Utilizing an Implementation Science Lens to Optimize Urban HIV Responses

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IAPAC Fast Track Cities 2022
Sevilla, Spain

FAST-TRACK CITIES

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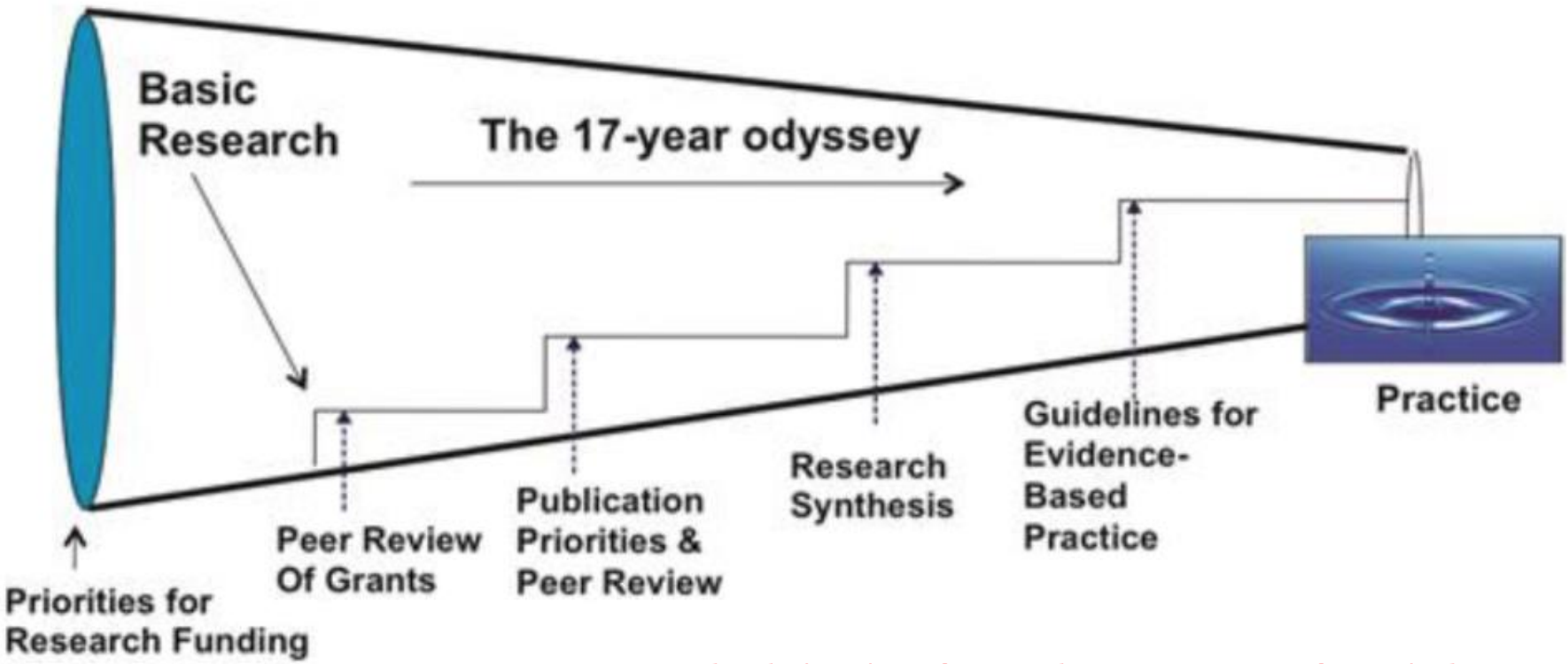
Outline

- What is and why use implementation science to guide your work
- Stakeholder engagement
- Target implementation gaps
- Real-world examples
  - Biskhek, Kyrgyzstan – Fast Track City Implementation
  - Ukraine
  - Lima, Peru

Word Cloud: Terminology for Dissemination & Implementation Research

Rabin B.A. et al. *Dissemination & Implementation Research in Health*, 2018.

Research Gap from Evidence to Practice



…. and this is for the 14% of evidence-based practices that actually make it!

Balas EA, Boren SA. Managing clinical knowledge for health care improvement. In: Bemmel J, McCray AT, eds. *Yearbook of medical informatics*. Stuttgart: Schattauer; 2000: 65– 70.

Implementation Science

Balas & Boren, 2000

Implementation Science

- **Definition**: The scientific study of *methods* to promote the systematic uptake of research findings and other evidence-based interventions into routine practice to improve the quality and effectiveness of health services and care.
- Implementation is part of a diffusion- dissemination-implementation continuum.
  - **Diffusion:** the passive, untargeted and unplanned spread of new practice
  - **Dissemination:** the active spread of new practices to a target audience using planned strategies
  - **Implementation:** the *process* of putting to use (e.g., scaling up) or integrating new practices within a setting
- A combination of several theories, models & frameworks.
  - Now >100 theoretical frameworks to guide the science of implementation

Interventions vs. Implementation Strategies

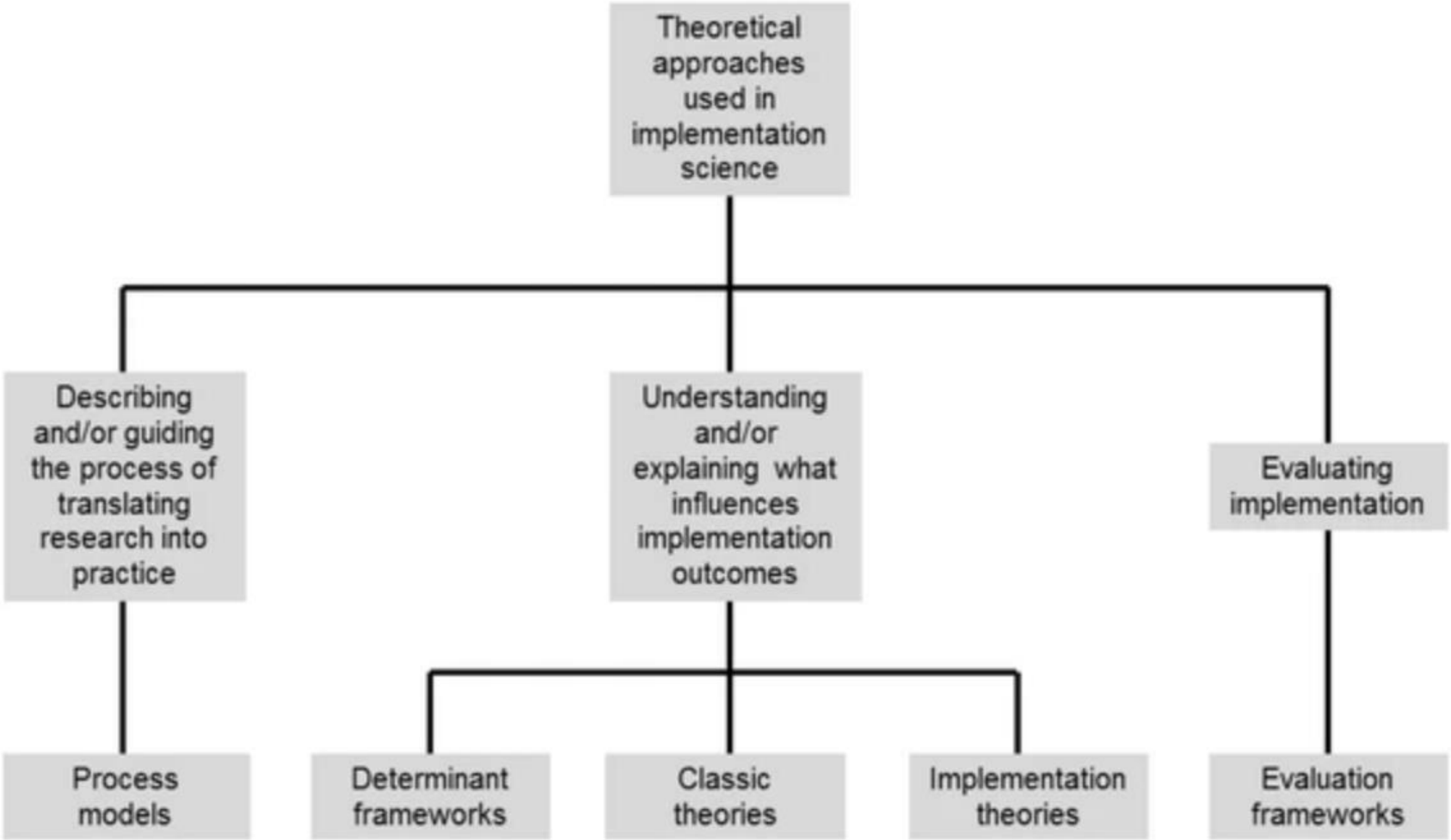
- The evidence-based intervention / practice / innovation is **THE THING** (e.g., ART, PrEP)

- Implementation strategies are the stuff we do to try to help people/places **DO THE THING** (e.g., facilitate, mHealth, same-day ART)

- Main implementation outcomes are **HOW WELL** they **DO THE THING** (e.g., close the implementation gap or scale up)

- Courtesy Geoff Curran

Making Sense of Implementation Theories, Models and Frameworks



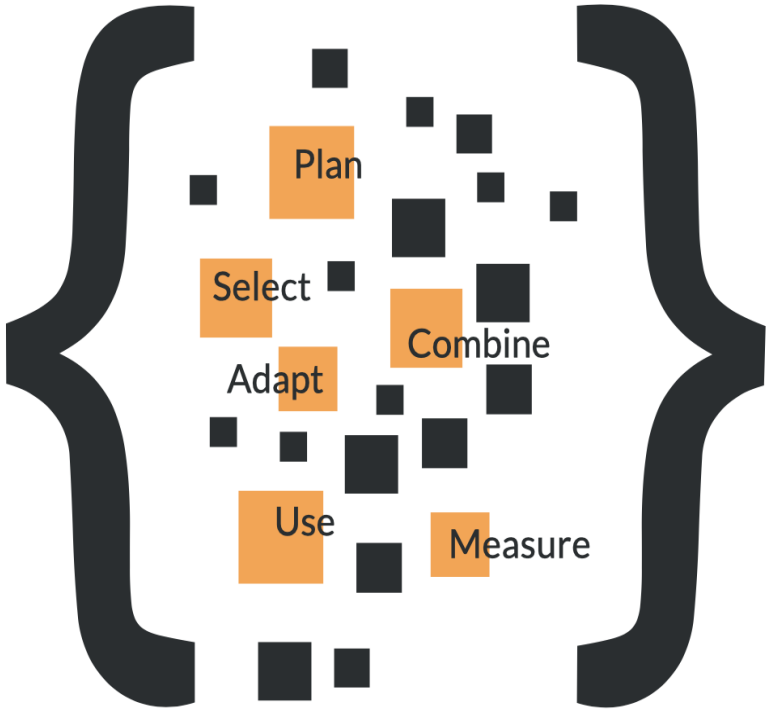
Nilsen P, *Implement Sci*, 2015

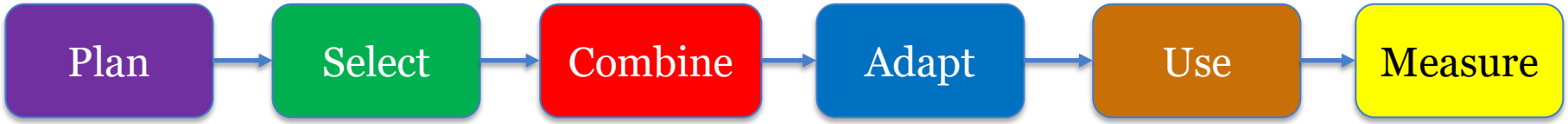
Exploring Dissemination and Implementation Models

Helping Navigate Dissemination and Implementation Models

The D&I Models Webtool is an interactive, online resource designed to help researchers and practitioners navigate D&I Models through planning, selecting, combining, adapting, using, and linking to measures.

Access The D&I Models Webtool Here!





https://dissemination-implementation.org

In sum ….. we become systems engineers!

Faster!

Cheaper!

Better!

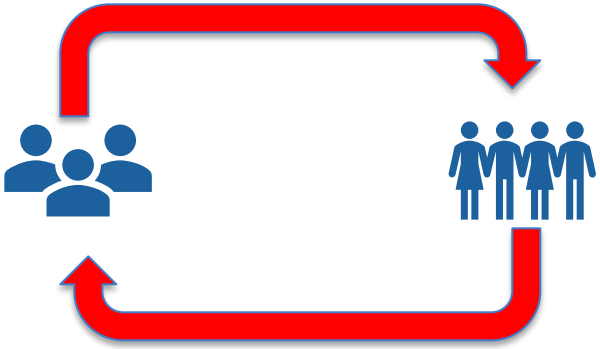
Forsberg K & Mooz H, Center for Systems Management, 1998

Practical Implementation and Implementation Science

- There can be tension between those who are doing the actual real-world implementation and those who are studying it or facilitating it
- Tensions can occur between multiple stakeholders (e.g.)
  - Funders and implementers
  - Implementers and targets (e.g., patients, clinicians)
- Outcomes are optimized when there are synergies between implementers and researchers
  - Creating synergies is key and is an active process
- Coordination between stakeholder groups (ideally community informed or led)
  - Aligning the benefits and the goals

Four Key Ingredients in Implementation Research

Implementation Questions



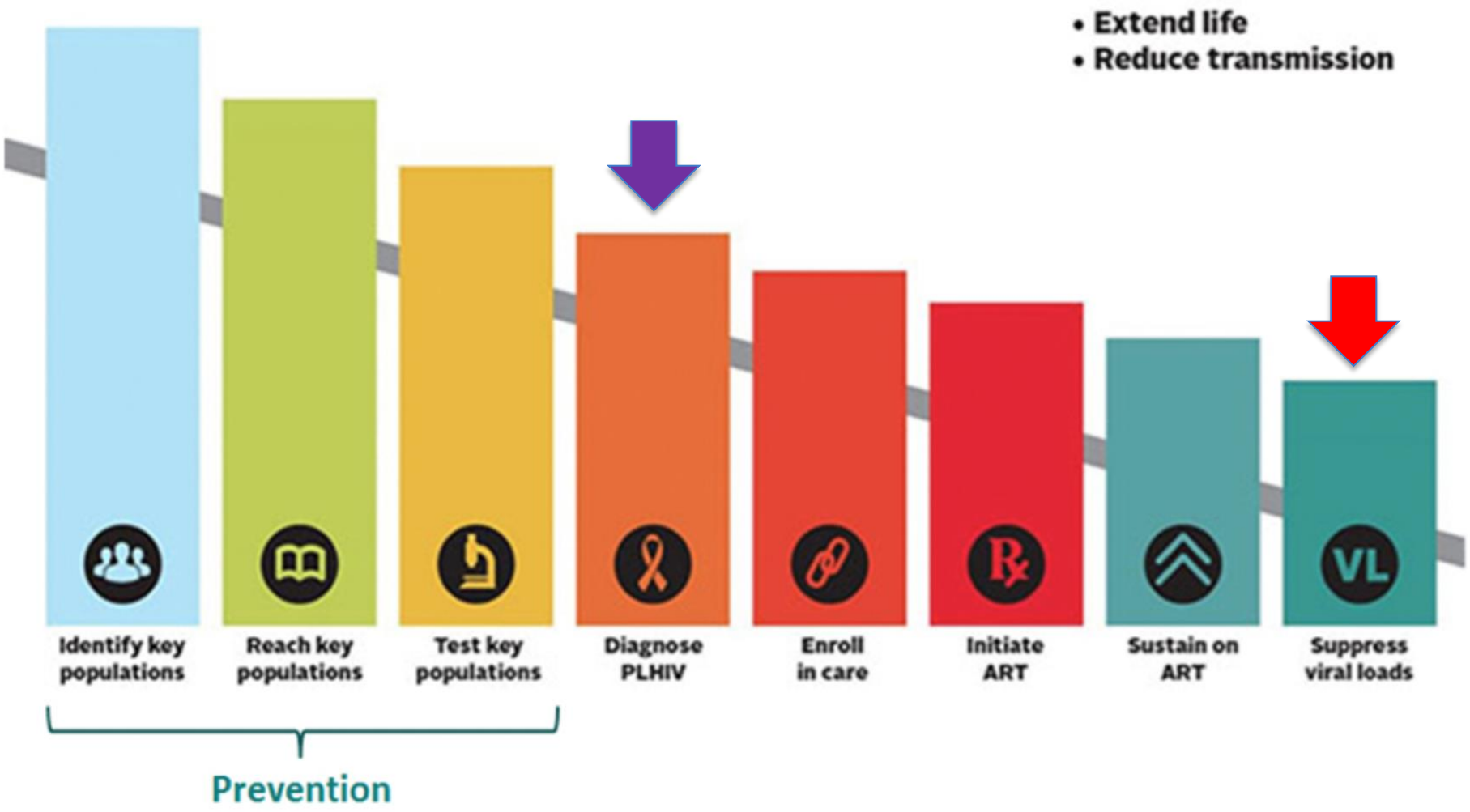
Implementation Research Team

Community Partners

Theories, Models, & Frameworks

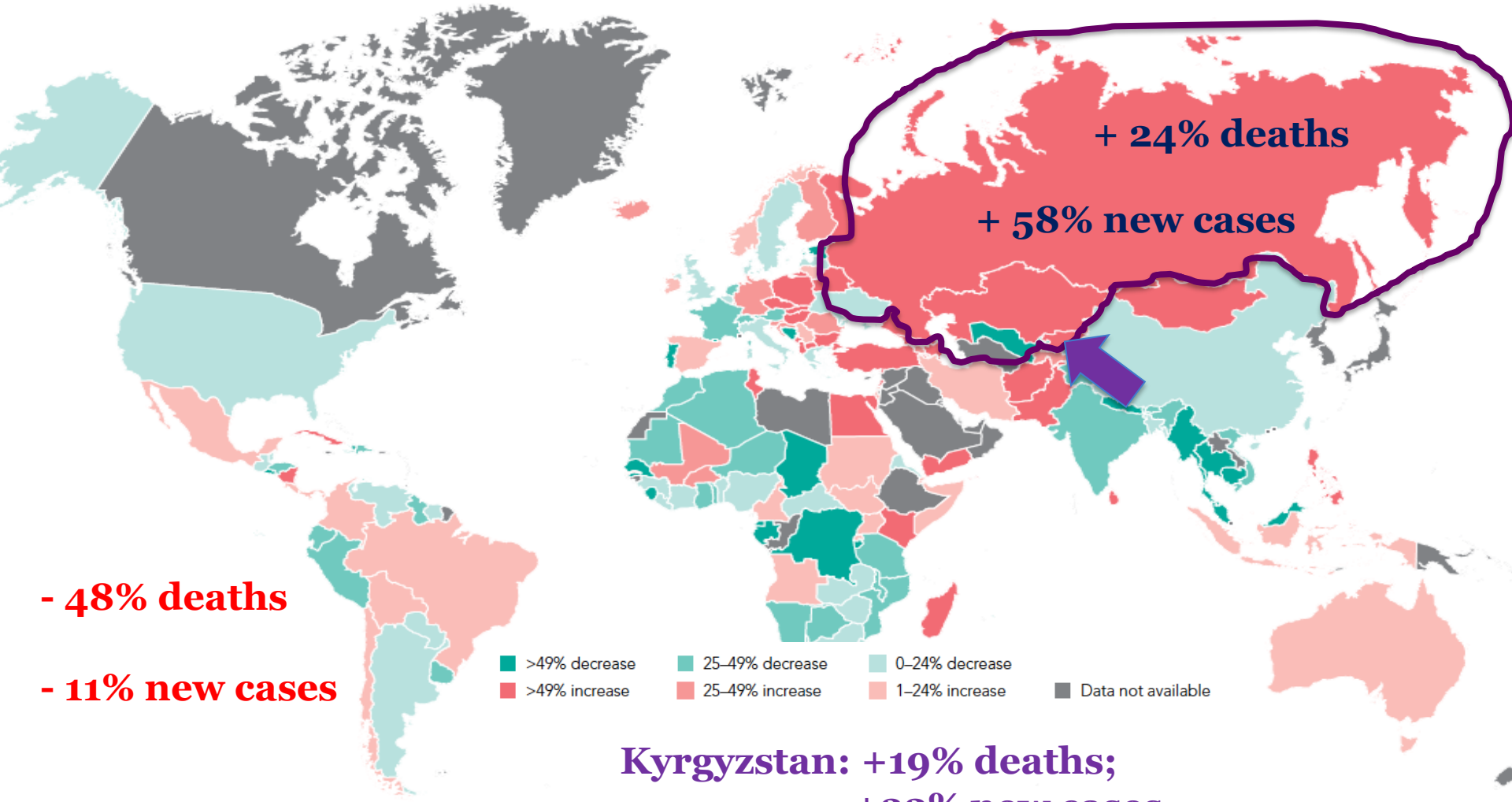
Community Partners to Guide the Research Team

Target Implementation Gaps – Understand Context



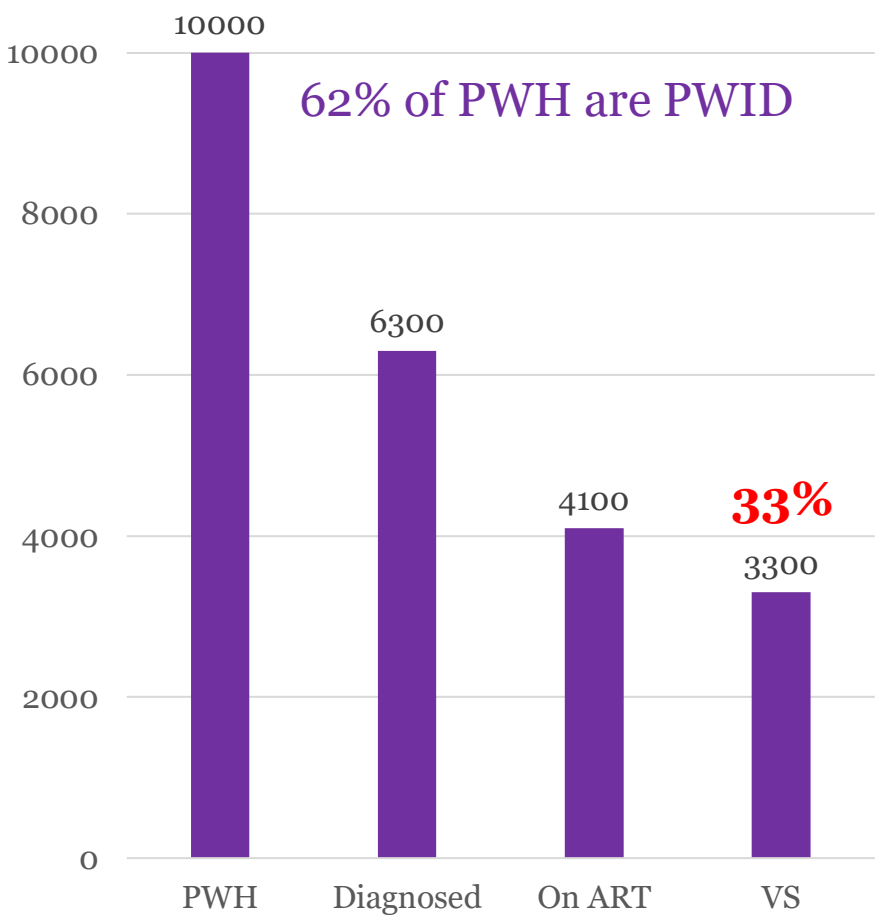
Bishkek, Kyrgyzstan

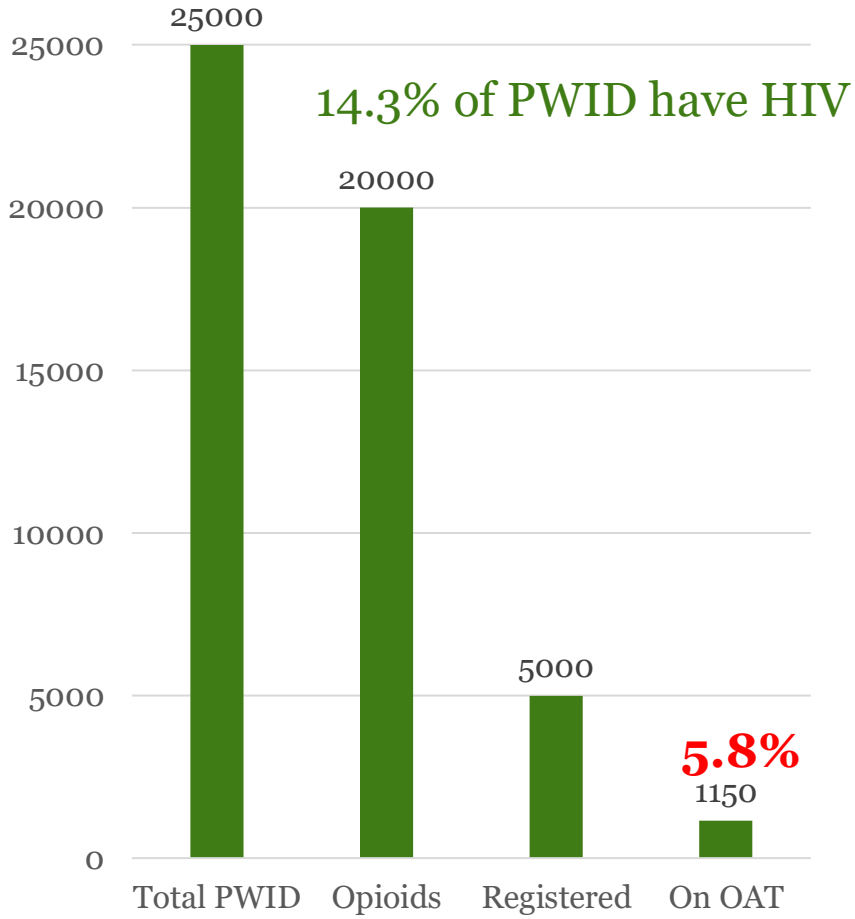
Percent Change in New HIV cases: *2010 to 2020*



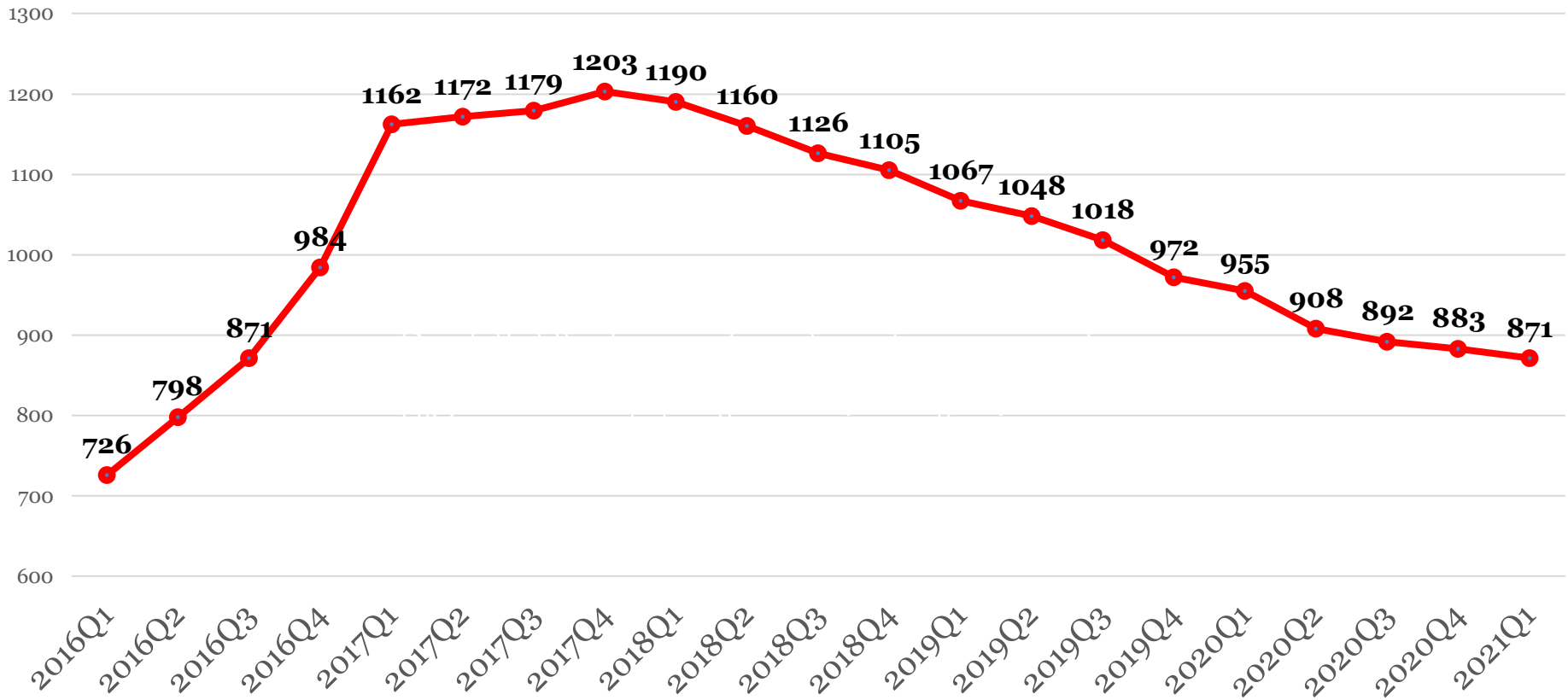
Kyrgyzstan Treatment Cascades

HIV and Opioid Use Disorder

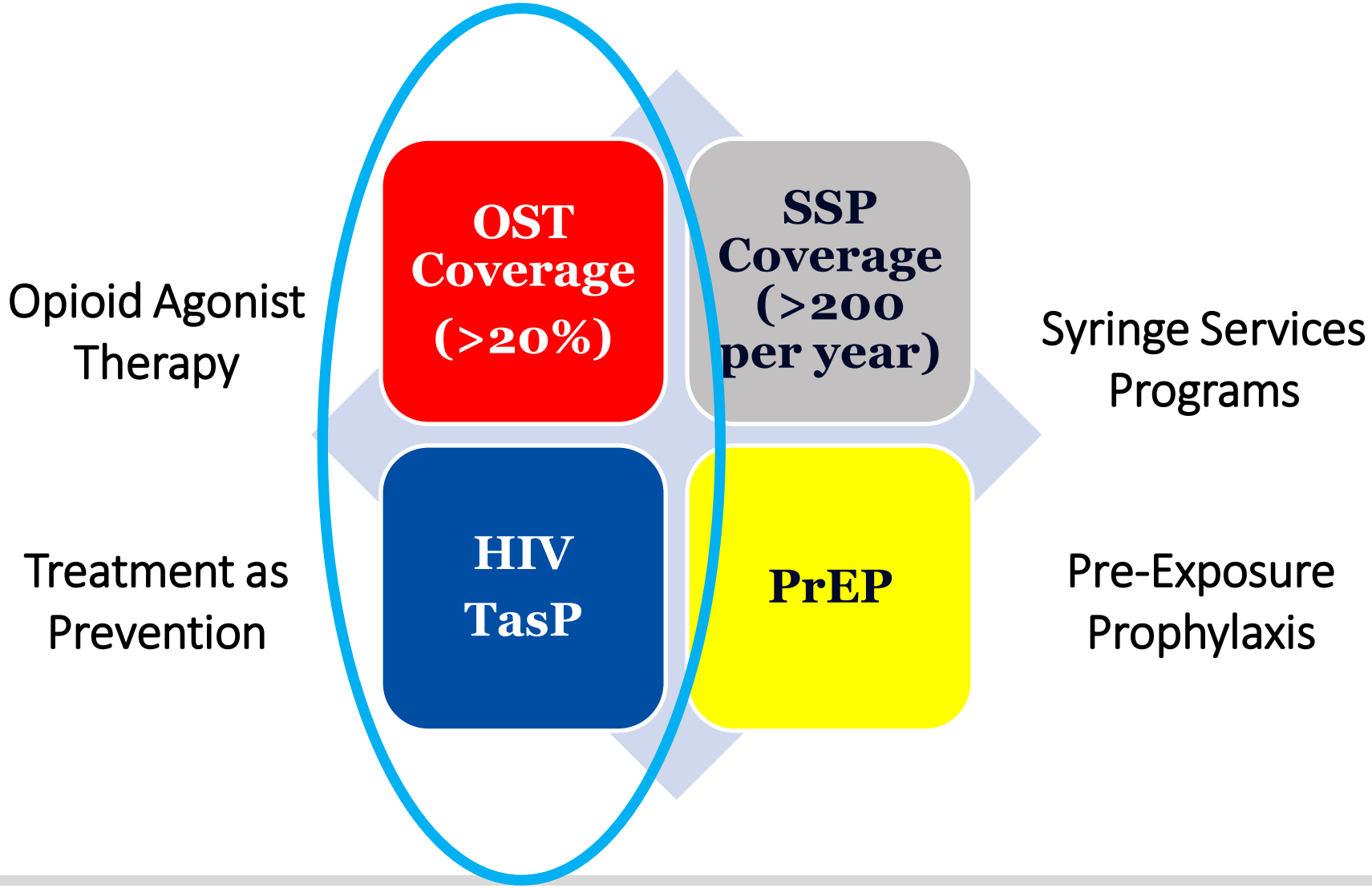




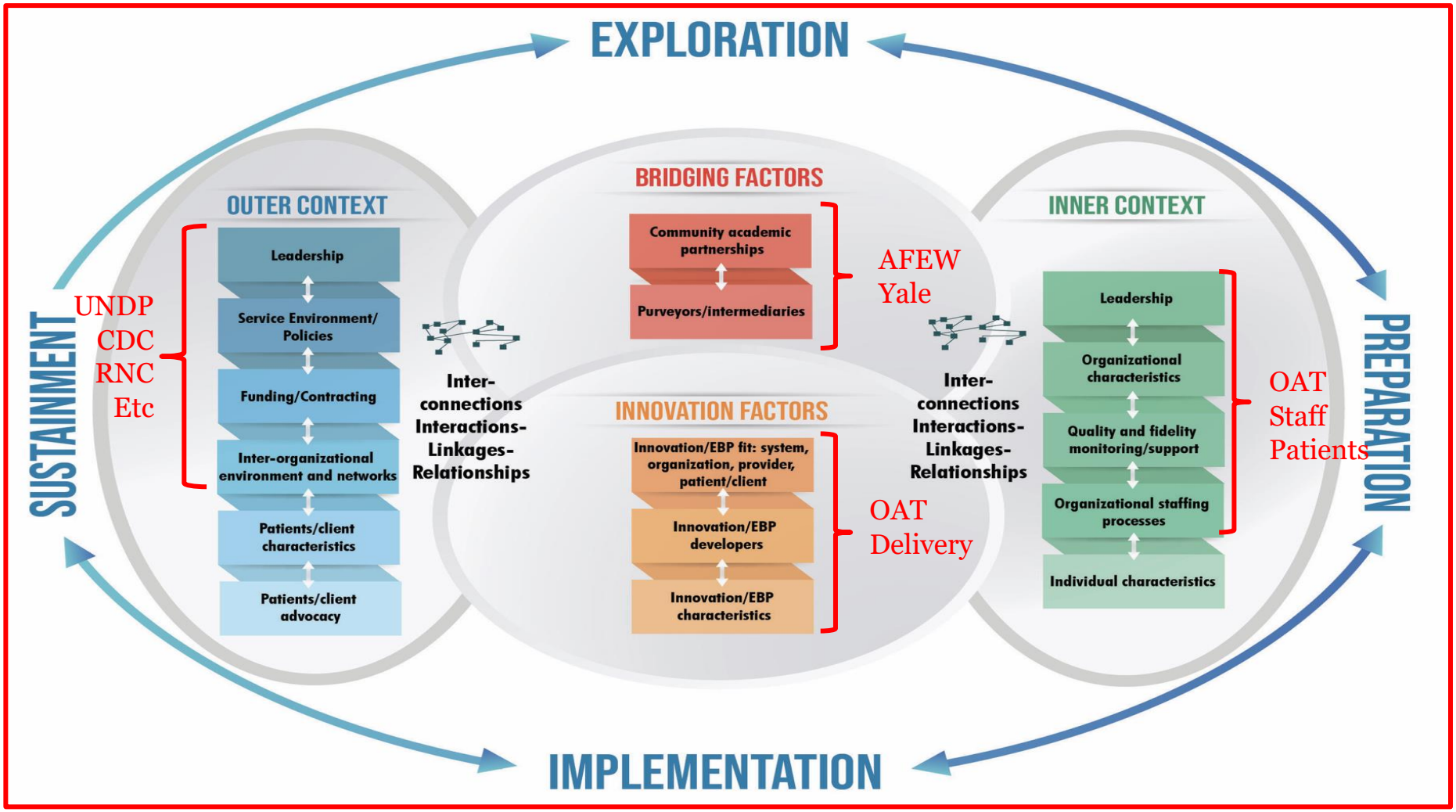
Patients on Methadone (2016-2021)



Evidence-Based Strategies to Prevent HIV Transmission in PWID



EPIS Framework
Exploration–Preparation-Implementation-Sustainment



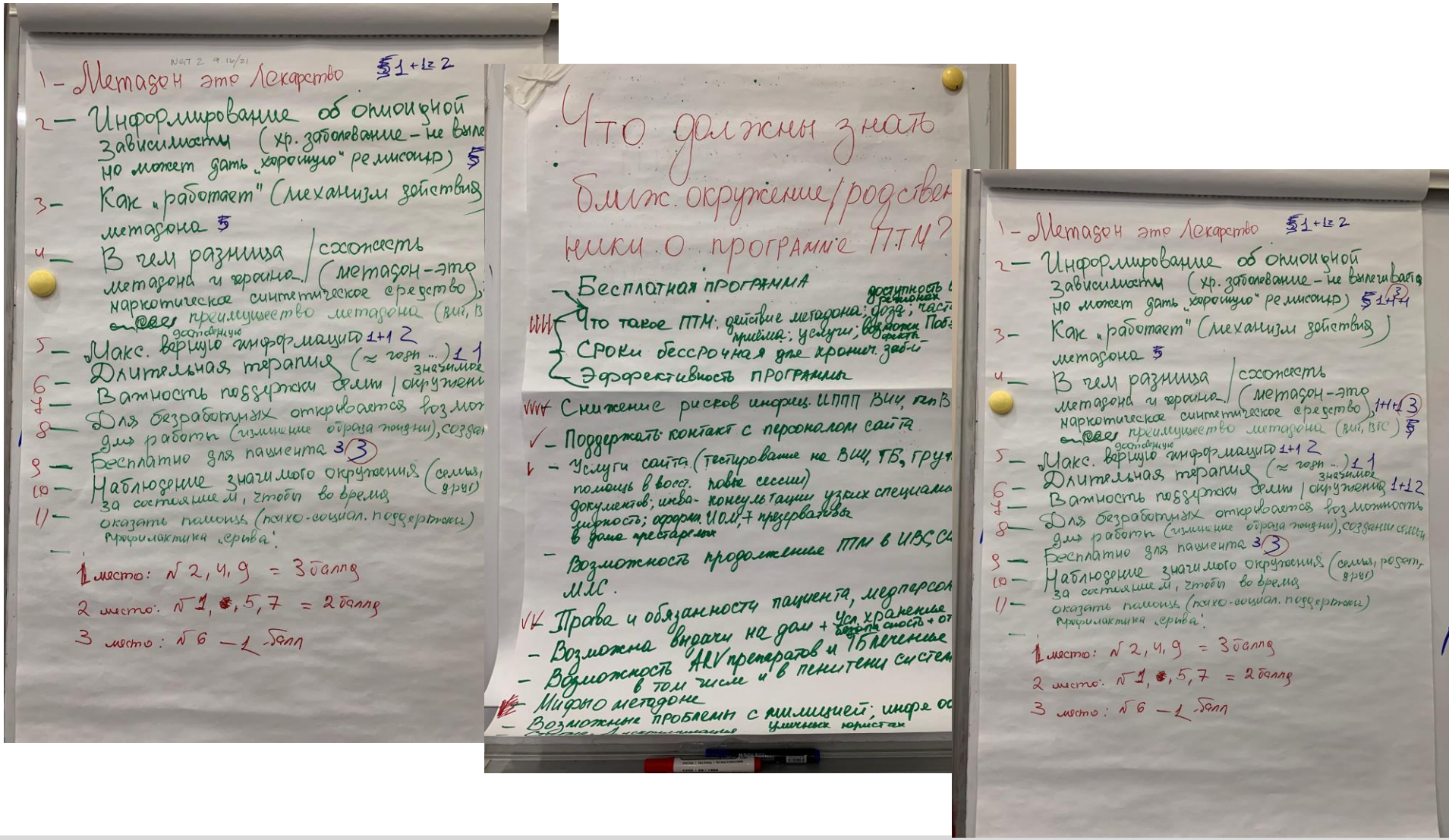
Moullin JC, Implement Sci 2019

NIATx Treatment Improvement Model

- A bundle of implementation tools that include expert facilitation (coaching) and quality *process* improvement specifically for behavioral healthcare settings to improve access and retention in treatment
  - Rapid assessment of barriers (nominal group technique)
  - Flow-charting
- Five principles include:
  - 1) understand and involve the customer;
  - 2) fix key problems;
  - 3) pick a powerful change leader;
  - 4) get ideas from outside the organization or field;
  - 5) use rapid-cycle (PDSA) testing to document changes.

See www.NIATX.net

Exploring Barriers and Facilitators to Implementation
Nominal Group Technique



Barriers to Methadone Scale-up
Nominal Group Technique

Group 1

- Inaccurate information about methadone (5)
- Low motivation by patients for treatment (5)
- Myths about methadone (3)
- Registration procedures (3)
- Prison ”caste” system (3)
- Stigma towards methadone clients (2)
- Medical comorbidities (2)
- Need for family support (1)
- Geographic limitations
- Healthcare system stigma

Group 2

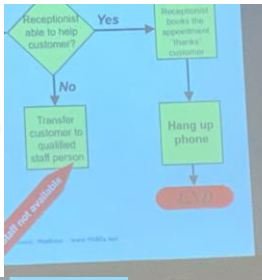
- Stigma towards methadone (7)
  - Prison ”caste” system (3)
- Myths about methadone (5)
- Registration procedures (4)
  - Documents required
- Uncertainty about future (1)
- Daily supervision
- How long to remain in treatment
- Low public awareness
- Policing near methadone program
- How methadone patients appear

Patient-Perceived Barriers to Methadone

- Bad reputation of methadone program (N=7)
- Too many logistical barriers for entry (N=5)
- Methadone is trading one addiction for another (N=4)
- Unclear expectations of program (expected cure) (N=4)
- Rigid policies for supervision/limited hours (N=4)
- Treated poorly by doctors (N=3)
- Interfered with their work (N=2)
- Not supported by families (N=1)
- A place to go to as a last resort

Implementation Tools - NIATx

Flow Charting



NGT

Stimulus Lectures

Understanding and Involving the Customer

Funders

Site Visit

Site Visit

Collaborative Learning and Team Building

NIATx Treatment Model

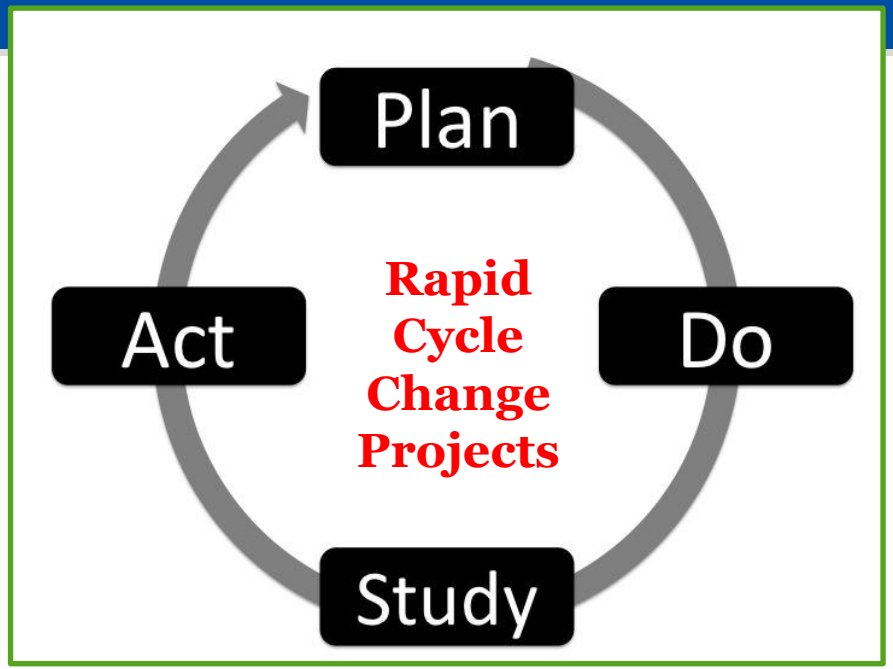
Reduce Waiting Times

Reduce No Shows

Increase Entry into OAT

Reduce OAT Dropout

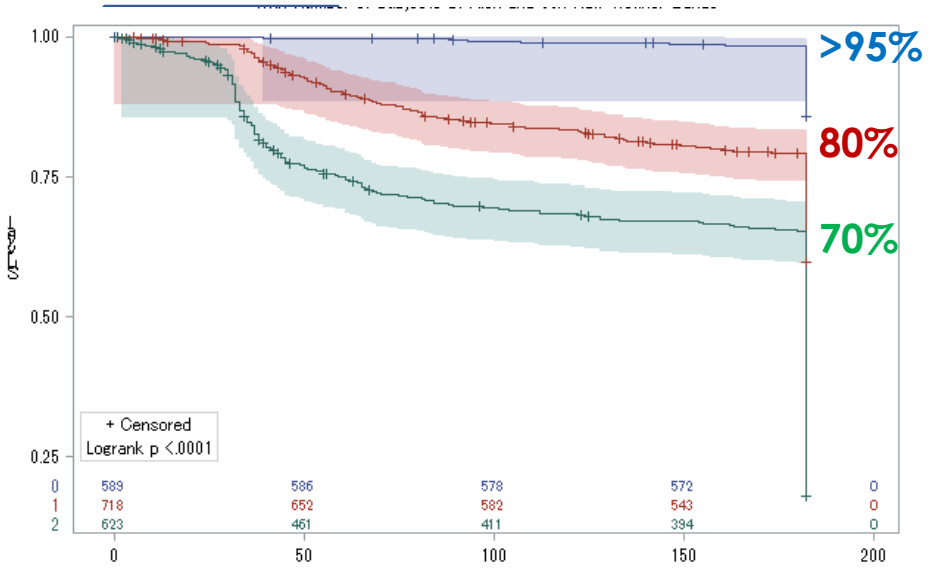
Improved OAT Outcomes



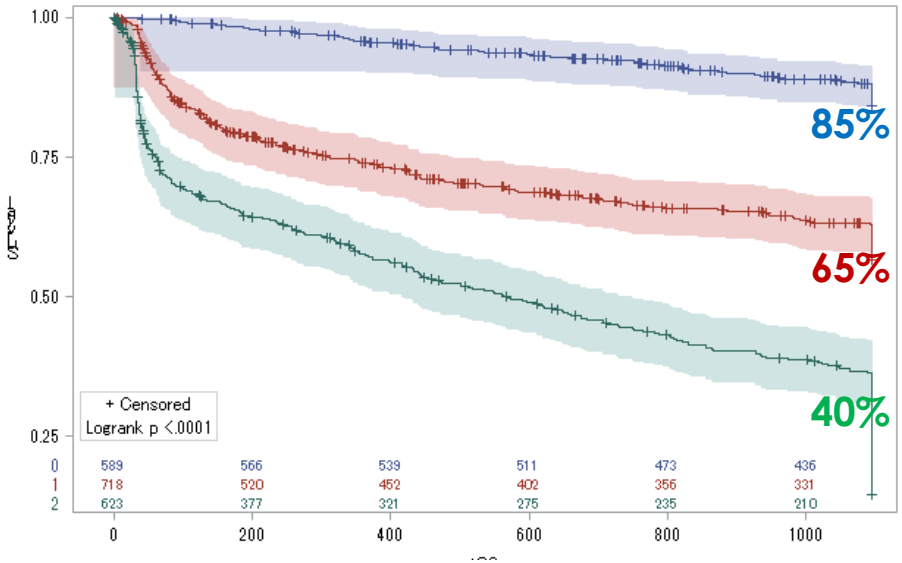
⇧ 1° & 2° HIV Prevention & QoL;
⇩ addiction severity & drug use

OAT Retention and Dosing: Kaplan Meier SCs

< 40 mg 40 – 85 mg >85mg

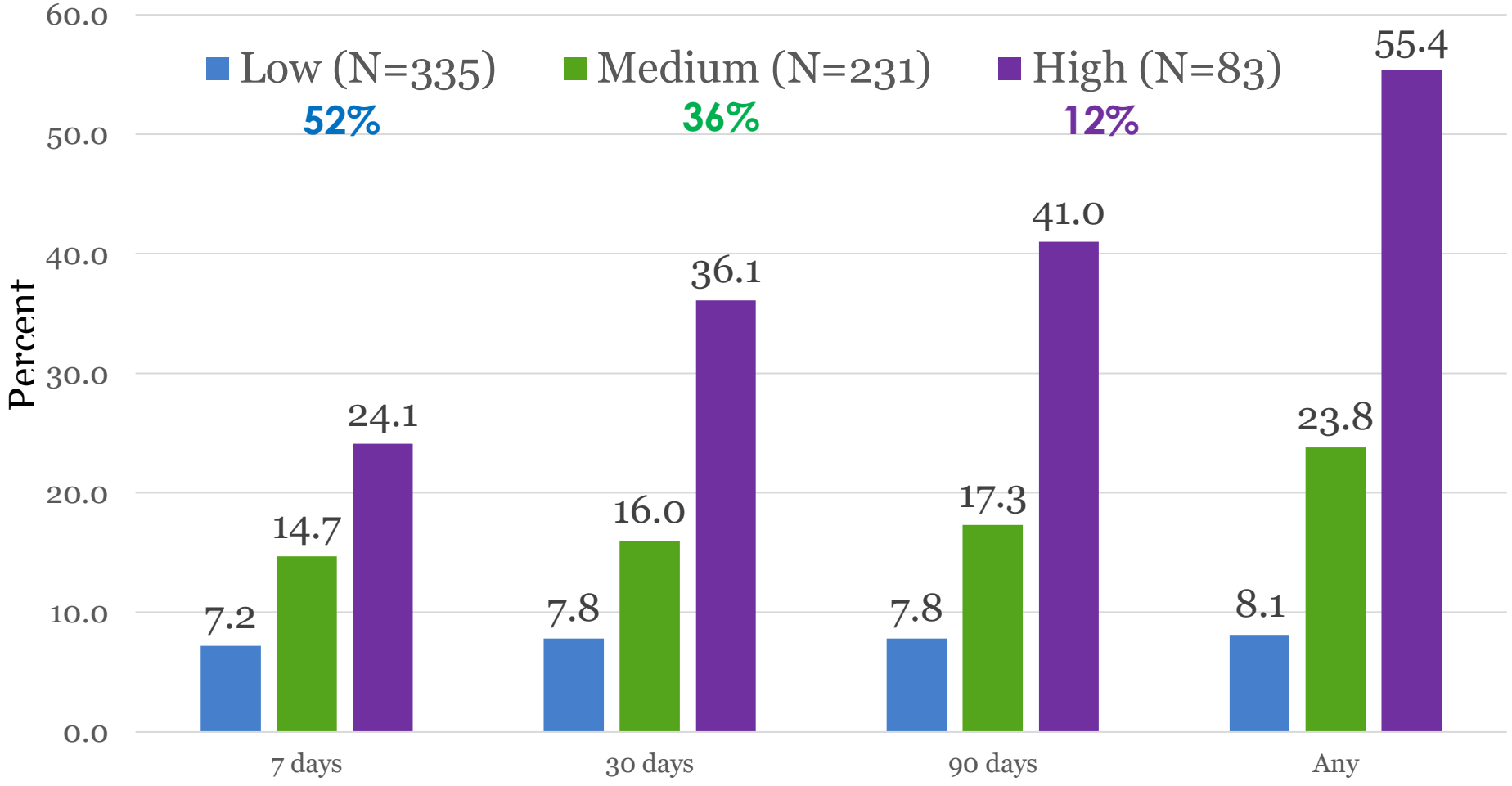


6 months



3 years

Linkage to Methadone After Release From Prison (N=649)

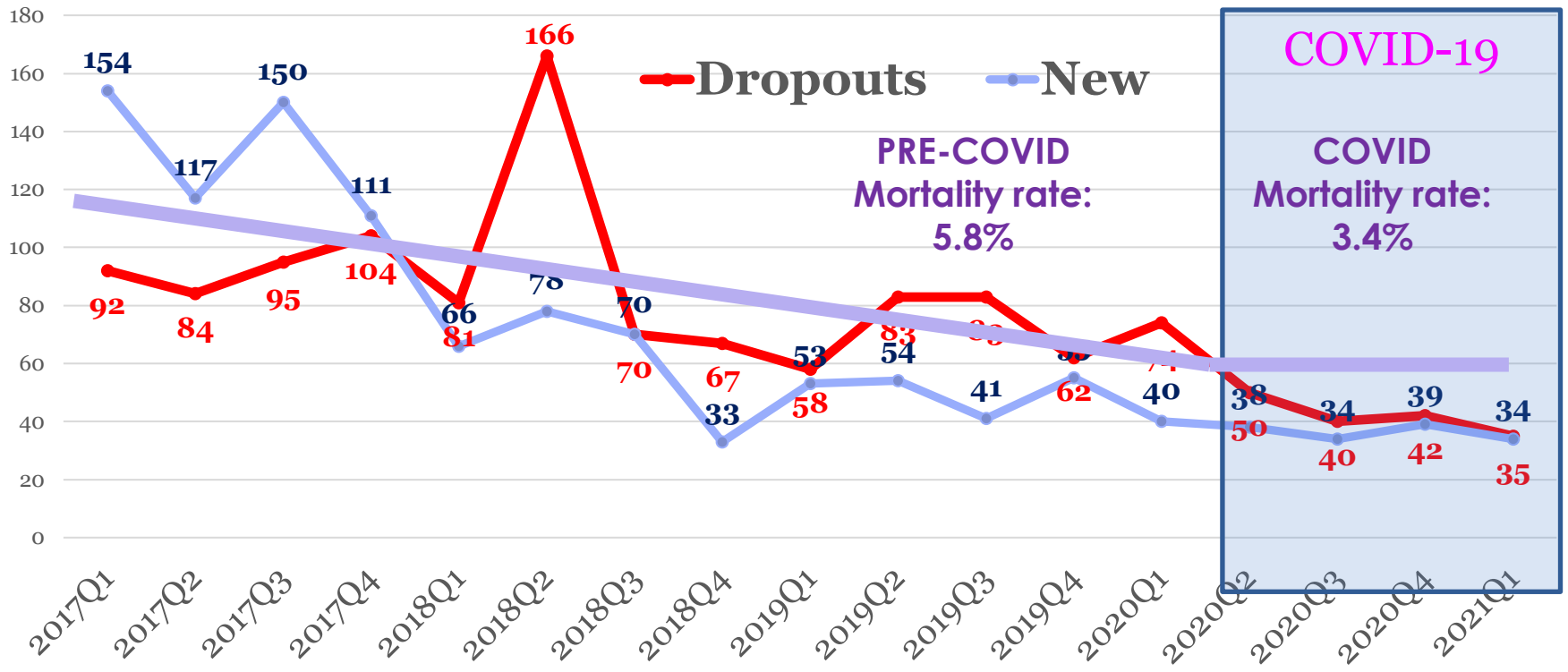


Bachireddy C, IJDP, 2022

Opportunities for Change Projects

- **Planned change projects**
  - Increase the proportion of patients on 90mg or more per day
    - Community and prison settings
  - Focus on patients who are on the ”standby” list
  - Supplemental counseling for positive drug tests
  - Work to support families
  - Increase proportion who are HIV tested
  - Enhance transition from prison to communities

OAT Patients: New Admissions vs Dropouts



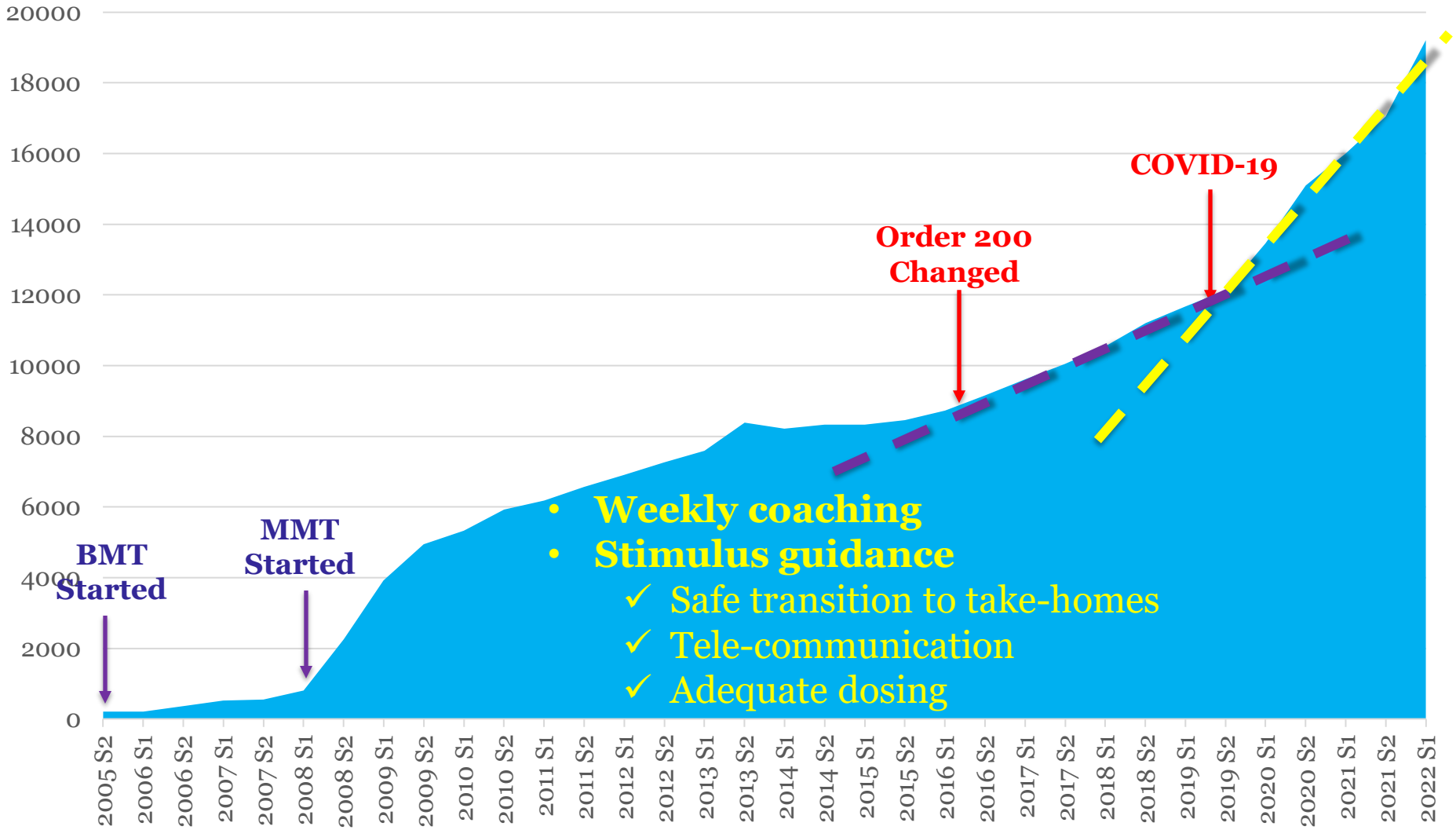
Opportunity: What Happened During COVID that resulted in fewer dropouts while new admissions stayed about the same?
Inc**reased Take-home dosing**

Preliminary Outcomes

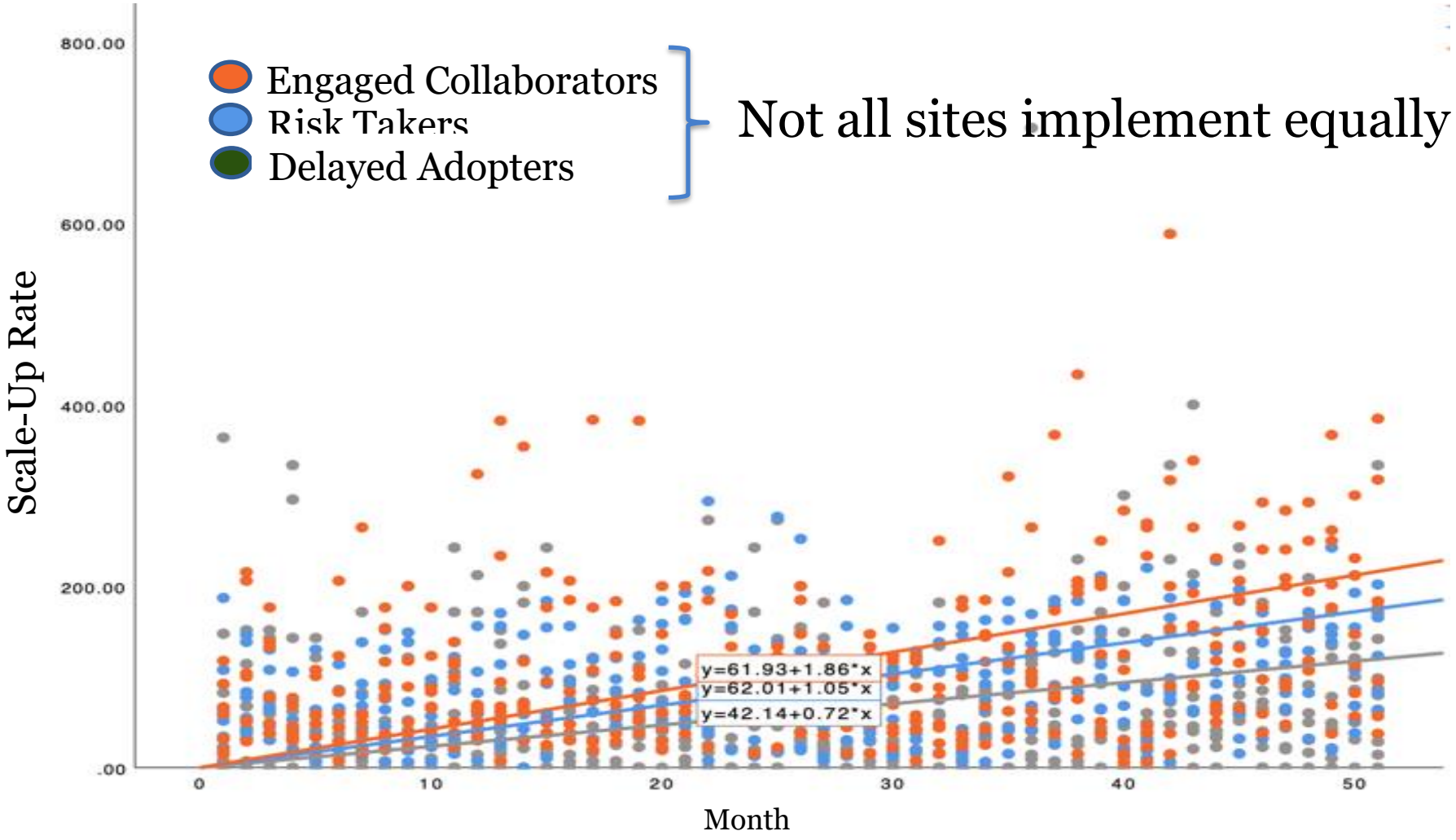
- OAT increased by 8% in Bishkek but continued to drop outside of Bishkek
- Change projects that achieved the best results:
  - Enhanced treatment in prisons and linkage to the community
  - Enhanced dosing strategies
  - Maintained patients on take-home dosing
  - Quick-start dosing → logistical work-up after stabilization
- Implementation products
  - Educational tools for patients and families
- Bridging Factors
  - Global Fund and CDC adopted performance indicators and P4P
  - New guidelines developed with fewer demands on patients and providers
  - Now planning to work throughout 3 countries in Central Asia

Ukraine

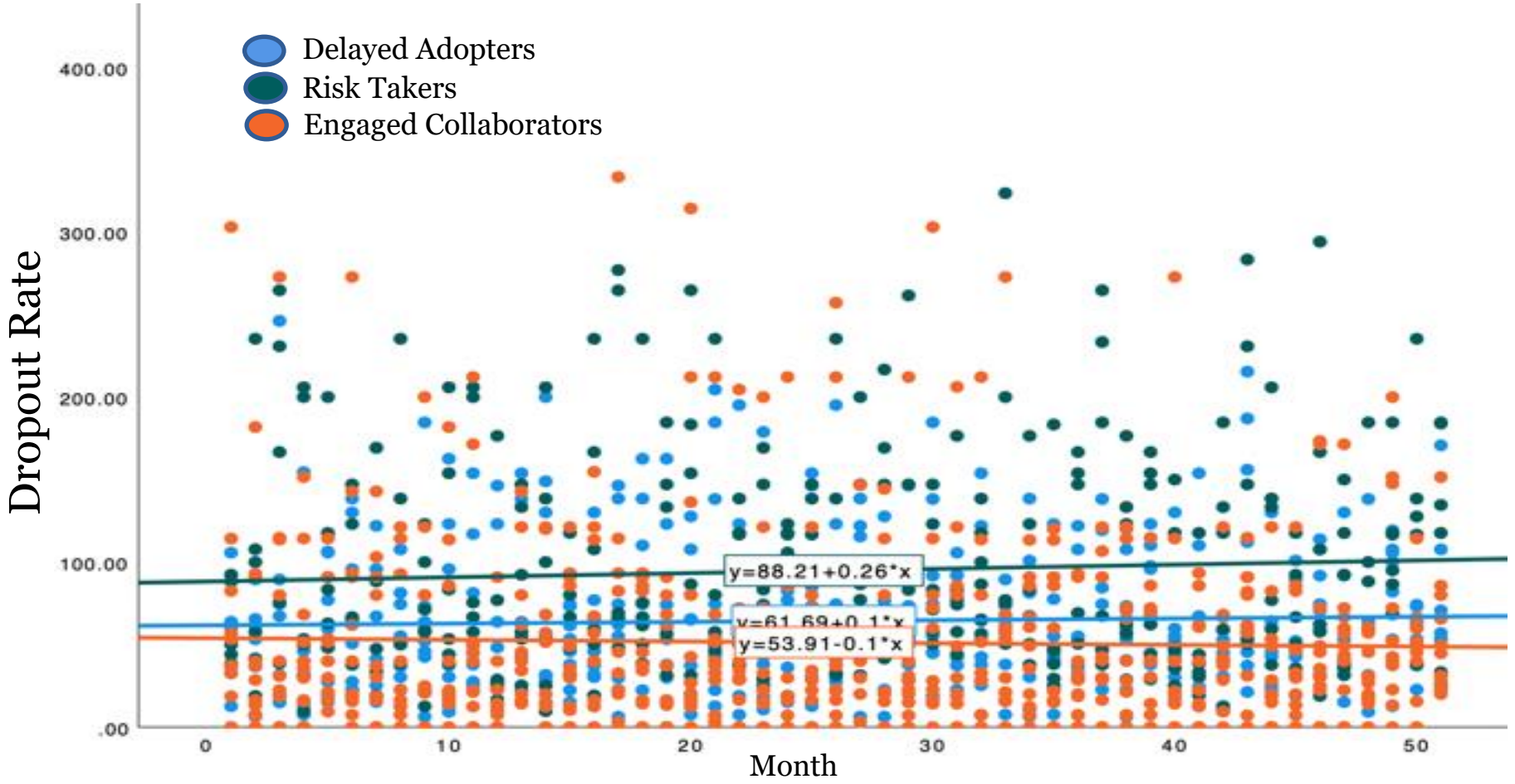
OAT Scale-up in Ukraine – COVID-19 as a Disruptor



NEW Admission Rate (Entry) by Month by Three Clusters after Order 200 Changed



Dropout Rate by Month by Clusters After Order 200 Changed



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Public Health

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Extending a lifeline to people with HIV and opioid use disorder during the war in Ukraine

Prof Frederick L Altice, MD • Daniel J Bromberg, MSc • Sergii Dvoriak, MD • Anna Meteliuk, MPH • Iryna Pykalo, MPH • Zahedul Islam, MBA • Lyu Azbel, PhD • Lynn M Madden, PhD • Show less

February 24, 2022

Lancet Public Health, 2022

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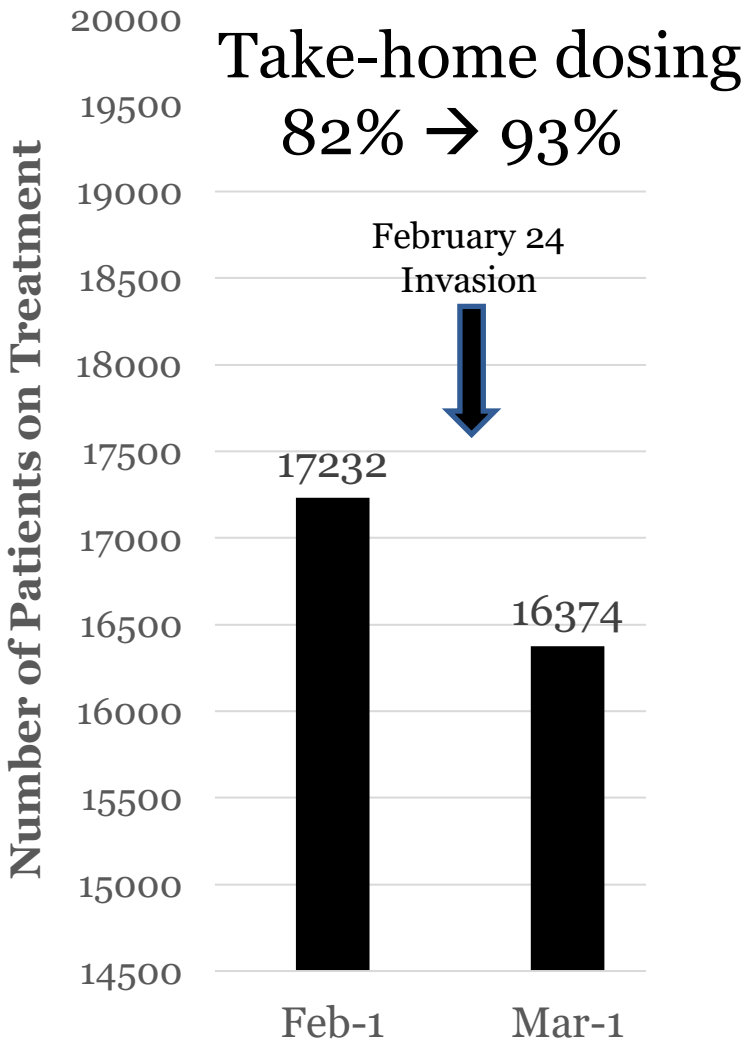
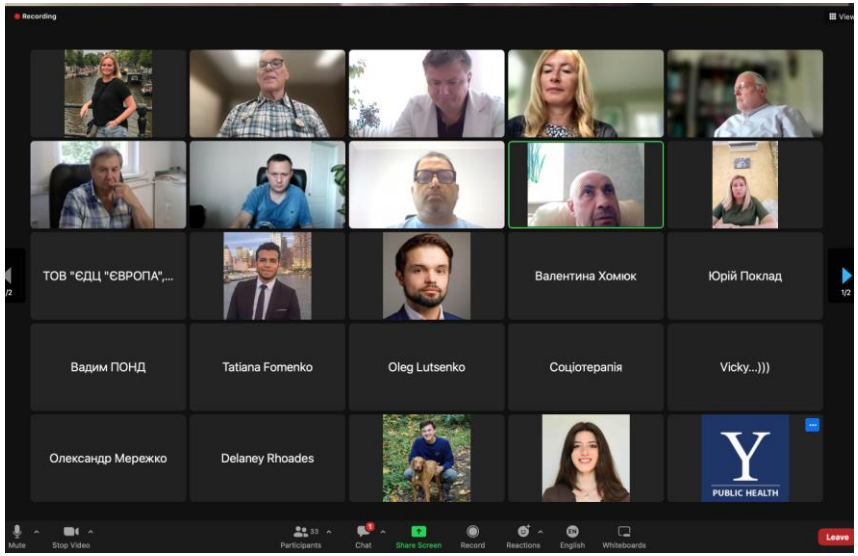
OAT Scale-Up After the Invasion by Russia





2022

Altice FL, Lancet Psych, 2022

Slava Ukraini!