

An 'Interesting Problem': From Landscape Analysis, to Implementation Strategy

Closing the opioid agonist maintenance treatment (OAMT) implementation gap in Ukraine

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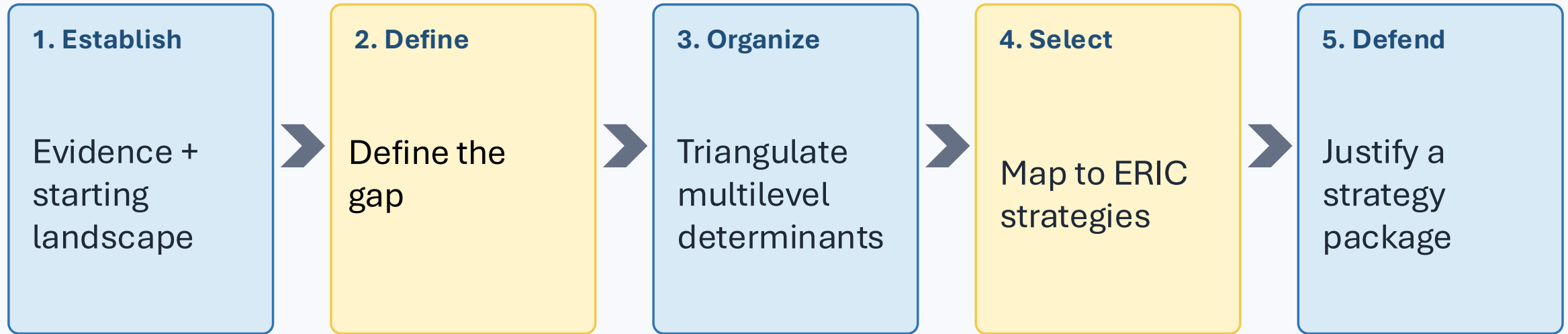
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The learning arc –Expanding Medication Assisted Therapy (ExMAT) in Ukraine will serve as an implementation example over three days of skill building



**Learning Product: A one-sentence implementation-gap statement
+ a determinant → strategy → mechanism map**

Before we review the data: what problem was ExMAT trying to solve?

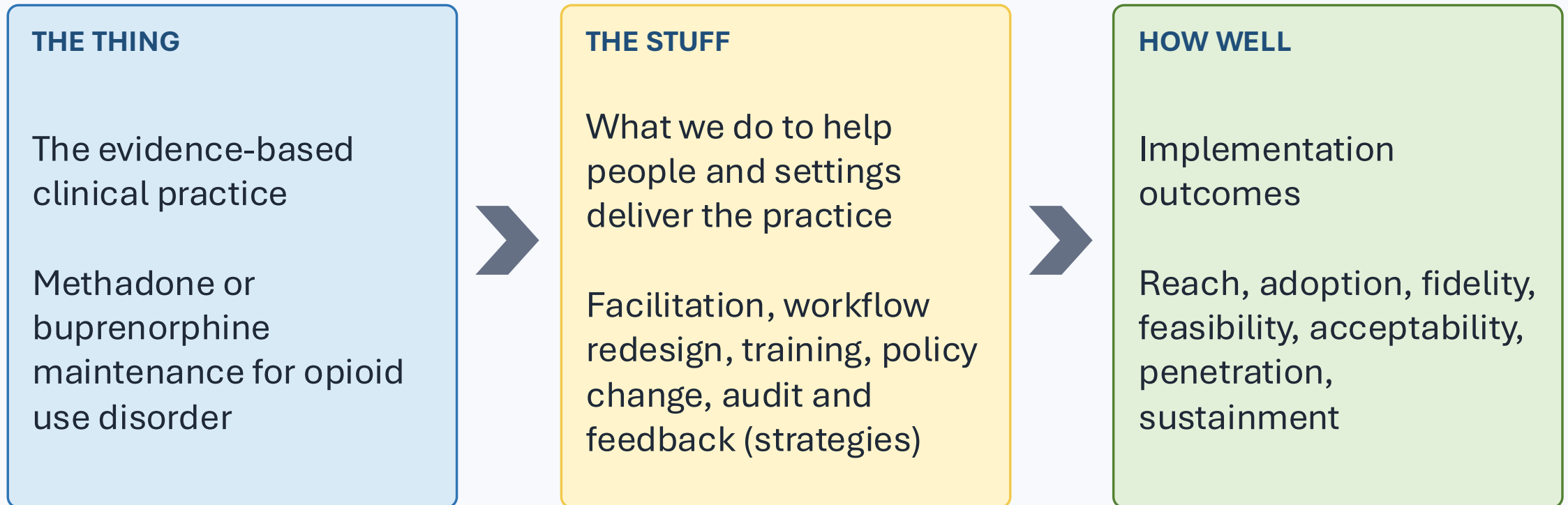
OAMT is effective in treating opioid use disorder AND reducing the incidence of and mortality from HIV. Ukraine introduced it in 2004. Yet coverage after 10 years remained extremely low.

Is this primarily an efficacy problem, a patient problem, a clinic problem, or a system problem?

PAIR DISCUSSION • 5 minutes

Write your thoughts in a sentence. You can revise it after the evidence is revealed.

Implementation science keeps three domains separate



Concept adapted from Curran GM. Implementation Science Pragmatic Trials Collaboratory teaching materials.

The clinical evidence regarding OAMT was not the uncertainty

The “thing” was already strongly supported

Retention in ART

~72% vs 9%

Injection rate

Large
reduction

HIV acquisition

~54–59% lower

Mortality

>3-fold lower

Social function

Improves in
multiple
domains

**The central uncertainty was not whether OAMT worked.
The challenge was why a proven intervention reached so few people.**

Ukraine at the start: a high-burden, low-access system – what is the landscape?

EPIDEMIC CONTEXT

- HIV concentrated among PWID – incidence of HIV and death continuing to rise
- Large population with opioid dependence
- OAMT introduced primarily as HIV prevention
- Continuing overdose and infectious-disease burden

SYREX – National Data Base

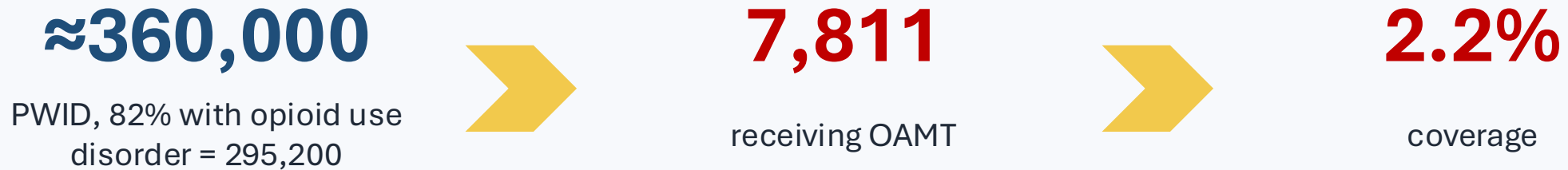
DELIVERY CONTEXT

- Vertically organized addiction system
- Diagnosis of OUD controlled by addiction specialists
- Daily supervised dosing
- Limited geographic access
- OAMT rarely integrated into general care

POLICY CONTEXT

- Mandatory national registration
- Failed-detoxification requirements
- Restricted take-home dosing
- Procurement and prescribing constraints
- Criminalization and police interference

By 2014, the implementation gap remained very high, despite availability of opioid agonist therapy beginning in 2004



Implementation gap: a highly effective practice existed, but the delivery system reached only a small fraction of the population who could benefit.

GAP = 7811/295200 or 2.2 %. Evidenced based benchmark commonly used for meaningful population impact: ≥20% coverage

Exercise: Define the gap precisely

A good gap statement names the practice, population, setting, and measurable shortfall

**Among _____ in _____, only _____ receive
_____, despite evidence that _____. The gap is
concentrated in _____ and results in _____.**

SMALL GROUPS (6-8 persons) • 5 minutes

After defining the gap – understand the determinants

1. To successfully close the gap, we need to better understand the landscape – who are the potential stakeholders?
2. What methods can we use to elicit **determinants**?
(Barriers and facilitators regarding the evidenced based practice - OAMT)

Quick Thought Exercise: As you think about the challenges of scaling up OAMT, make a list of **potential stakeholders**. Pair the list with **methods/ideas regarding how to understand their perspectives** of the gap.

Consider the domains of the Socio-Ecological Model for change.

Policy / Outer Setting

Organization / Inner Setting

Provider / Interpersonal

Patient / Individual

Understanding the ExMAT gap required triangulation (multi-level stakeholders)

Each method answered a different implementation question

1,613 PWID survey

How common and severe were barriers?

Who was willing to enter treatment?

Which patient characteristics and beliefs mattered?

199 PWID • 25 focus groups

How did people experience treatment?

Why did they resist entry or leave?

What did “normal life” and autonomy mean?

18 clinicians & administrators • NGT

Which system barriers could regional leaders change?

Which solutions were locally feasible?

What should be prioritized first?

Evidence stream 1: Survey of 1,613 opioid-dependent PWID

Five cities; current, former, and never OAMT participants

DESIGN

Cross-sectional survey

Kyiv • Odesa • Mykolaiv •
Dnipro • Lviv

Stratified recruitment by OAMT
experience

MEASURES

24 potential barriers

Treatment willingness

Prior experiences, social
context, overdose,
incarceration, HIV and
demographics

ANALYTIC VALUE

Quantified cumulative barrier
burden

Compared severity across
domains

Identified who was least likely
to enter OAMT



HHS Public Access

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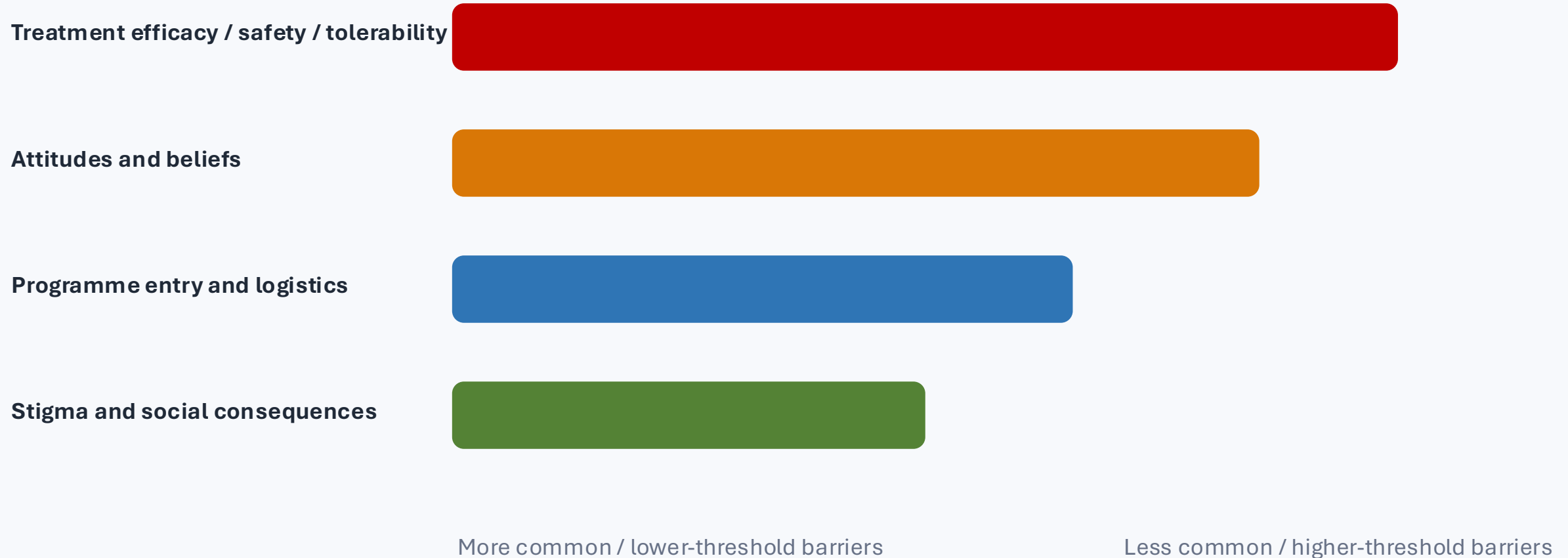
Drug Alcohol Depend. 2016 August 1; 165: 213–220. doi:10.1016/j.drugalcdep.2016.06.011.

Determinants of Willingness to Enroll in Opioid Agonist Treatment among Opioid Dependent People Who Inject Drugs in Ukraine

Iuliia Makarenko¹, Alyona Mazhnaya¹, Maxim Polonsky², Ruthanne Marcus², Martha J. Bojko², Sergii Filippovich¹, Sandra Springer², Sergii Dvoriak³, and Frederick L. Altice^{2,4}

Results—**Overall, 421 (36%) PWID were willing to initiate OAT.** Associated with the willingness to initiate OAT common for both groups included: higher injection frequency; **never on OAT:** social and family support **previously on OAT:** positive attitude towards OAT. Among participants previously on OAT, significant correlates also included: HIV-negative status and depression. Among participants **never on OAT**, however, living in Kyiv or Lviv, previous imprisonment, registration at a Narcology service and recent overdose were significantly correlated with willingness to initiate OAT.

What the survey showed: barriers were cumulative, not isolated (IRT)



Teaching point: removing one logistical obstacle will not overcome accumulated mistrust, treatment beliefs, stigma, and prior negative experience.

Zelenev A et al. Drug Alcohol Depend. 2018;190:82–88. Rasch item-response analysis among 811 participants never previously receiving OAMT.



Contents lists available at ScienceDirect

Drug and Alcohol Dependence

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



Full length article

Assessment of barrier severity and willingness to enter opioid agonist treatment among people who inject drugs in Ukraine

Alexei Zelenev^{a,*}, Portia Shea^a, Alyona Mazhnaya^{b,c}, Julia Rozanova^a, Lynn Madden^{a,d}, Ruthanne Marcus^a, Frederick L. Altice^{a,e}



Results: The Rasch model **confirmed the cumulative nature of barriers with concerns over treatment efficacy, safety and tolerability being more prevalent than barriers related to logistical constraints, opportunity costs and social stigma.**

Participants were more likely to have a **higher resistance to OAT entry** if they experienced fewer overdoses, did not attain higher education, were not previously incarcerated and if **their peers** did not have a higher level of resistance to OAT.

Evidence stream 2: 199 PWID in 25 focus groups (high resource - a lot of work)

The qualitative work explained what the survey could only count

ENTRY

“Bureaucracy” made treatment difficult to start

IDENTITY

Methadone could symbolize illness, dependence, social control, or spoiled identity

AUTONOMY

Daily attendance competed with work, family, travel, and ordinary life

RELATIONSHIPS

Power asymmetry and paternalism shaped treatment experience

CRIMINALIZATION

Police harassment and criminal-justice exposure reinforced avoidance



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Author manuscript

Drugs (Abingdon Engl). Author manuscript; available in PMC 2016 April 14.

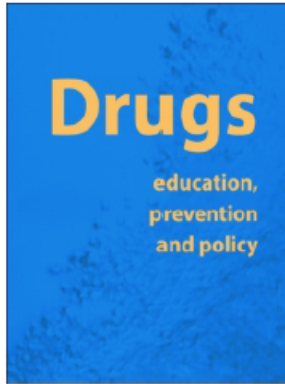
Published in final edited form as:

Drugs (Abingdon Engl). 2015 ; 22(3): 255–262. doi:10.3109/09687637.2015.1016397.

“Bureaucracy & Beliefs”: Assessing the Barriers to Accessing Opioid Substitution Therapy by People Who Inject Drugs in Ukraine

Martha J. Bojko¹, Alyona Mazhnaya², Iuliia Makarenko³, Ruthanne Marcus¹, Sergii Dvoriak³, Zahedul Islam², and Frederick L. Altice^{1,4}

Findings—A number of **programmatic and structural barriers** were mentioned by participants as barriers to entry to OST, including compulsory drug user registration, waiting lists, and limited number of treatment slots. Participants also voiced **strong negative attitudes and beliefs** about OST, especially methadone. Their **perceptions** about methadone’s **side effects** as well as the **stigma** of being a methadone client were expressed as obstacles to treatment.



Drugs: Education, Prevention and Policy



ISSN: 0968-7637 (Print) 1465-3370 (Online) Journal homepage: <http://www.tandfonline.com/loi/idep20>

In their own voices: Breaking the vicious cycle of addiction, treatment and criminal justice among people who inject drugs in Ukraine

Alyona Mazhnaya, Martha J. Bojko, Ruthanne Marcus, Sergii Filippovych, Zahedul Islam, Sergey Dvoriak & Frederick L. Altice

Findings: Most participants were **male (66%)**, **in their late 30s**, and **previously incarcerated (85%)**, mainly for drug-related activities. When imprisoned, PWIDs perceived themselves as being “addiction-free”. After prison-release, the confluence of **police surveillance and societal stress** contributed to participants’ drug use relapse, perpetuating a cycle of searching for money and drugs, followed by re-arrest and reincarceration. **Fear of police and arrest both facilitated OAT entry** and simultaneously contributed to avoiding OAT since **system-level requirements identified OAT clients as targets for police harassment**. OAT represents an evidence-based option to “break the cycle”; however, **law enforcement practices** still thwart OAT capacity to improve individual and public health.

Why People Who Inject Drugs Voluntarily Transition Off Methadone in Ukraine

Qualitative Health Research
1–14
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journals.sagepub.com/home/qhr


Julia Rozanova¹, Ruthanne Marcus¹, Faye S. Taxman², Martha J. Bojko³,
Lynn Madden^{1,4}, Scott O. Farnum⁴, Alyona Mazhnaya⁵, Sergii Dvoriak⁶,
and Frederick L. Altice^{1,4}

To understand why PWID may voluntarily discontinue MMT, we analyzed data from 25 focus groups conducted in five Ukrainian cities from February to April 2013 with 199 participants who were currently, previously, or never on MMT. Using constant comparison method, we uncovered **three themes** explaining why PWID transition off MMT: (a) purposeful **resistance to rigid social control** associated with how MMT is delivered and to power asymmetries in provider–patient relationships, (b) self-management of a PWID’s “**wounded identity**” that is common in socially stigmatized and physically sick persons—MMT serves as a reminder of their illness, and (c) the **quest for a “normal life” uninterrupted by daily MMT site visits**, harassment, and time inefficiencies, resources, and social capital. Focusing on holistic principles of recovery would improve addiction treatment and HIV prevention in Ukraine and globally.

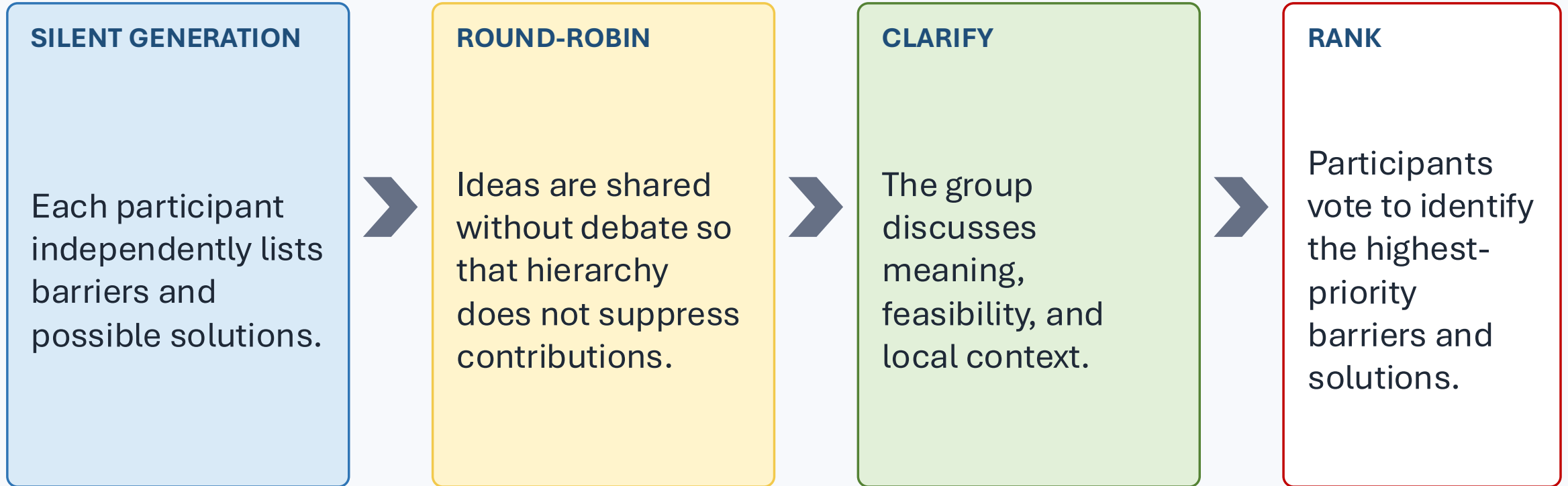
The patient-level story was really a delivery-system story



A common assumption/mistake is to label this “patient resistance.” The qualitative evidence suggested that resistance was often a rational response to a burdensome, stigmatizing, and controlling delivery system.

Evidence stream 3: provider nominal group technique (NGT)

18 clinicians and administrators converted experience into prioritized change targets



NGT is both a data-collection method and an implementation tool - add data slide.



Contents lists available at ScienceDirect

International Journal of Drug Policy

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



Research paper

Using nominal group technique among clinical providers to identify barriers and prioritize solutions to scaling up opioid agonist therapies in Ukraine



Lynn Madden^{a,b,*}, Martha J. Bojko^c, Scott Farnum^a, Alyona Mazhnaya^d,
Tatiana Fomenko^d, Ruthanne Marcus^c, Declan Barry^{a,b}, Irina Ivanchuk^e,
Viktor Kolomiets^d, Sergey Filippovych^d, Sergey Dvoryak^f, Frederick L. Altice^{a,c,g,h}

Results: The top three identified barriers included:

- (1) **Strict regulations and inflexible policies** dictating distribution and dispensing of OAT;
- (2) **No systematic approach to assessing OAT needs** on regional or local level; and
- (3) **Limited funding and financing mechanisms** combined with a lack of local/regional control over funding for OAT treatment services.

Triangulation: where evidence converged—and where it differed

Determinant	Survey	Focus groups	Provider NGT
Restrictive policy / registration	●	●	●
Daily attendance / take-home restrictions	●	●	●
Provider stigma / paternalism	●	●	●
Poor dosing and clinical practice	●	○	●
Police harassment / criminalization	●	●	○
Limited hours and geography	●	●	●
Leadership and collaboration	○	○	●
Patient beliefs and treatment fears	●	●	○

● strong signal ○ secondary or indirect signal

Synthesis of Makarenko 2016; Bojko 2015/2016; Mazhnaya 2016; Rozanova 2017; Madden 2017; Zelenev 2018.

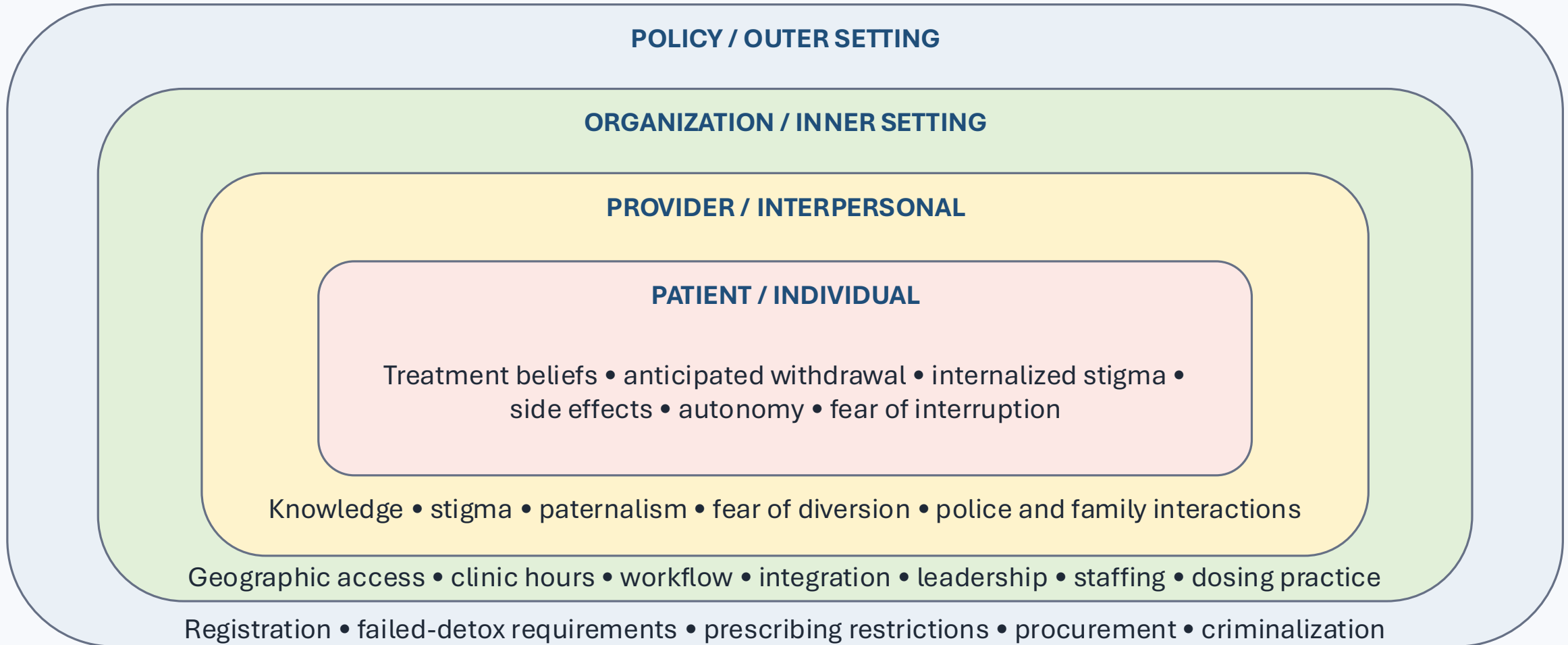
A barrier list is not yet an implementation diagnosis

OBSERVATION	DETERMINANT	WHY IT MATTERS	MODIFIABILITY
Patients do not want methadone	Beliefs about efficacy, safety, identity and control	Reduces demand and willingness to enroll	Moderate—requires credible information + delivery change
Daily queues and rigid hours	Workflow and service-design mismatch	Creates opportunity costs and visible stigma	High—take-home dosing, hours, decentralization
Clinicians resist new practice	Implementation climate, knowledge, leadership	Blocks adoption even when policy permits change	Moderate—facilitation, champions, education, audit-feedback
Registration and detox requirements	External policy and regulatory barriers	Prevents low-threshold entry	Lower locally—requires policy engagement

Prioritize determinants that are important, changeable, and linked to the implementation outcome.

Damschroder LJ et al. Implement Sci. 2009;4:50. Updated CFIR: Damschroder LJ et al. Implement Sci. 2022;17:75.

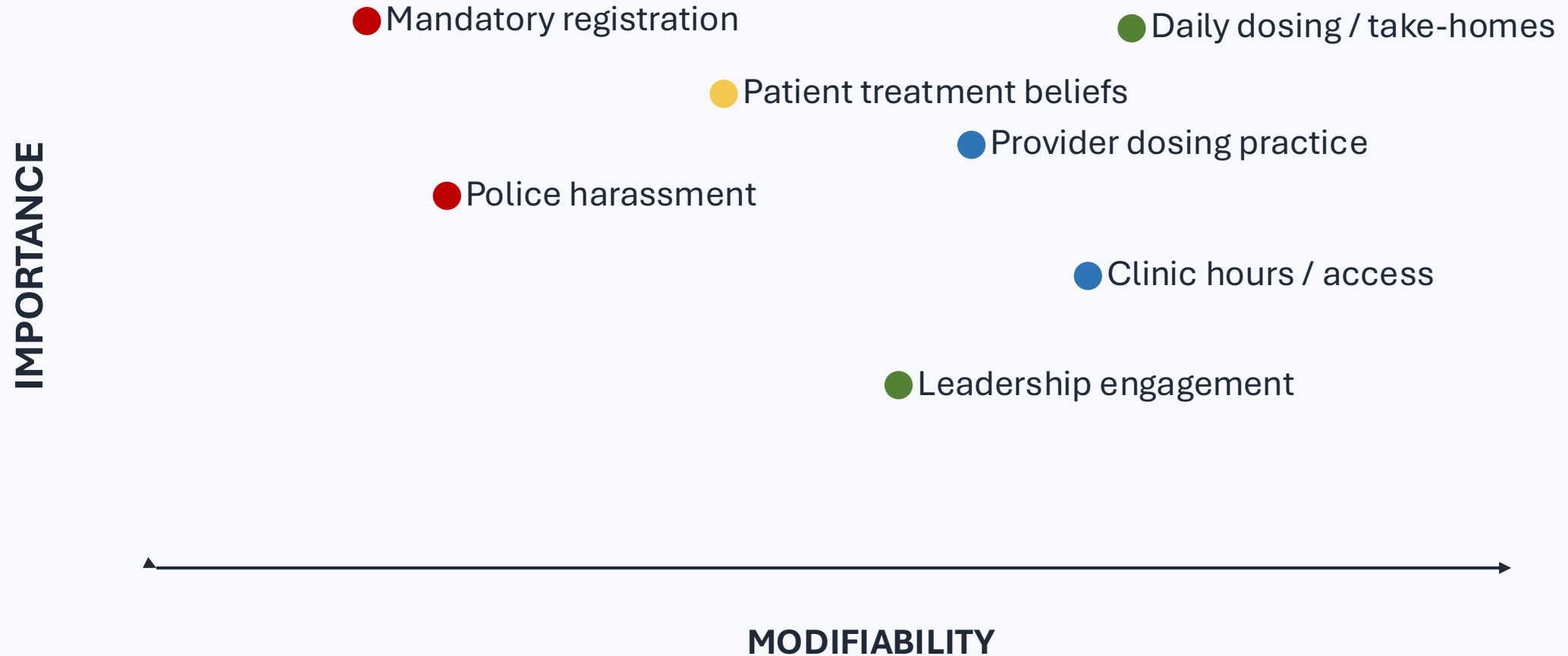
Map the data – The socioecological model (for change) makes the implementation context visible and guides implementation strategy selection



Conceptual synthesis from the Ukraine mixed-methods programme; organized using socioecological and CFIR constructs.

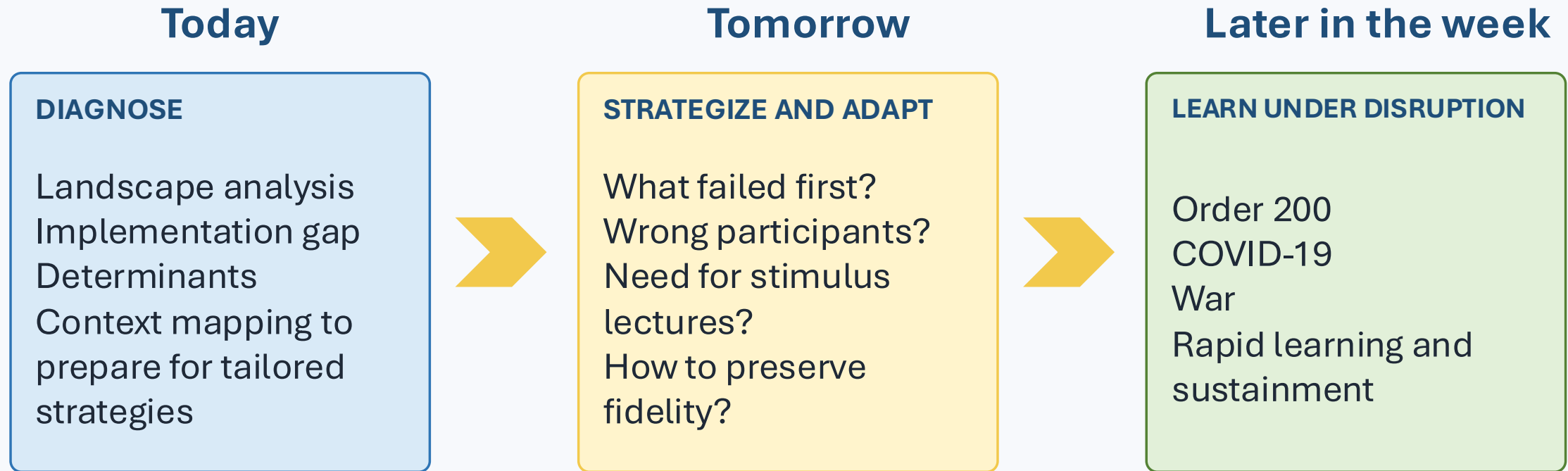
Which determinants should be addressed first?

GROUP VOTE: Choose the three determinants you would target first.



Illustrative prioritization based on the published Ukraine evidence; positions are pedagogic rather than formal quantitative rankings.

The story pauses here



The implementation strategy package must evolve while its causal logic remains explicit.

Day 2

Text box here

ERIC provides a vocabulary of HOW to address a determinant—not a shopping list

Engage consumers

Patient navigators • involve patients/families • prepare patients

Train & educate

Educational meetings • outreach visits • ongoing consultation

Support clinicians

Facilitation • champions • audit and feedback • learning collaborative

Change infrastructure

Revise roles • change workflows • integrate services • alter record systems

Use policy & finance

Change regulations • incentivize delivery • modify reimbursement / procurement

Strategy selection requires a causal explanation: how should this strategy change the determinant?

Map determinants to strategies through mechanisms

Determinant	ERIC strategy	Mechanism	Proximal outcome
Low clinician confidence in dosing	Conduct educational meetings + provide ongoing consultation	Knowledge, self-efficacy, normalization	Higher dose adequacy and fidelity
Weak regional leadership ownership	Identify and prepare champions + executive sponsor	Priority, accountability, legitimacy	Adoption and sustained participation
Rigid clinic workflow / daily attendance	Conduct local consensus discussions + change service sites + revise roles	Reduced burden and improved fit	Reach, feasibility, retention
Poor cross-region learning	Create a learning collaborative + facilitation	Social learning and collective problem solving	Faster uptake of promising practices
Restrictive regulations	Build a coalition + engage policymakers	Policy legitimacy and structural permission	Expanded delivery options

ERIC strategies: Powell BJ et al. Implement Sci. 2015;10:21. Mechanism logic consistent with Lewis CC et al. Implement Sci. 2018;13:10.

No single strategy could close this gap

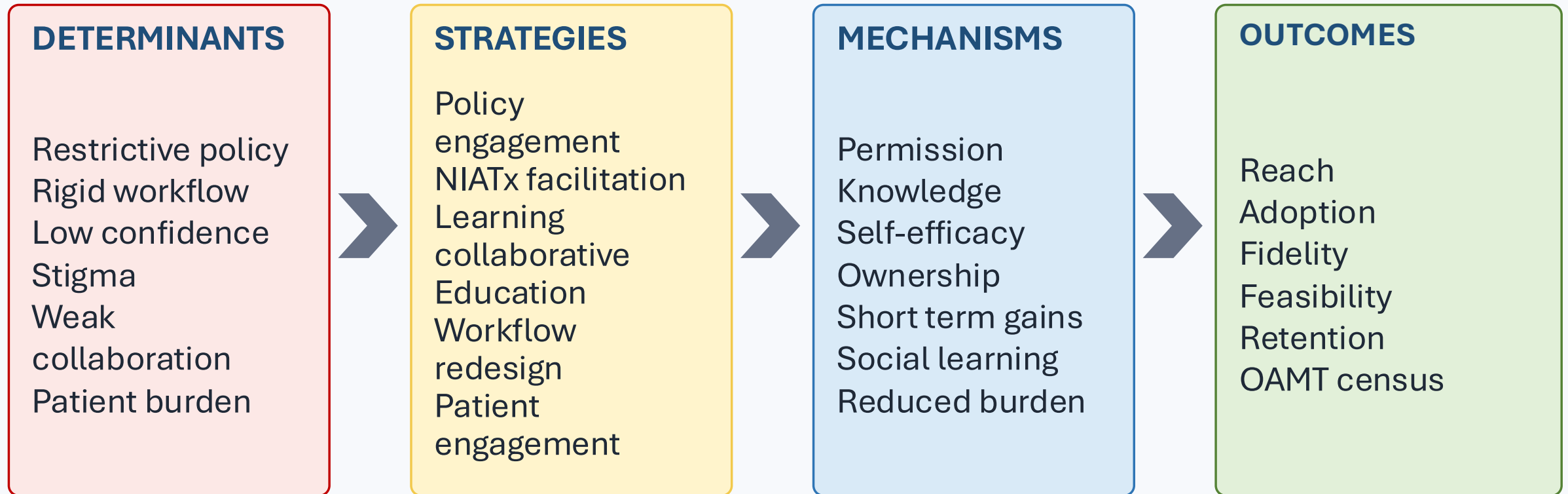


The package must be coherent: strategies should reinforce one another and target the highest-priority determinants.

Introduce NIATx here -- a bundle of evidenced based implementation that features rapid cycle change, including rapid, low resource and repeated gathering and sharing of information from stakeholders

Discuss adaptation of dosing and private pay models, order 200

A compact implementation research logic model



Mechanisms make the strategy package testable—not merely plausible.

Decision lab: build your strategy package delete?

Constraint: You may choose only THREE strategies for the first 12 months.

1. Name the determinant

2. Select the ERIC strategy

3. State the mechanism

4. Choose one implementation outcome

5. Name a possible unintended consequence

SMALL GROUPS • 7 minutes | REPORT OUT • 1 minute per group

Why NIATx was a strong fit—but required adaptation (stimulus lectures and P4P over time)

NIATx component	Determinant targeted	Mechanism
Executive sponsor + change leader	Vertical authority and weak local ownership	Legitimacy, accountability and prioritization
Walk-through + process mapping	Clinic entry barriers and inefficient workflow	Makes patient burden visible; identifies bottlenecks
NGT + change team	Unprioritized problems and hierarchy	Structured participation and local consensus
Coaching + learning collaborative	Low confidence and isolated providers/regions	Facilitation, social learning and problem solving
Rapid-cycle testing	Uncertainty about what works locally	Low-risk experimentation and observable feedback

Selection is not the end: adaptation, fidelity, and context determine whether the strategy works.

Madden L et al. Int J Drug Policy. 2017;49:48–53. Altice FL et al. Lancet Reg Health Eur. 2022;18:100407.

Five take-home lessons

- 1 Start with the measurable implementation gap—not with a favorite framework or strategy.
- 2 Use multiple evidence streams because patients, providers, organizations, and policies reveal different determinants (SEM).
- 3 Translate “barriers” into specific, prioritized, modifiable determinants.
- 4 Select ERIC strategies through determinant → mechanism logic; avoid strategy shopping.
- 5 Build a coherent package and specify implementation outcomes so the theory can be tested.

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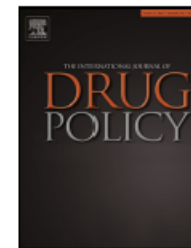
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Research paper

Willingness to pay for opioid agonist treatment among opioid dependent people who inject drugs in Ukraine



Iuliia Makarenko^{a,b,*}, Alyona Mazhnaya^a, Ruthanne Marcus^b, Martha J. Bojko^b,
Lynn Madden^{c,d}, Sergii Filippovich^a, Sergii Dvoriak^e, Frederick L. Altice^{b,f}

Results: Overall, 378 (44%) expressed WTP for OAT. Factors independently associated with WTP differed by OAT experience. Among those using OAT, independent predictors of WTP included: city (Dnipro – aOR = 1.9; 95%CI = 1.1–4.8 and Lviv – (aOR = 2.2; 95%CI = 1.1–4.8) compared to those elsewhere in Ukraine), higher income (aOR = 1.8; 95%CI = 1.2–2.7) and receiving psychosocial counseling (aOR = 1.8; 95%CI = 1.2–2.7). Among those who had previously been on OAT, positive attitude towards OAT (aOR = 1.3; 95%CI = 1.1–1.6) and family support of OAT (aOR = 2.5; 95%CI = 1.1–5.7) were independently associated with WTP. Among PWID who had never been on OAT, being male (aOR = 2.2; 95%CI = 1.1–4.2), younger age (aOR = 1.9; 95%CI = 1.2–3.2), higher income (aOR = 2.0; 95%CI = 1.2–3.4) and previous unsuccessful attempts to enter OAT (aOR = 2.3; 95%CI = 1.1–4.7) were independently associated with WTP. PWID were willing to commit a large percentage of their monthly income for OAT, which, however, varied significantly based on OAT experience: current OAT: 37% of monthly income, previous OAT: 53%, and never OAT: 60% (p-value = 0.0009).

Effect of expanding opioid agonist therapies on the HIV epidemic and mortality in Ukraine: a modelling study



Jiale Tan, Frederick L Altice, Lynn M Madden, Alexei Zelenov

Findings Under a status-quo scenario (OAT coverage of 2·7% among PWID), the number of new HIV infections among PWID in Ukraine over the next 10 years was projected to increase to 58 820 (95% CI 47 968–65 535), with striking regional differences. With optimum allocation of OAT without additional increases in procurement, OAT coverage could increase from 2·7% to 3·3% by increasing OAT doses to ensure higher retention levels. OAT scale-up to 10% and 20% over 10 years would, respectively, prevent 4368 (95% CI 3134–5243) and 10 864 (7787–13 038) new HIV infections and reduce deaths by 7096 (95% CI 5078–9160) and 17 863 (12 828–23 062), relative to the status quo. OAT expansion to 20% in five regions of Ukraine with the highest HIV burden would account for 56% of new HIV infections and 49% of deaths prevented over 10 years.



HHS Public Access

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The Real-World Impact of Dosing of Methadone and Buprenorphine on Retention on Opioid Agonist Therapies in Ukraine

Scott O. Farnum, MS, MPA¹, Iuliia Makarenko, MPH, MS², Lynn Madden, PhD, MPA^{1,3}, Alyona Mazhnaya, MPH, MS², Ruthanne Marcus, PhD, MPH⁴, Tanya Prokhorova, BA², Martha J. Bojko, PhD⁴, Julia Rozanova, PhD⁴, Sergii Dvoriak, MD, PhD⁵, Zahedsul Islam, MD², Frederick L. Altice, MD, MA^{1,4,6}

Findings: The proportion prescribed high (MMT: >85mg; BMT: ≥16mg), medium (MMT: >4085mg; BMT: >6–15mg), and low (MMT: ≤40mg; BMT: ≤6mg) dosages was 25%, 43% and 32%, respectively. Retention was significantly higher for BMT than MMT both at 12 (89% vs 75%) and 36 months (80% vs 56%). Though dosing levels for BMT did not influence retention, increasing dosages for MMT were significantly associated with higher retention rates at 1 (90%, 96%, 99%), 12 (59%, 78%, 91%) and 36 (34%, 59%, 79%) months, respectively. Independent predictors Author Manuscript Author Manuscript Author Manuscript associated with 12-month OAT discontinuation were medium (adjusted hazards ratio: aHR=2.23; 95%CL=1.95–2.54) and low (aHR=4.96; 95%CL=4.37–5.63) OAT dosage relative to high dosage, male sex (aHR=1.27; 95%CL=1.14–1.41), MMT relative to BMT prescription (aHR=1.57; 95%CL=1.32–1.87), and receiving OAT in general (aHR=1.22; 95%CL=1.02–1.46) or tuberculosis (aHR=1.43; 95%CL=1.10–1.85) hospitals, relative to specialty addiction treatment and AIDS Center settings. Lower dosages contributed more to dropout especially at 1 month (aHR 3.12; 95%CL=2.21–4.41 and aHR 7.71; 95%CL=5.51–10.79 for medium and low dosages, respectively). Younger age was significantly associated with OAT discontinuation only at 36 months (aHR=1.08; 95%CI=1.02–1.15).