

Integrating Services for Infectious (HIV, HCV, TB) and Non-Communicable (Psychiatric and Substance Use Disorder) Syndemic Conditions

Frederick L. Altice, M.D. M.A.

Professor of Medicine & Public Health

Yale University

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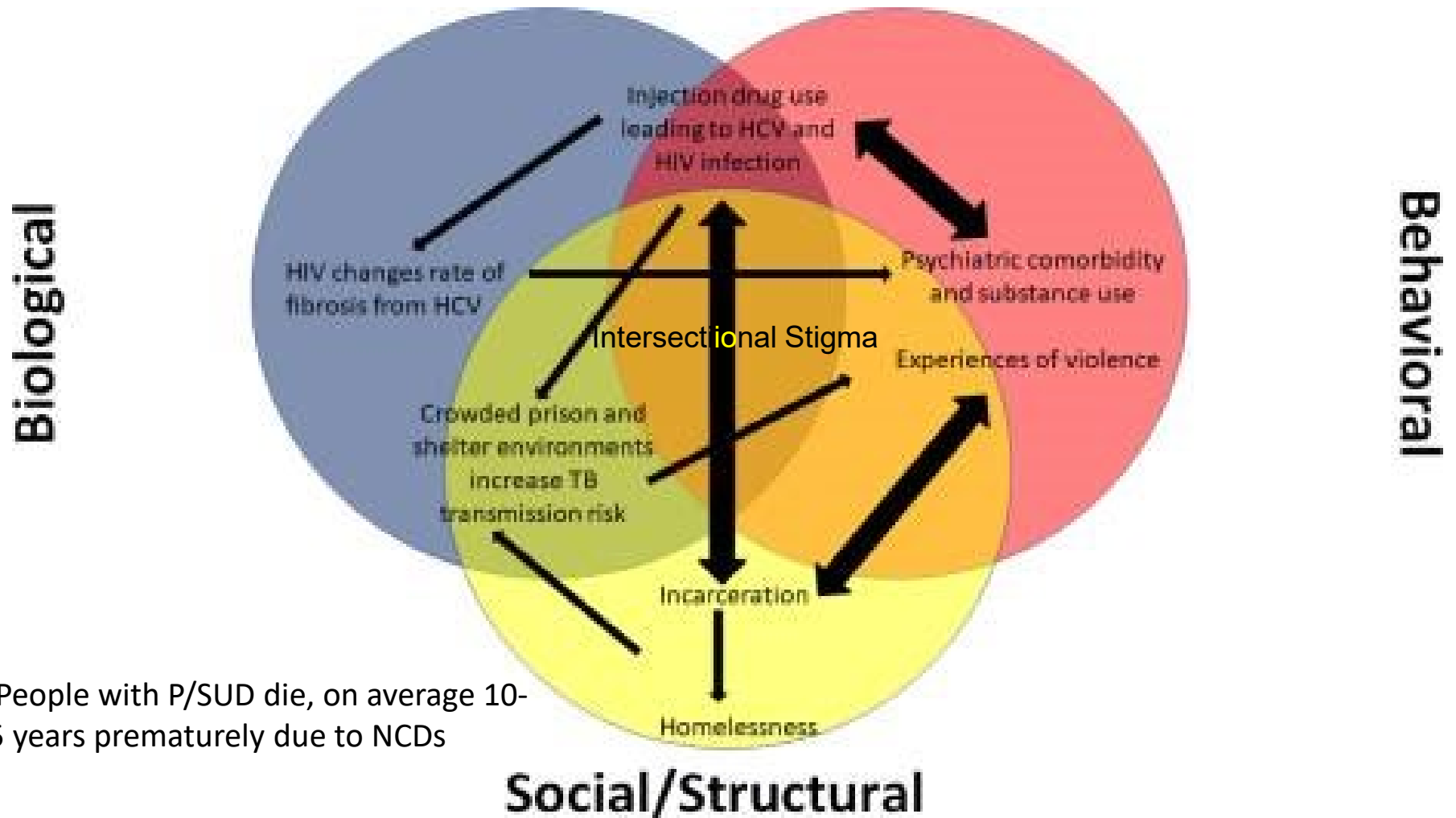
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Why Integrate Services for PWID* → Syndemics



* People with P/SUD die, on average 10-25 years prematurely due to NCDs

Conceptual Framework for Integrating Service Delivery

Six levels of integration from coordinated →
co-located → integrated services

Coordinated Care

1. Minimal collaboration
2. Basic collaboration at a distance


Co-Located Care

3. Basic collaboration onsite
4. Close collaboration with some system integration


Integrated Care


5. Close collaboration approaching integrated practice
6. Full collaboration in a Transformed/Merged practice

A STANDARD FRAMEWORK FOR
LEVELS OF INTEGRATED HEALTHCARE



SAMHSA-HRSA
Center for Integrated Health Solutions

 NATIONAL COUNCIL
FOR COMMUNITY BEHAVIORAL HEALTHCARE

 A Division of the Department of Health and Human Services
SAMHSA

APRIL 2013

Advantages and Weaknesses at Each Level of Collaboration/Integration

| COORDINATED Key Element: Communication | | Co-Located Key Element: Physical Proximity | | INTEGRATED Key Element: Practice Change | |
|---|--|--|---|---|--|
| LEVEL 1 Minimal Collaboration | LEVEL 2 Basic Collaboration at a Distance | LEVEL 3 Basic Collaboration Onsite | LEVEL 4 Close Collaboration Onsite with Some System Integration | LEVEL 5 Close Collaboration Approaching an Integrated Practice | LEVEL 6 Full Collaboration in a Transformed/ Merged Integrated Practice |
| Advantages | | | | | |
| <ul style="list-style-type: none"> Each practice can make timely and autonomous decisions about care Readily understood as a practice model by patients and providers | <ul style="list-style-type: none"> Maintains each practice's basic operating structure, so change is not a disruptive factor Provides some coordination and information-sharing that is helpful to both patients and providers | <ul style="list-style-type: none"> Colocation allows for more direct interaction and communication among professionals to impact patient care Referrals more successful due to proximity Opportunity to develop closer professional relationships | <ul style="list-style-type: none"> Removal of some system barriers, like separate records, allows closer collaboration to occur Both behavioral health and medical providers can become more well-informed about what each can provide Patients are viewed as shared which facilitates more complete treatment plans | <ul style="list-style-type: none"> High level of collaboration leads to more responsive patient care, increasing engagement and adherence to treatment plans Provider flexibility increases as system issues and barriers are resolved Both provider and patient satisfaction may increase | <ul style="list-style-type: none"> Opportunity to truly treat whole person All or almost all system barriers resolved, allowing providers to practice as high functioning team All patient needs addressed as they occur Shared knowledge base of providers increases and allows each professional to respond more broadly and adequately to any issue |
| Weaknesses | | | | | |
| <ul style="list-style-type: none"> Services may overlap, be duplicated or even work against each other Important aspects of care may not be addressed or take a long time to be diagnosed | <ul style="list-style-type: none"> Sharing of information may not be systematic enough to effect overall patient care No guarantee that information will change plan or strategy of each provider Referrals may fail due to barriers, leading to patient and provider frustration | <ul style="list-style-type: none"> Proximity may not lead to greater collaboration, limiting value Effort is required to develop relationships Limited flexibility, if traditional roles are maintained | <ul style="list-style-type: none"> System issues may limit collaboration Potential for tension and conflicting agendas among providers as practice boundaries loosen | <ul style="list-style-type: none"> Practice changes may create lack of fit for some established providers Time is needed to collaborate at this high level and may affect practice productivity or cadence of care | <ul style="list-style-type: none"> Sustainability issues may stress the practice Few models at this level with enough experience to support value Outcome expectations not yet established |

Understand Barriers and Facilitators to Service Delivery Integration - examples

- Patient-level factors
 - Concerns about quality of care, stigma in how services are delivered, convenience
- Clinician-level factors
 - Confidence in co-management by non-specialists, workload, inconvenience, concerns about quality by specialists, stigma/discrimination, financial support
- Clinic-level factors
 - Leadership support, organizational space, shared medical-records, resources, no set expectations (quality health indicators)
- Healthcare system-level factors
 - Funding, Lack of guidelines, legal impediments

Context: Ukraine

- Volatile HIV epidemic driven primarily among PWID → concentrated in key populations with transition to sexual partners of PWID
- Cultural context
 - Post-Soviet system of Narcology (stigma toward PWID and OAT)¹
 - Opioid agonist maintenance therapies (**OAT**) introduced in 2004 (buprenorphine) and 2008 (methadone)²
 - OAT scale-up hindered by multi-level factors³
 - Early research findings from other studies resulted in regulatory changes:
 - Allowing OAT to be provided outside specialty settings (2016) based other research studies (R01 DA033679)
 - Pilot study demonstrating feasibility of integrating OAT into PCCs⁴
 - Mathematical modeling demonstrating scale-up not feasible unless OAT in PCCs⁵
 - Creation of a combined Center for Treatment of Psychiatric and Substance Use Disorders (2019)
 - Creation of a National Health System with changes in funding (2020)

Integrating Opioid Agonist Therapies, HIV and TB Services into Primary Care Settings

- Patient-level considerations
 - Variability in interest to move to another clinic
- Clinician concerns
 - *Specialists* – concern that patients would receive suboptimal care (later concerns about funding arose with NHS)
 - *Primary care providers* – lack of confidence in treating addiction, HIV and/or TB
- Distance-based learning using a Project ECHO to support PCCs to provide OAT, HIV and TB prevention and treatment services
- Addiction treatment specialists was linked to each clinic to accept consultation or referral back to specialty center

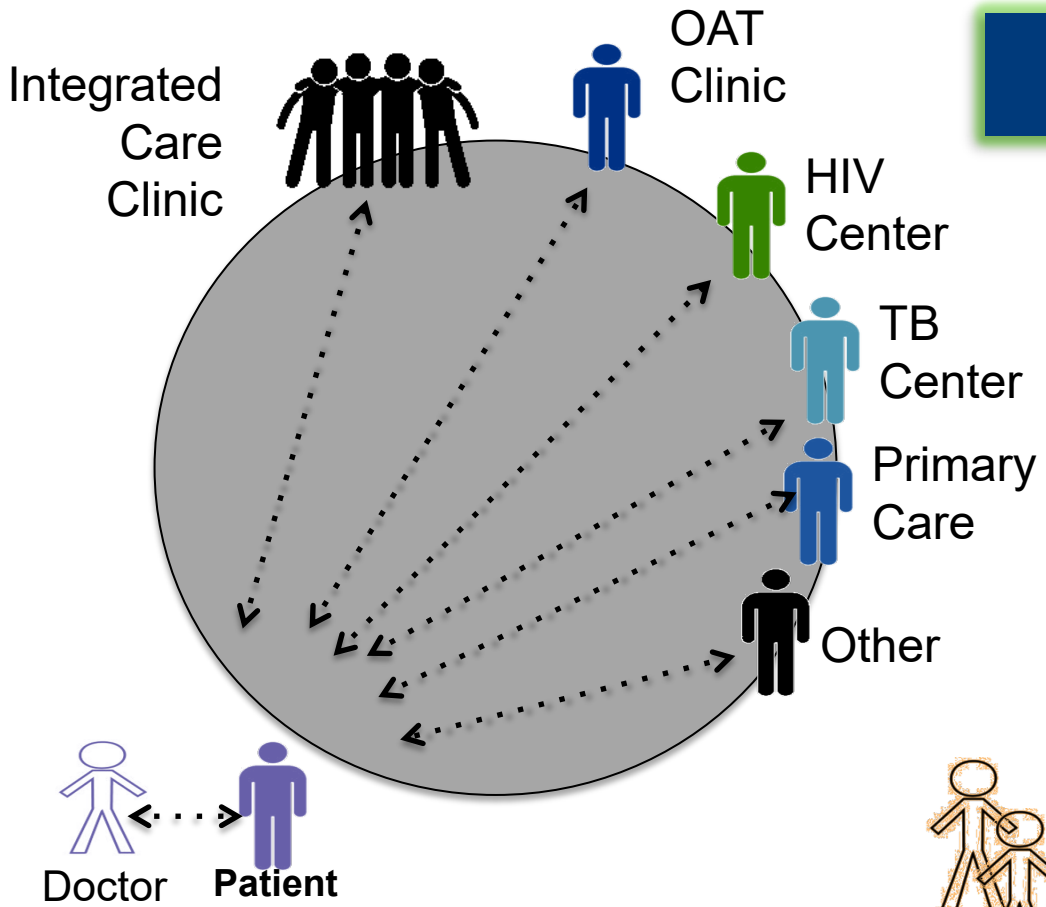
Transition from Specialty to Primary Care Settings Resulted in:

- Patient-level outcomes (high levels of retention):
 - Reduced stigma
 - Increased health-related quality of life
 - Increased trust in physician
 - Provider-level outcomes from chart review:
 - Screen and diagnose HIV/HCV
 - Facilitate ART initiation in HIV patients
 - See patients for routine medical care issues
 - Clinicians reported need for ongoing coaching and to address clinical issues related to OAT, HIV, TB. Also requested assistance with screening/treating depression. Paid too little to do “extra” work.
- Affirmed in qualitative interviews (mixed methods)

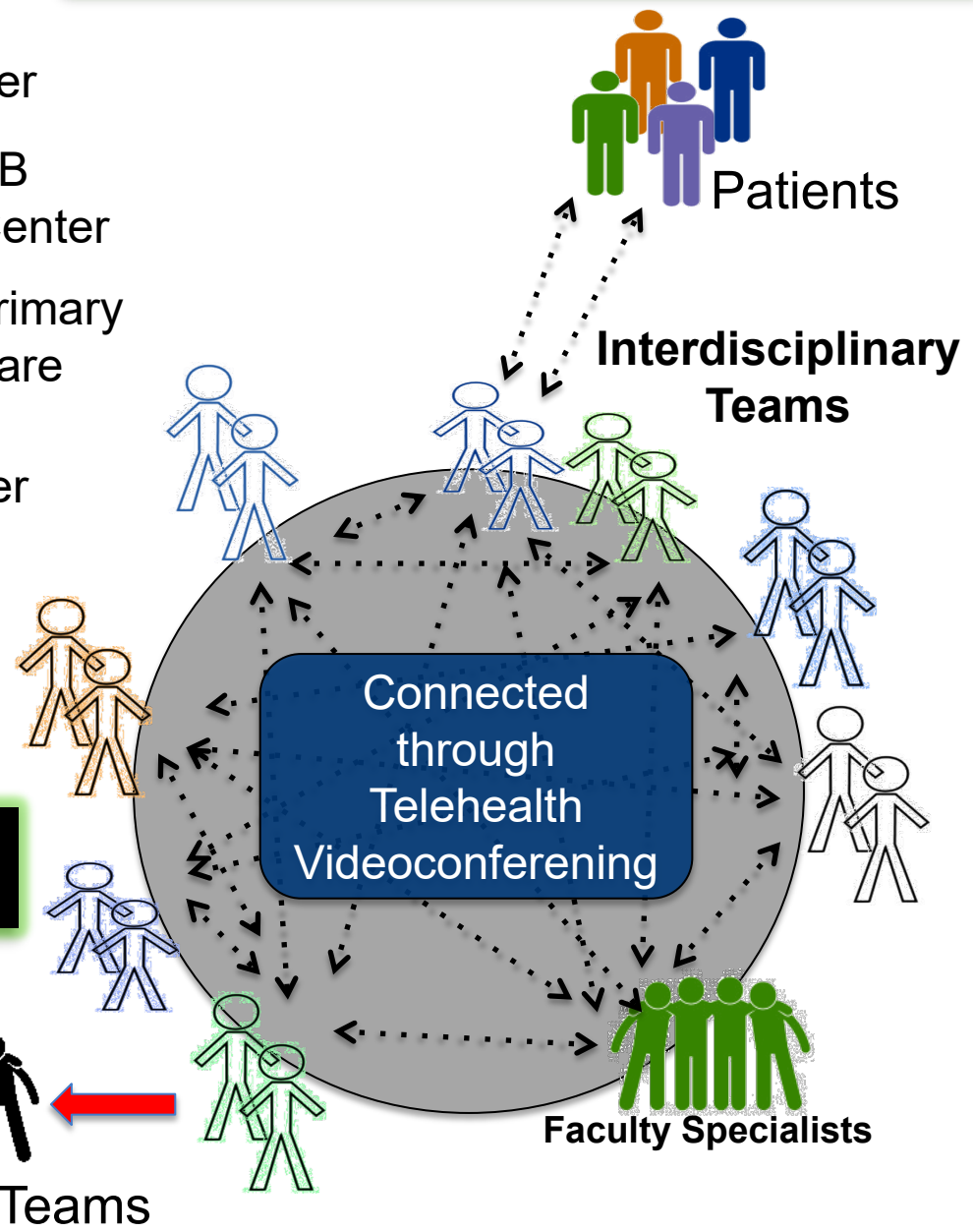
Selecting Implementation and Evaluation Strategies

- **Problem:** Lack of confidence in PCPs in providing specialty care services
 - **Solution:** Project ECHO – weekly sessions alternating with addiction, HIV and OAT (OAT provided onsite but only screening and referral could be done for HIV and TB)
- **Problem:** Lack of income for PCPs
 - **Solution:** Pay-for-performance (P4P) for clinicians
- **Problem:** What types of efficacy measures worth considering
 - **Solution:** Delphi method to identify those measures important for primary care, infectious diseases (HIV, TB) and addiction treatment outcomes → creation of quality health indicators (QHIs: TOTAL – primary care + specialty services)

KNOWLEDGE NETWORK MODEL Interactive Learning Environment



NON-COLLABORATIVE REFERRAL MODEL
Patient Must Seek Independent Care

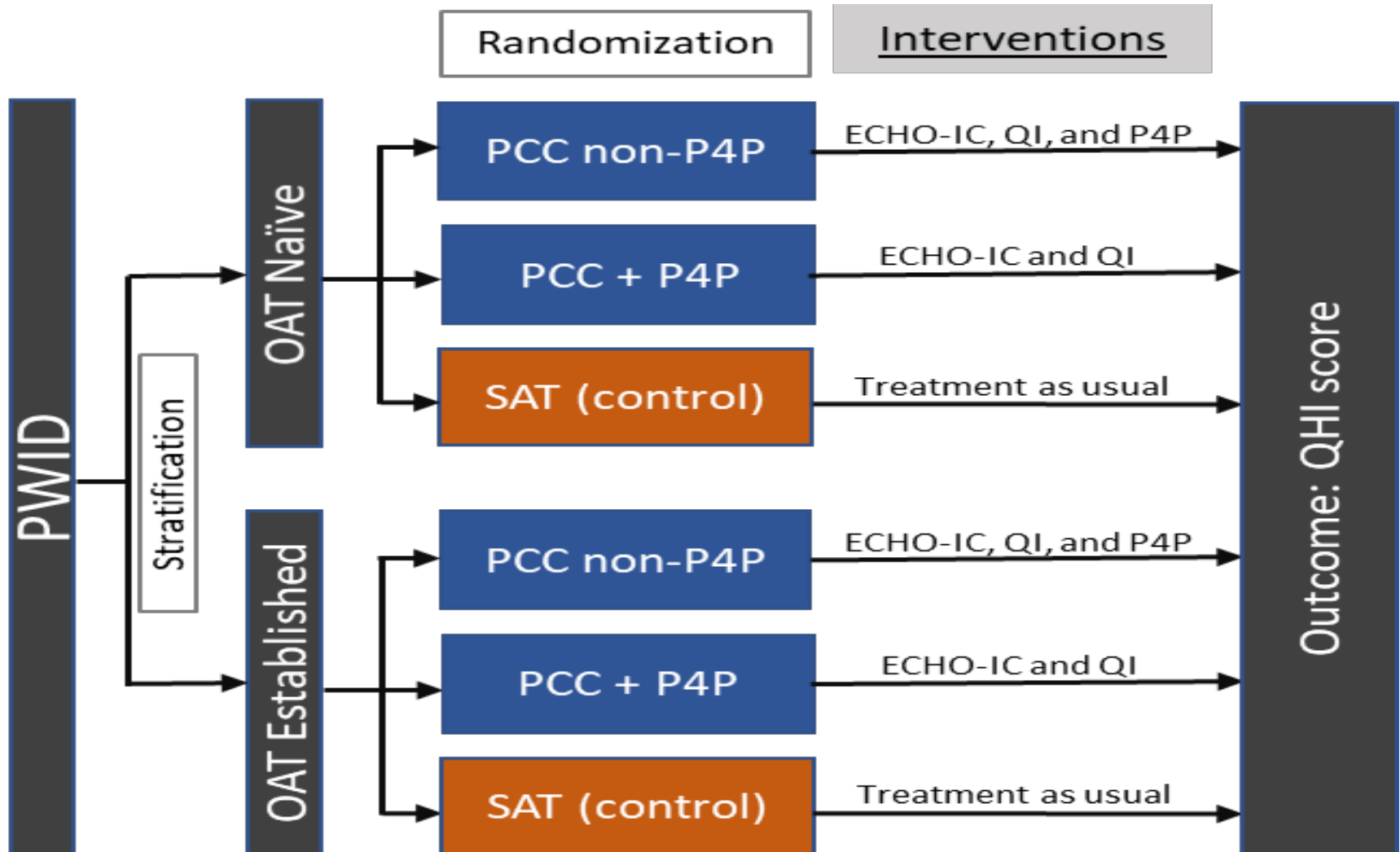


Selection of Quality Health Indicators

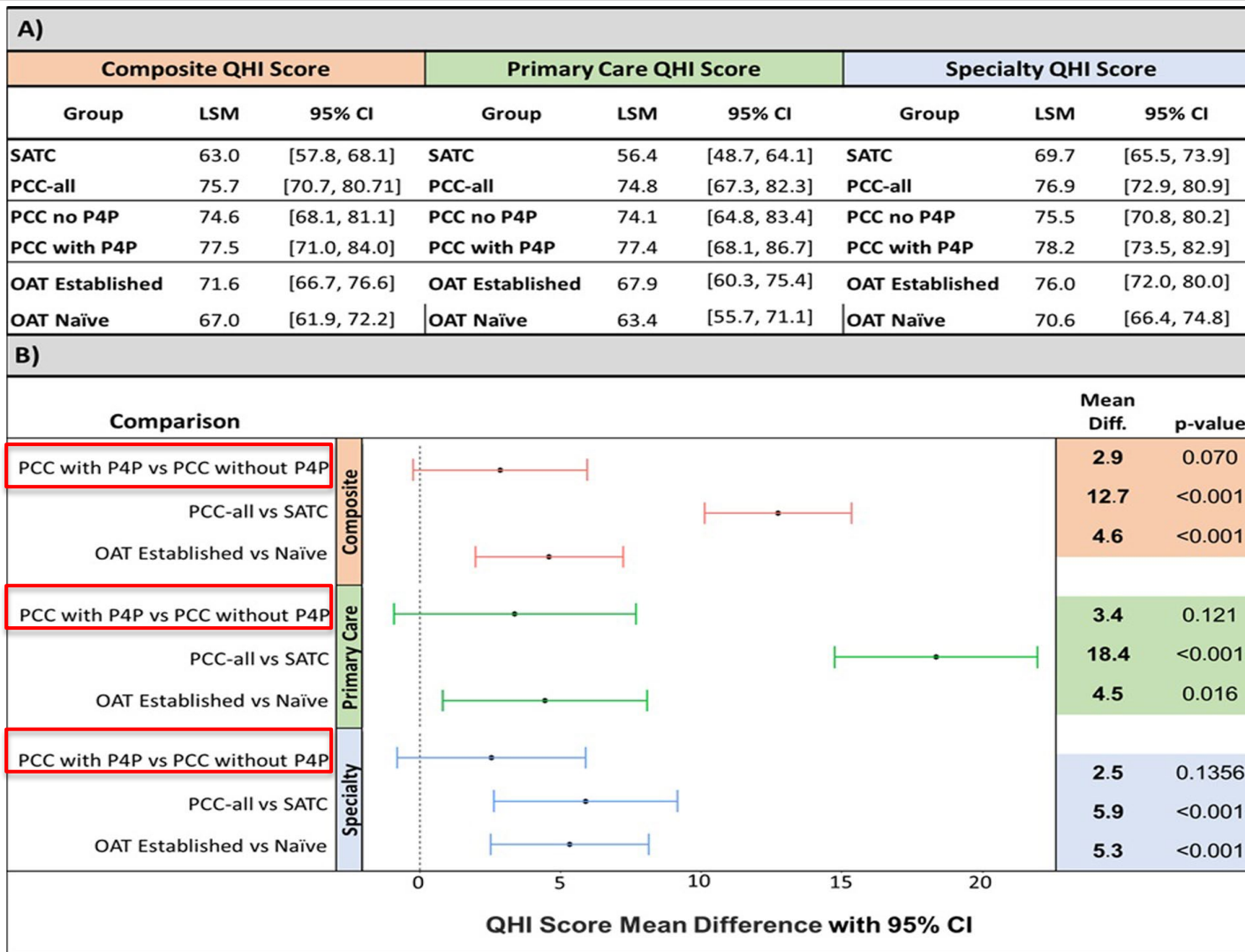
| | | QHI | Indication | Notes |
|-----------------------|-----|-------------------------------------|-----------------------------------|-----------------------------|
| Primary Care Services | | Medical Examination | Everyone | Physical exam |
| | | Blood analysis | Everyone | General blood analysis |
| | | Urine analysis | Everyone | - |
| | | Cardiogram | Age \geq 40 | - |
| | | Mammogram | Age \geq 40 and female | - |
| | | Cervical cancer screening | Female | Pap smear |
| | | Prostate cancer screening | Age \geq 50 and male | Digital or laboratory |
| | | Hepatitis B screening | Everyone | - |
| | | Hepatitis C screening | Hepatitis C negative individuals | - |
| Specialty Services | HIV | HIV screening | HIV negative individuals | - |
| | | CD4 or viral load | HIV positive individuals | - |
| | | ART treatment | HIV positive individuals | - |
| | TB | TB screening | Everyone | Symptomatic or fluorography |
| | | TB treatment | TB screening positive individuals | - |
| | OAT | Received take-home OAT prescription | Everyone | Not observed OAT |
| | | Adequate OAT dose | Everyone | Methadone $>$ 80 mg |
| | | On OAT at 12 months | Everyone | At any location |

Pashchenko O, PLoS Global Health, 2021

IMPACT Trial: Study Design (24 months)



Quality Health Indicator Outcomes at 12 months



Change in Provider Attitude Over 24 Months

| | Baseline Mean (SD) | Difference in means between baseline and 24 months | 95% CI | p |
|--|-----------------------|--|------------|------------------|
| Stigma towards PWID | | | | |
| Discrimination | 8.0 (1.4) | 0.1 | -0.3 – 0.4 | 0.707 |
| Prejudice | 6.8 (1.3) | -0.2 | -0.6 – 0.2 | 0.258 |
| Shame | 6.8 (1.7) | 0.3 | -0.2 – 0.7 | 0.336 |
| Fear | 6.4 (1.8) | 0.6 | 0.2 – 1.1 | 0.009 |
| Stereotypes | 4.6 (1.4) | 0.4 | 0.1 – 0.8 | 0.025 |
| Abstinence vs Maintenance Orientation Scale | 5.9 (1.2) | 0.7 | 0.4 – 1.0 | <0.001 |
| Evidence-Based Practice Attitudes Scale 36 | 6.7 (0.8) | 0.0 | -0.3 – 0.2 | 0.861 |

Changes in Stereotypes toward PWID Translate to Improved Treatment Outcomes (QHI)

| | 12 months | | | 24 months | | |
|--|--------------------------------------|--|--|-----------------------------------|--|--|
| | Primary QHI mean diff (95% CI) | Specialty QHI mean diff (95% CI) | Composite QHI mean diff (95% CI) | Primary QHI mean diff (95% CI) | Specialty QHI mean diff (95% CI) | Composite QHI mean diff (95% CI) |
| Stigma towards PWID | | | | | | |
| Discrimination | 1.1 (-6.3 – 8.4) | 0.2 (-4.4 – 4.7) | -0.2 (-5.5 – 5.1) | -3.6 (-22.1 – 15.0) | -5.6 (-12.3 – 1.1) | -4.9 (-17.3 – 7.6) |
| Prejudice | 3.6 (-3.2 – 10.5) | 0.6 (-3.6 – 4.9) | 1.8 (-3.1 – 6.7) | 3.9 (-5.2 – 13.0) | -1.2 (-4.9 – 2.5) | 1.5 (-4.8 – 7.8) |
| Shame | -2.5 (-7.4 – 2.4) | -1.8 (-1.2 – 4.8) | -2.3 (-5.8 – 1.2) | 1.0 (-11.6 – 13.5) | -1.4 (-6.4 – 3.6) | -0.2 (-8.8 – 8.4) |
| Fear | -0.8 (-5.1 – 3.6) | 0.6 (-3.3 – 2.1) | -1.1 (-4.3 – 2.0) | 0.8 (-9.0 – 10.6) | -2.4 (-6.2 – 1.3) | -0.9 (-7.5 – 5.8) |
| Stereotypes | 4.3 (-1.6 – 10.1) | 1.1 (-2.6 – 4.7) | 2.5 (-1.9 – 6.8) | 12.4 (1.2 – 23.6)* | 2.5 (-2.6 – 7.5) | 7.8 (0.0 – 15.6)* |
| Abstinence vs Maintenance Orientation Scale | -4.9 (-11.0 – 1.3) | 1.4 (-2.4 – 5.1) | 2.6 (-7.2 – 2.0) | -5.8 (-18.6 – 7.0) | -3.7 (-8.6 – 1.2) | -5.0 (-13.6 – 3.6) |
| Evidence-based Practice Scale | 6.9 (-2.3 – 16.2) | 2.0 (-3.7 – 7.7) | 4.2 (-2.7 – 11.1) | 11.6 (-5.1 – 28.2) | -3.4 (-10.1 – 3.3) | 4.5 (-7.3 – 16.3) |

| Measure | Direct Providers | | | | | Indirect Providers | | | | |
|--|------------------|----------------|------------------|----------------|------------------|--------------------|----------------|------------------|----------------|------------------|
| | Baseline | Baseline - 12m | | 12-24 months | | Baseline | Baseline - 12m | | 12-24 months | |
| | Mean (SD) | change in mean | p | change in mean | p | Mean (SD) | change in mean | p | change in mean | p |
| Feelings thermometer (0-100) | | | | | | | | | | |
| Patients who inject drugs | 50.1 (19.6) | -1.57 | 0.633 | 4.37 | 0.186 | 32.2 (19.8) | 5.10 | 0.021 | 9.11 | <0.001 |
| Patients with HIV | 66.2 (16.1) | 2.53 | 0.339 | 4.56 | 0.085 | 57.3 (14.3) | 1.92 | 0.227 | 2.88 | 0.069 |
| Men who have sex with men | 43.5 (21.3) | 0.87 | 0.753 | 2.76 | 0.321 | 32.6 (20.7) | 3.34 | 0.081 | 4.28 | 0.026 |
| Women who engage in sex work | 45.4 (20.2) | 2.54 | 0.315 | 2.40 | 0.342 | 32.5 (19.9) | 2.14 | 0.240 | 6.82 | <0.001 |
| Recently released prisoners | 51.9 (13.5) | -0.91 | 0.683 | 0.25 | 0.909 | 45.0 (13.5) | 1.75 | 0.259 | 4.74 | 0.002 |
| Counselor Assessment Screen (1-5) | | | | | | | | | | |
| Being tough-minded about addiction | 2.75 (0.365) | -0.01 | 0.811 | -0.14 | 0.002 | 3.07 (0.389) | -0.06 | 0.094 | -0.10 | 0.004 |
| Abstinence/maintenance orientation | 2.87 (0.359) | -0.22 | <0.001 | -0.29 | <0.001 | 3.24 (0.336) | -0.02 | 0.489 | -0.03 | 0.405 |
| Negative opinions about patients | 2.58 (0.332) | -0.09 | 0.117 | -0.16 | 0.006 | 2.80 (0.388) | -0.07 | 0.100 | -0.12 | 0.002 |
| Incorrect medical information | 2.59 (0.433) | -0.15 | 0.847 | -0.21 | 0.004 | 2.93 (0.523) | -0.10 | 0.086 | -0.12 | 0.044 |
| Stigma Scale (1-5) | | | | | | | | | | |
| Intention to discriminate | 1.86 (0.430) | -0.02 | 0.795 | -0.02 | 0.761 | 2.31 (0.561) | -0.18 | 0.001 | -0.19 | 0.001 |
| Prejudice | 2.38 (0.440) | 0.07 | 0.307 | 0.12 | 0.068 | 2.80 (0.509) | -0.11 | 0.016 | -0.19 | <0.001 |
| Internal shame | 2.38 (0.540) | -0.02 | 0.813 | -0.05 | 0.478 | 2.82 (0.620) | -0.20 | 0.002 | -0.17 | 0.007 |
| Fear | 2.53 (0.575) | -0.08 | 0.354 | -0.23 | 0.007 | 2.92 (0.686) | -0.20 | 0.002 | -0.22 | 0.001 |
| Stereotypes | 3.41 (0.487) | -0.16 | 0.025 | -0.22 | 0.002 | 3.53 (0.549) | -0.08 | 0.182 | -0.02 | 0.712 |
| Resistance to change (1-5) | | | | | | | | | | |
| | 2.41 (0.354) | -0.16 | 0.002 | -0.06 | 0.241 | 2.61 (0.391) | -0.21 | <0.001 | -0.25 | <0.001 |

Integrating Mental Health Services into Addiction Treatment Clinics

- **Patient concerns:** preferred integration because of stigma and too far to travel, SSRIs too expensive
- **Clinician concerns:** Narcology is a subspecialty of psychiatry but they had little experience managing mental illness – sought confidence (ECHO), paid too little to take on more (tools), clinic did not have budget to buy SSRIs (purchased SSRIs for all sites)

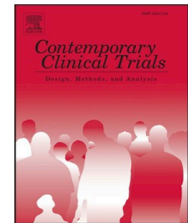


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Contemporary Clinical Trials

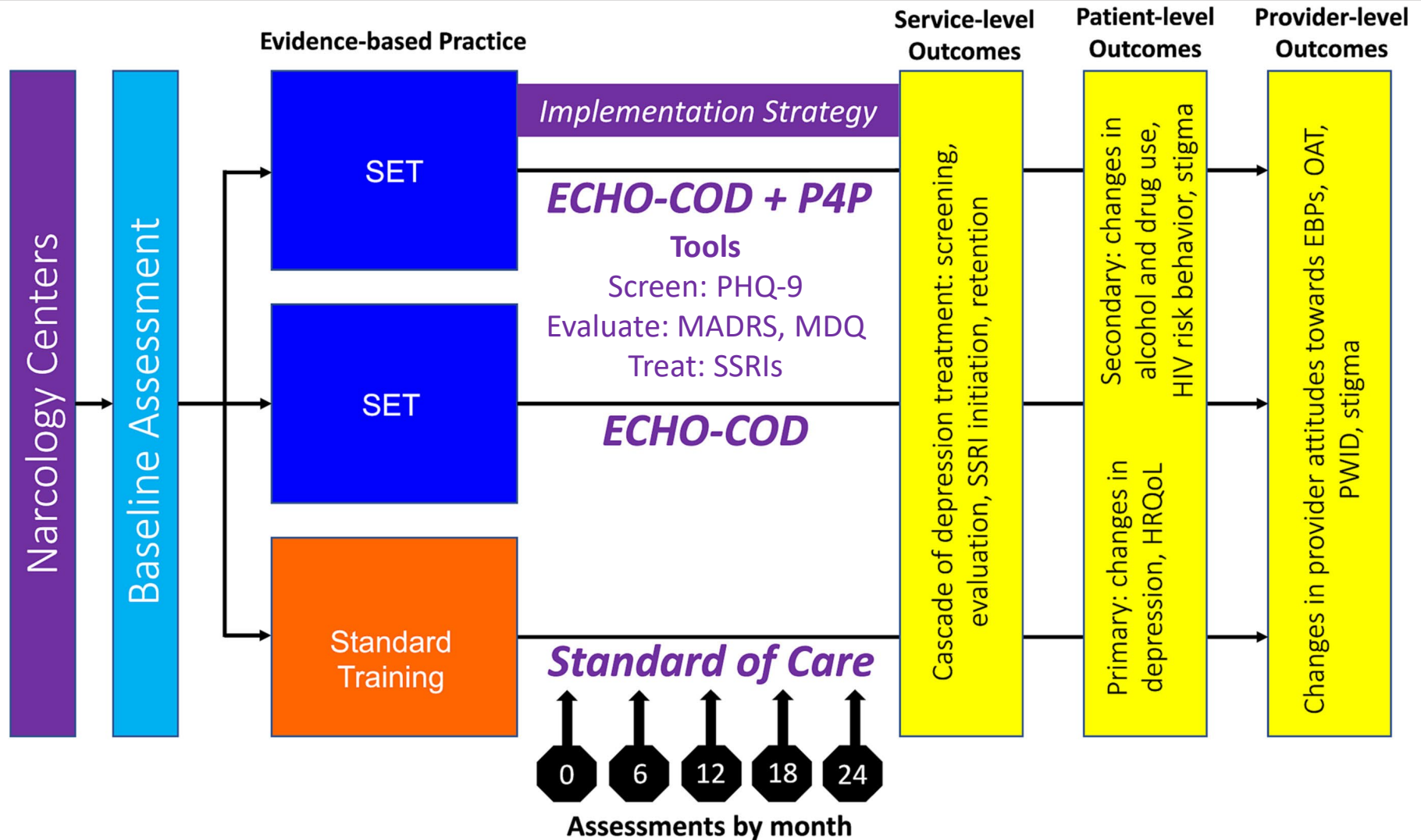
journal homepage: www.elsevier.com/locate/conclintrial



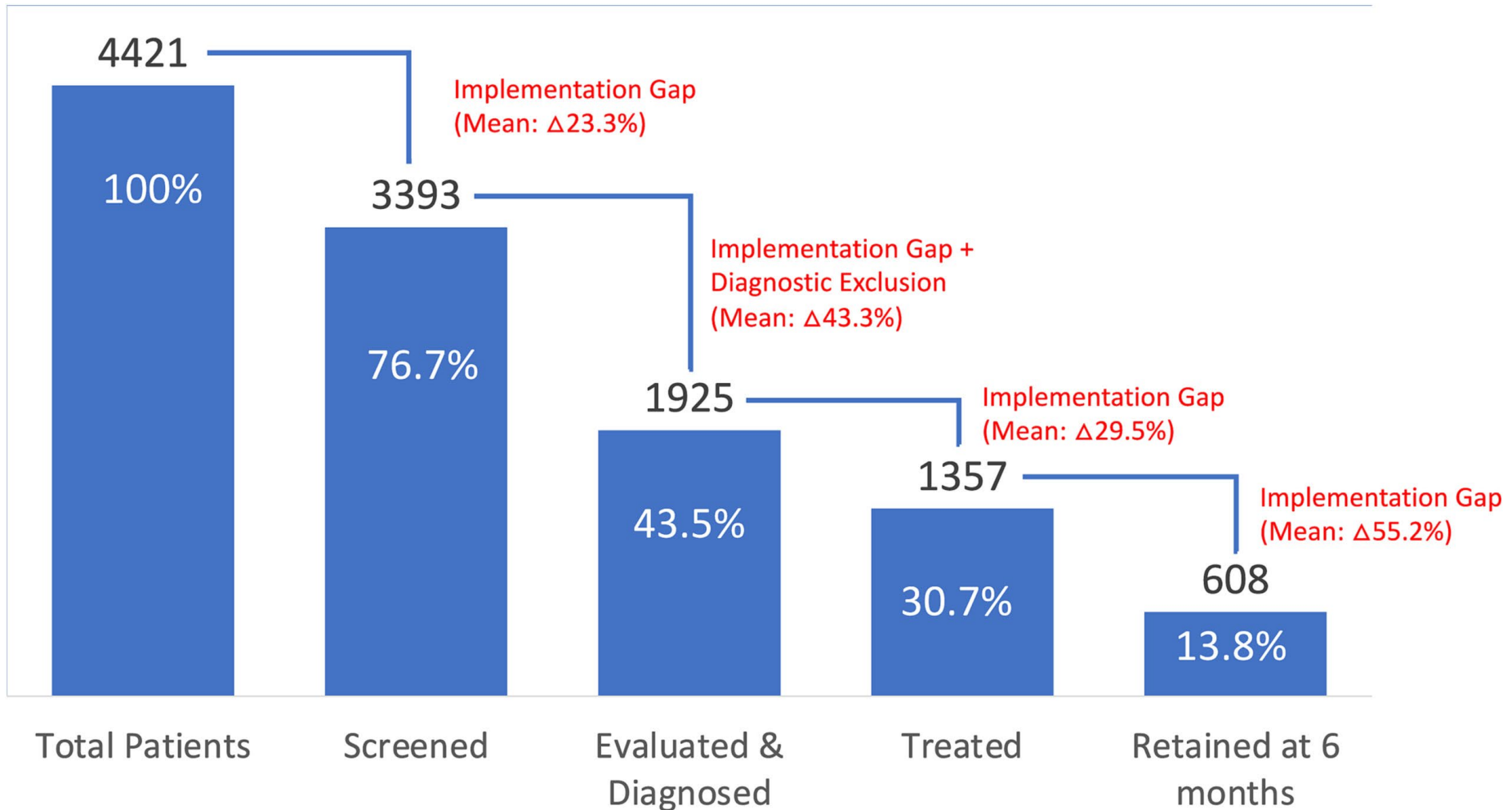
Design, implementation and preliminary results of a type-2 hybrid cluster-randomized trial of integrating screening and treatment for major depressive disorder into specialty clinics providing opioid agonist therapies in Ukraine

Eteri Machavariani^{a,*}, Daniel J. Bromberg^{b,c}, Kostyantyn Dumchev^d, Sergii Dvoriak^d, Oleksandr Zeziulin^d, Olga Morozova^e, Denise Esserman^f, Iryna Pykalo^d, Nataliia Saichuk^d, Roman Ivasiy^a, Marwan S. Haddad^g, Frederick L. Altice^{a,b,h}

MEDIUM: Integrating Mental Health Services into Addiction Treatment Programs (12 sites)



Aggregate Outcomes Across Sites



Other Ongoing Integration Studies

- West Virginia (BIRCH)
 - Goal: to integrate MOUD, HIV and HCV services into PCCs
 - Using the NIATx strategy to integrate screening, evaluation and treatment (SET) strategies for OUD, HIV and HCV into primary care settings
 - NIATx involves 5 key principles, a bundle of implementation tools and collaborative learning (coaching) to guide process improvement
 - Type 2 Hybrid, Stepped wedge trial
- Peru (Re-CAST)
 - Goal: To decentralize HIV services in Lima, Peru
 - Uses Delphi method to identify best practices to move patients to PCCs from specialty HIV care clinics
 - Creates Hub and Spoke Service Delivery and uses NIATx to guide decentralization
 - Uses Project ECHO to train primary care clinics
 - Type 2 Hybrid, Stepped wedge trial

Summary

- Integrating services is variable (coordination, co-location, integration) and is often a process.
- There is excellent rationale for service delivery integration, especially where syndemic conditions are prevalent and promote additional harm.
- There are many innovative strategies and tools that can be used but finding the right ones that address patient, provider, clinic and systems is crucial for sustainability.