health and Substance Use diagnoses

II. **Contextual Functioning:** Degree of functional impairment per life domain

III. **Developmental and Cognitive Functioning:** (cognitive functioning, emotional & behavioral maturity)

IV. **Risk and Recovery Environments:** Environmental risk and recovery conditions (e.g. trauma, safety, negative influences, family conflict, poverty)
## Differential Diagnosis: Trauma, Mental Health & Substance Use

<table>
<thead>
<tr>
<th>Trauma Symptom</th>
<th>Differential: Mental Health Diagnosis</th>
<th>Differential: Substance Use Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem concentrating</td>
<td>ADHD: Depression</td>
<td>Marijuana</td>
</tr>
<tr>
<td>Hyper-arousal</td>
<td>ADHD; Bipolar; Anxiety</td>
<td>Amphetamines</td>
</tr>
<tr>
<td>Paranoia</td>
<td>Psychosis</td>
<td>PCP; Amphetamines; LSD; Peyote; Psilocybin</td>
</tr>
<tr>
<td>De-realization</td>
<td>Panic disorder</td>
<td>LSD; Peyote; Psilocybin</td>
</tr>
<tr>
<td>Memory problems</td>
<td>Depression; Cognitive Disabilities</td>
<td>Huffing</td>
</tr>
<tr>
<td>Emotional Numbing</td>
<td>Depression</td>
<td>Depressants</td>
</tr>
<tr>
<td>Irritability</td>
<td>Bipolar; Depression; ODD</td>
<td>Withdrawal from substances</td>
</tr>
</tbody>
</table>
Symptom Interaction MH X SU: Symptom Effects

- Mask: hide; cover; disguise
- Mimic: imitate; cross-over symptoms
- Symptom activation: Trigger
- Attenuate: alleviate
- Intensify; amplify; accelerate
- Prolong: Extend
- Exacerbate: destabilize; aggravate
- Diminish cognitive capacities and decision-making
Symptom Interaction MH X SU: SU impact on MH

- **Attenuate** MH symptoms (marijuana effect on aggression)
- **Increase/escalate/intensify** mania symptoms (cocaine)
- Decrease self-control; increase impulsivity (alcohol; mania; ADHD; externalizing disorders)
- **Uncover pre-existing condition**: (marijuana; psychotic symptoms)
- **Numbing** of MH symptoms: (Marijuana, alcohol; Trauma)
Symptom Interaction MH X SU: MH impact on SU

- ADHD: Impulsive decision making and poor judgement accelerates substance use (alcohol, cannabis, and other drugs)
- Anxiety/OCD: Increase in anxiety leads to substance use to alleviate symptom (alcohol; marijuana; valium; benzodiazepines or other calming agents)
- Depression: Increased depression influences the frequency and intensity of alcohol use for the purpose of diminishing depressive symptoms
- Mania: Person uses cocaine to expand the symptoms (Miele et al.)
Reciprocal and multidimensional interaction and impacts

- **Symptoms X Relationship interaction**
  - Ex: poor emotional regulation x parent trauma-based reactivity → escalating conflict → substance use

- **Symptoms X Functioning interaction**
  - Ex: unidentified lagging skill sets and unrealistic school expectations → poor school performance, frustration, and shut down → leading to truancy and hanging with negative peers → cannabis use.

- **Context X Developmental factors interaction**
  - Negative peers + impulsive decision-making → substance use → illegal behavior in the community
Unpacking the Complexity

• Behavioral Health Timeline
• Interaction Prompts
• Interactional Contextual Functional Analysis
• Contextual Assessment
• Genograms
<table>
<thead>
<tr>
<th>Time Frame/Age</th>
<th>Mental Health Symptoms</th>
<th>Substance Use/Abstinence</th>
<th>Life Events/Trauma</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005 (10)</td>
<td>Withdrawn; bedwetting</td>
<td>Not using</td>
<td>Sexually abused by neighbor</td>
</tr>
<tr>
<td>2006 (11)</td>
<td>Behavior problems at school</td>
<td>Not Using</td>
<td>Identified ED</td>
</tr>
<tr>
<td>2007 (12)</td>
<td>Multiple suspensions for fighting</td>
<td>First Use (alcohol)</td>
<td></td>
</tr>
<tr>
<td>2008 (13)</td>
<td>Argumentative at home</td>
<td>Sporadic Use (marijuana)</td>
<td></td>
</tr>
<tr>
<td>2009 (14)</td>
<td>Irritability/ Angry outbursts</td>
<td>Using marijuana daily</td>
<td>Hanging with negative peers</td>
</tr>
<tr>
<td>2010 (15)</td>
<td>Cutting; Self Harm</td>
<td>Taking pills from grandma’s drug cabinet</td>
<td>Negative peers</td>
</tr>
<tr>
<td>2011 (16)</td>
<td>Hypervigilant; gone most weekends;</td>
<td>Benzodiazepine- Xanax</td>
<td>Negative peers: Stealing for drugs</td>
</tr>
<tr>
<td></td>
<td>Sporadic school attendance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current (17)</td>
<td>Depressed; anxious</td>
<td>Abstinent</td>
<td>Probation</td>
</tr>
</tbody>
</table>
SA/MH Interaction Prompts (Baltrinic)

**SU** → **Impact MH**

*• The last time you used (substance)__________ how did it affect your:*

– Mood (ex. Anger)
– Experience with your friends/significant other
– Relationships with family
– Functioning at school
– Behaviors in the community
MH/SA Interaction Prompts (Baltrinic)

MH  →  Impact SU

• The last time you were (mood/context) _________ and used (substance)_________ how did it affect your:
  – Ability to concentrate, complete your work
  – Response to stress
  – Experience with your friends/significant other
  – Relationships with family
  – Functioning at school
  – Behaviors in the community
Integrated Contextual Functional Analysis

Contextual & Relational Dynamics: Family, Peers, School, Community

Youth

SU Disorder

MH Disorder

Salient Behavior/Symptom

Exacerbating Response

Escalation Cycle

Risks Factors, Skills, Resources, and Supports

De-stabilizing Event or Trigger

Trauma Filter

Dispositional Factors

Safety Issue

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Contextual Assessment

School + -

Peers + -

Community + -

Informal Supports + -

Youth

Family

Work

+ = Protective Factors
- = Risk Factors

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Resiliency-Oriented Approach
Resource Framework

“What makes you ill is not the same thing that makes you healthy.” Kenneth Thompson, M.D., SAMHSA

Conservation of Resources Theory

(Stevan Hobfoll)

• First, act to prevent or limit resource loss
• Begin initiation of resource building interventions once there is reasonable stability
• Target resources not (just) illness: “target ... the resources and conditions that facilitate healthy functioning.”
The Power of Assets to Prevent
(Marc Mannes, Search Institute)
Risk and Resiliency Focus (Mannes; Shepler)

Resiliency

Increase Protective Factors in Multiple Environments

Reduce Risk Environments and Behaviors

Safety is Foundational

Safe environments for recovery and resiliency promotion
Protective Factors
(The Search Institute; Benson et al. 2004)

• An increase in two or three assets for a low asset youth (10 or less) has greater influence on reducing substance use behavior than with high asset youths (31 or more)

• Adding developmental assets reduces ATOD use at all levels of developmental assets

• Youth with higher amounts of assets in the external asset categories of Supports and Boundaries and Expectations were less likely to initiate ATOD use than youth with less assets in these categories
# External Asset Categories

<table>
<thead>
<tr>
<th>Boundaries &amp; Expectations</th>
<th>Supports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family boundaries</td>
<td>Family support</td>
</tr>
<tr>
<td>School boundaries</td>
<td>Positive family communication</td>
</tr>
<tr>
<td>Neighborhood boundaries</td>
<td>Other adult relationships</td>
</tr>
<tr>
<td>Adult role models</td>
<td>Caring neighborhood</td>
</tr>
<tr>
<td>Positive peer influence</td>
<td>Caring school climate</td>
</tr>
<tr>
<td>High expectations</td>
<td>Parent involvement in schooling</td>
</tr>
</tbody>
</table>
Establish Positive Connections & Functional Success through Relational Supports and Strategic Accommodations

Solidify Structure, Supervision, & Monitoring

Build Protective Factors: Pro-Social Recovery Environments, Asset Building; Supports

Build Adaptive Skills & Emotional Coping Across Settings; Psycho-education

Engagement; Readiness to Change

Safety, Stabilization, Risk & Symptom Reduction

Resiliency-Oriented Change Model

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Integrated and Comprehensive Treatment Matched to Need

Recovery & Resiliency

Eco-systemic Functioning

Basic Skills and Coping

Basic Needs, Safety, and Stabilization

Youth and Family Need Hierarchy (Shepler, 1991, 1999)
Ongoing Conceptualization and Treatment Prioritization

Formulate integrated conceptualization of the interaction between SU and MH behaviors in context

**Utilize Principle of Saliency**

- Which mental health and/or substance use behaviors are most urgent and/or concerning?
- In what contexts are these behaviors of most concern?
- Which concerns if not addressed could spiral into bigger problems?
- What poses the greatest risk or stressor to the youth and family?
- Which assets, skills, supports or resources best promote resiliency and recovery for this youth?
Target Outcomes

• Living at home or in a permanent home setting
• Attending and achieving at school/work
• Reduced involvement in the JJ system
• Reduced use/no use of substances
• Reduced mental health symptoms
• Participating in positive family, peer, and community life
• Accessing resources and natural supports as needed to maintain gains and prevent recidivism
Integrated Co-Occurring Treatment

Logistics

• Dually certified agency; dually licensed supervisor
• 2 to 4 FTE clinical staff either dually licensed or dually trained, with mix of SU and MH expertise on the team
• Consultation, training, and technical support:
  • Initial core training and ongoing booster trainings
  • Provide weekly consultation and coaching of ICT Team
• Years 3+:
  • ICT Supervisor Monitors Fidelity
  • Consultation negotiated based on need
  • Yearly fidelity review
• ICT is typically funded through a combination of Medicaid, insurance, and cross-system funding.
Lessons Learned

• For integration to be effective- needs to occur at the policy, funding, and treatment levels
  • Resolve infrastructure issues prior to implementation (integrated funding and paperwork requirements)

• Collaboration with key system partners is essential (especially Courts & Schools)

• Education of referral sources about prevalence of youth with co-occurring disorders and need for integrated treatment

• Intensive clinical supports are needed to help manage risk and safety (active safety planning and monitoring, and 24-hour on-call availability)

• Ongoing treatment and supports may be needed
Realistic Outcomes and Expectations

• Think trajectory of wellness not cure

• Chronic relapsing disorder, requiring multiple treatment attempts over time (White and Dennis)

• Williams and Chang (2000) found that the average rate of sustained abstinence after treatment, across 53 adolescent substance use treatment outcome studies, was 38% at 6 months and 32% at 12-months.

• Tomlinson et al (2004) abstinence at 6 months: 26% in SUD-only group; 13% in SUD and Psychiatric Disorder group

• Measure what you do: risk reduction across life domains
  • Track multiple outcomes

• Conversation with key stakeholders about realistic outcome expectations
ICT Research

Positive Results: Improvement Over Time

All Youth Considered Together

- Substance use variables (GRAD; Drug Screens)
- Mental health variables: (Ohio Scales; GRAD)
- Family/Parenting (GRAD)
- Pro-Social Activities (GRAD)
- Educational Functioning (GRAD)

ICT Did Better than TAU

- Substance Use Variables (GRAD; Drug Screens)
- Mental Health Problem Severity: (GRAD only)
- Pro-Social Activities (GRAD)
- Pro-Social Peers (GRAD-Parent Rating)
- Family/Parenting (GRAD-Youth Rating)
ICT showed a significant decrease in substance use, as measured by the GRAD Substance Use/Abuse Scale, as compared to TAU  (p < 0.001)
ICT showed a significant decrease in mental health problem severity, as measured by the GRAD Personality/Behavior Scale, compared to TAU (p < 0.014)
ICT: BHJJ Preliminary Data 2009-2013 (Kretschmar & Butcher)

Ohio Scales Problem Severity

- ICT
- TF-CBT
ICT: BHJJ Preliminary Data 2009-2013 (Kretschmar & Butcher)

TSCC: Anger

Score

Intake

Termination

ICT

TF-CBT

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National Recognition

• **SAMHSA’s 2010 Science and Service Award**: a national program that recognizes community-based organizations and coalitions that have shown exemplary implementation of evidence-based mental health and substance abuse interventions. Given to McHenry County for its implementation of ICT for their SAMHSA SOC grant.

• **NIATx iAward (2010)** given by the State Association of Addiction Services and NIATx: Family Service and Community Mental Health Center located in McHenry County, Illinois received a 2010 iAward for Innovation in Behavioral Healthcare Services for its successful implementation of Integrated Co-Occurring Treatment (ICT).

• **Blueprint for Change: A Comprehensive Model for the Identification and Treatment of Youth with Mental Health Needs in Contact with the Juvenile**: One of the programs highlighted in the National Center for Mental Health and Juvenile Justice/OJJDP monograph.
Resources

- Providing Effective Treatment for Youth with Co-Occurring Disorders

- Prevalence of Youth Drug Use, Mental Health and Co-Occurring Disorder
  http://www.scribd.com/doc/246378645/Case-Western-Brief-1

- Screening and Assessment for Substance Use, Mental Health and Co-Occurring Disorders in Adolescents

- Overview of Evidence-Based Promising Treatment Practices for Youth With Substance Use and Co-Occurring Disorders
  http://www.scribd.com/doc/254697414/Case-Western-Brief-3

- Implementing Treatments for Youth with Co-Occurring Mental Health and Substance Use Disorders: Opportunities and Challenges

- Expected Outcomes in Substance Use Disorder Treatment for Youth
  http://www.scribd.com/doc/254014789/Case-Western-Brief-4#scribd
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