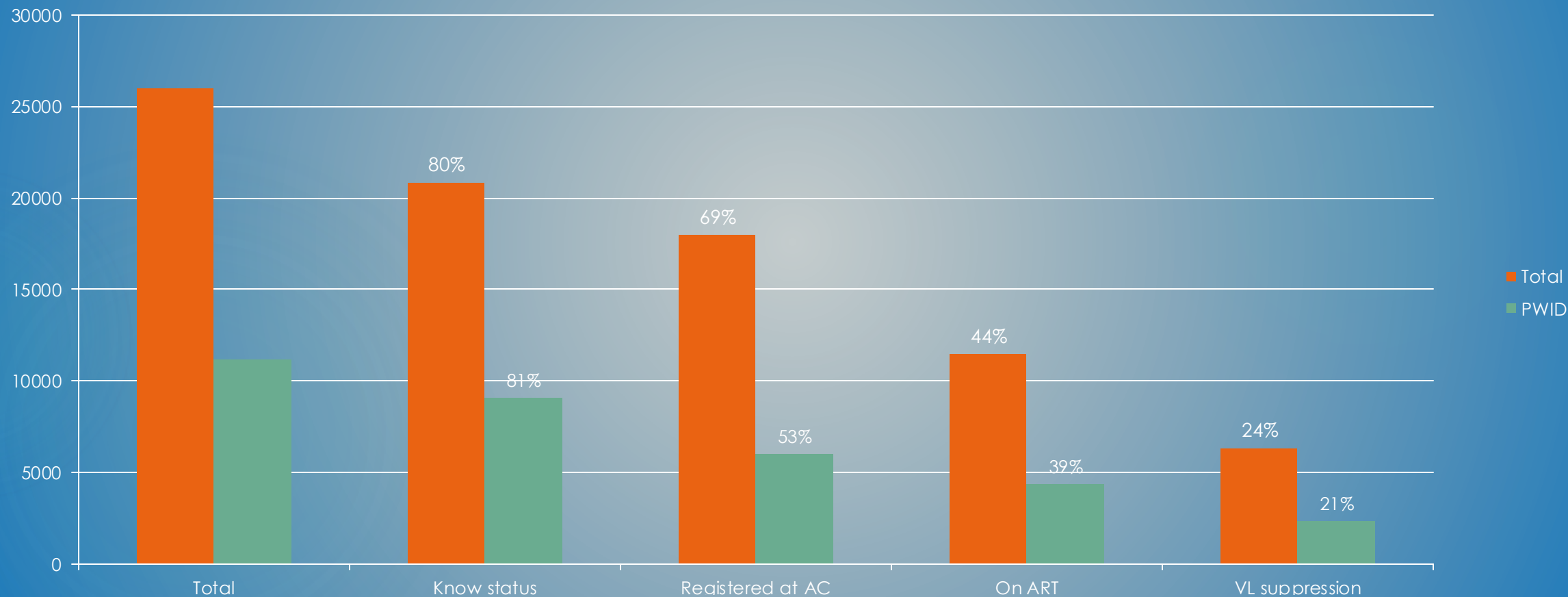




# Improving HIV service delivery for people who inject drugs in Kazakhstan: implementation science study

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# PWID experience the largest gaps in the HIV care cascade in Kazakhstan



Source: Republican AIDS Center, 2017



# Local context overview

- ▶ <50% of PWID attend syringe exchange programs (SEPs), and among those who do, fewer than half receive rapid HIV testing.
- ▶ Criminalization of drug use, stigma, and policing practices hinder access to harm reduction services.
- ▶ SEPs remain underutilized for HIV care despite their broad geographic presence (137 SEPs).
- ▶ SEPs lack capacity to integrate testing, case management, and referral to care due to limited training and fragmented service systems.
- ▶ Yet, SEPs are well positioned as gateways to HIV care

# Bridge Study Aims:

## Primary Aims

- ▶ **Aim 1:** Evaluate the impact of the integrated Bridge intervention on **linkage to HIV care** for HIV-positive PWID (primary outcome).
- ▶ **Aim 2:** Assess outcomes across the **HIV treatment cascade**, including testing, ART initiation, adherence, and viral suppression.

## Secondary Aims

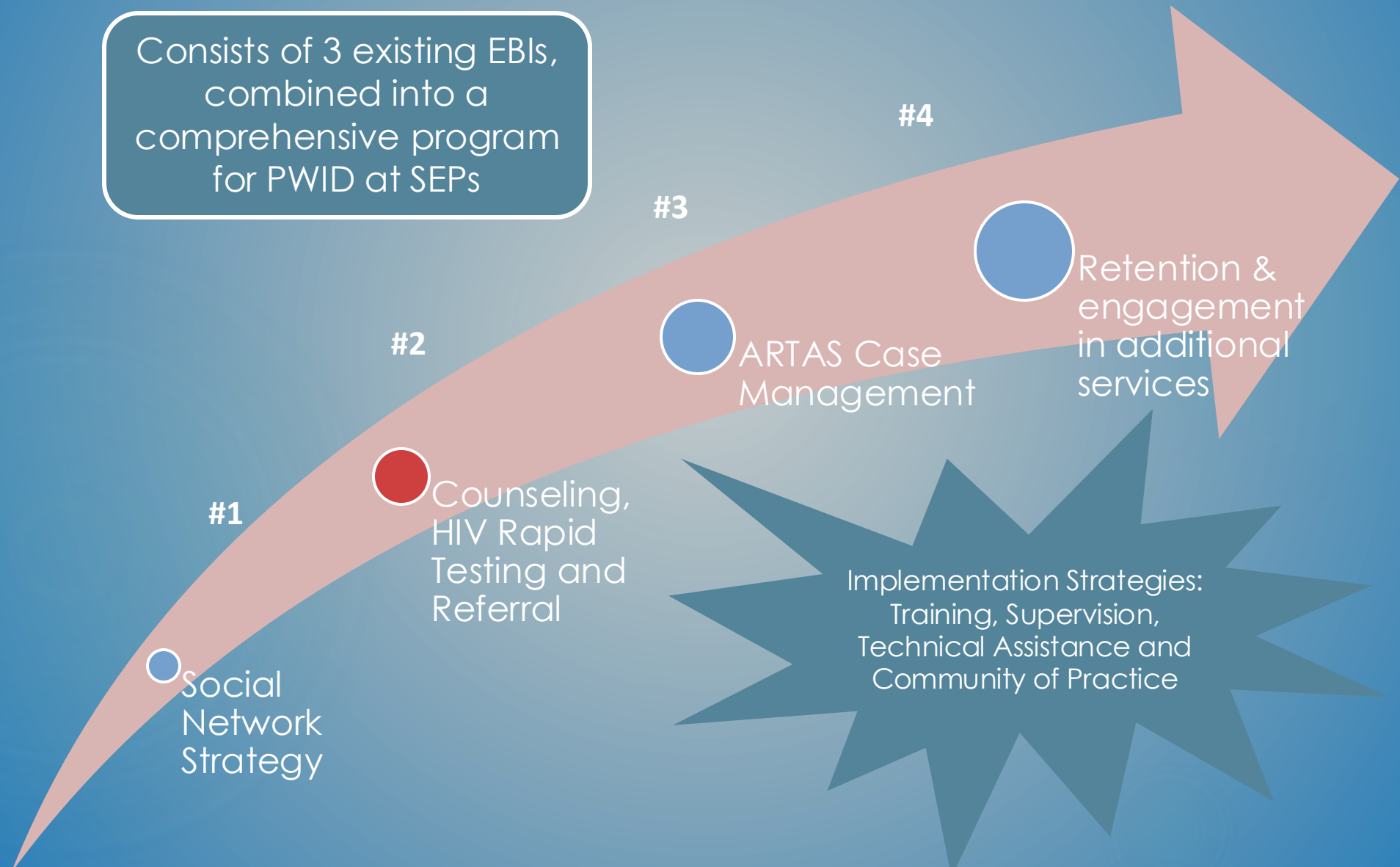
- **Aim 3:** Explore how **multi-level contextual factors** — such as provider capacity, stigma, organizational readiness, and structural barriers — influenced service delivery and outcomes.
- **Aim 4:** Examine **feasibility, cost, and sustainability** of implementing Bridge across different SEP settings..

# Bridge Evidence-Based Interventions

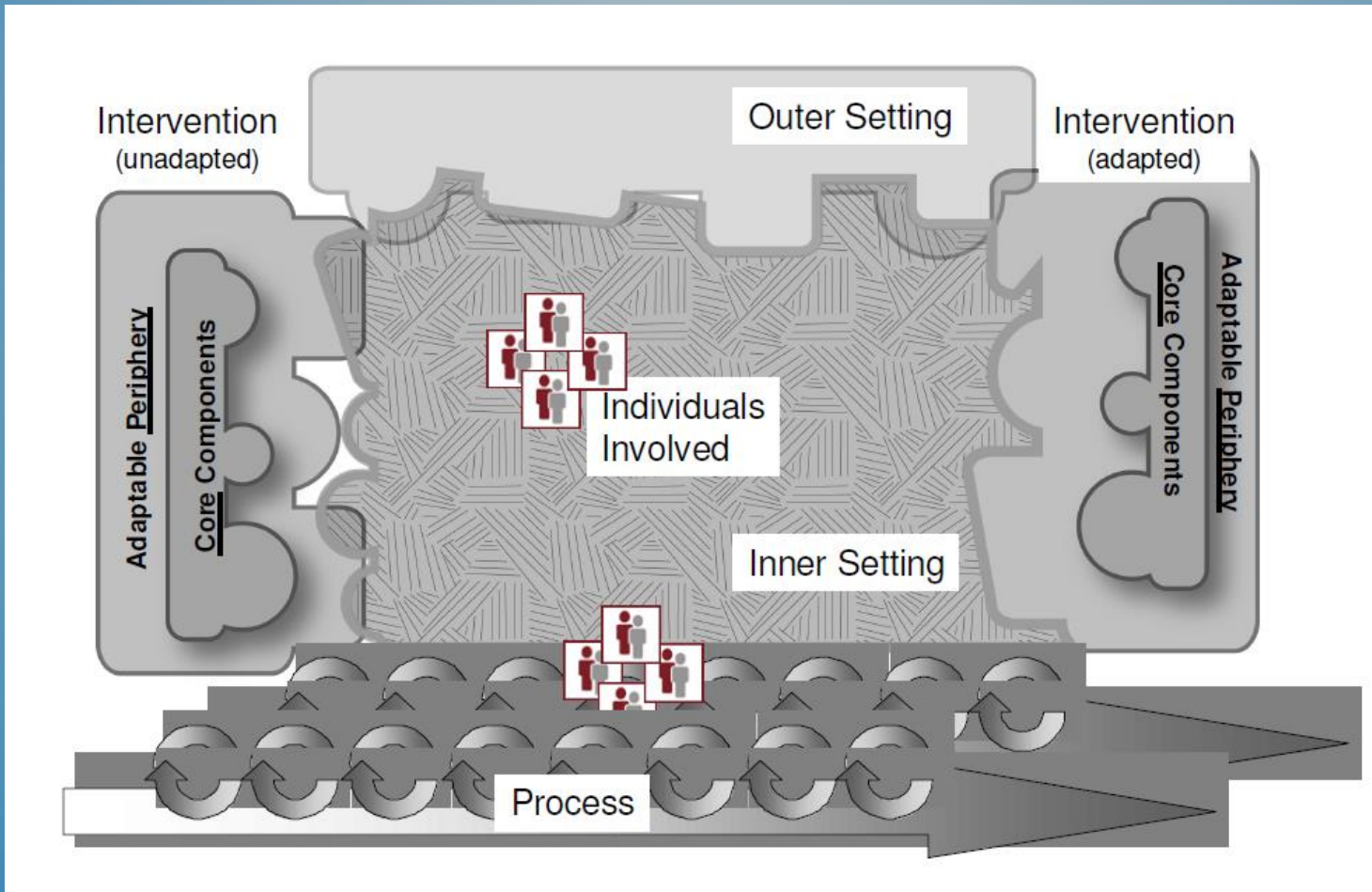
HIV + PWIDs

VIRAL SUPPRESSION

Consists of 3 existing EBIs, combined into a comprehensive program for PWID at SEPs



# Implementation framework: CFIR



# Bridge pre-implementation activities:

- ▶ Document review:
  - ▶ Collect & review protocols from Ministry of Health, AIDS Center, drug treatment centers, etc.
- ▶ Surveys:
  - ▶ 38 SEP “coordinators” (nurses or social workers)
  - ▶ 35 SEP outreach workers
  - ▶ 4 AIDS Center treatment department staff
- ▶ Focus groups:
  - ▶ 8 focus groups with 57 HIV-positive PWID
- ▶ Key informants
  - ▶ 3 community advisory board meetings with key informant stakeholders
  - ▶ Ad-hoc consultations with key informants

# Mapping barriers and facilitators into CFIR framework



CFIR Domain	Barriers	Facilitators
<b>Outer Setting</b>	<ul style="list-style-type: none"> <li>• Criminalization of drug use and police harassment</li> <li>• Limited external funding for harm reduction</li> <li>• Low engagement of PWID with formal health services</li> </ul>	<ul style="list-style-type: none"> <li>• High community demand for HIV services</li> <li>• Established peer networks</li> <li>• Strong NGO presence with trust in communities</li> </ul>
<b>Inner Setting</b>	<ul style="list-style-type: none"> <li>• Infrastructure limitations (e.g., lack of space, privacy)</li> <li>• Heavy workload and competing demands</li> <li>• Bureaucratic rigidity in some government SEPs</li> </ul>	<ul style="list-style-type: none"> <li>• Supportive leadership in many SEPs</li> <li>• Openness to innovation in NGO settings</li> <li>• Integration with existing SEP outreach models</li> </ul>
<b>Characteristics of Individuals</b>	<ul style="list-style-type: none"> <li>• Low confidence in delivering ARTAS</li> <li>• Lack of training or clarity in new roles</li> <li>• Stigma among some staff toward clients</li> </ul>	<ul style="list-style-type: none"> <li>• High motivation among peer outreach workers</li> <li>• Commitment to client-centered care</li> <li>• Willingness to learn and adapt</li> </ul>
<b>Intervention Characteristics</b>	<ul style="list-style-type: none"> <li>• Perceived complexity of ARTAS</li> <li>• Limited compatibility of intervention with SEP workflows</li> <li>• Concerns about fidelity vs flexibility</li> </ul>	<ul style="list-style-type: none"> <li>• Adaptability of SNS to local contexts</li> <li>• Perceived value of bundled services</li> <li>• Alignment with harm reduction philosophy</li> </ul>
<b>Process of Implementation</b>	<ul style="list-style-type: none"> <li>• Need for intensive supervision and TA early on</li> <li>• Inconsistent data use for decision-making</li> <li>• Initial confusion about roles and processes</li> </ul>	<ul style="list-style-type: none"> <li>• Use of digital tools for monitoring</li> <li>• Peer learning via communities of practice</li> <li>• Ongoing coaching and problem-solving support</li> </ul>

# Implementation Strategies

## Training

- Adult learning/experience cycle
- Audio recording with feedback post training

## Supervisory Model

- Strength-based supervisory model (SBS)
- Localized supervision

## Community of Practice

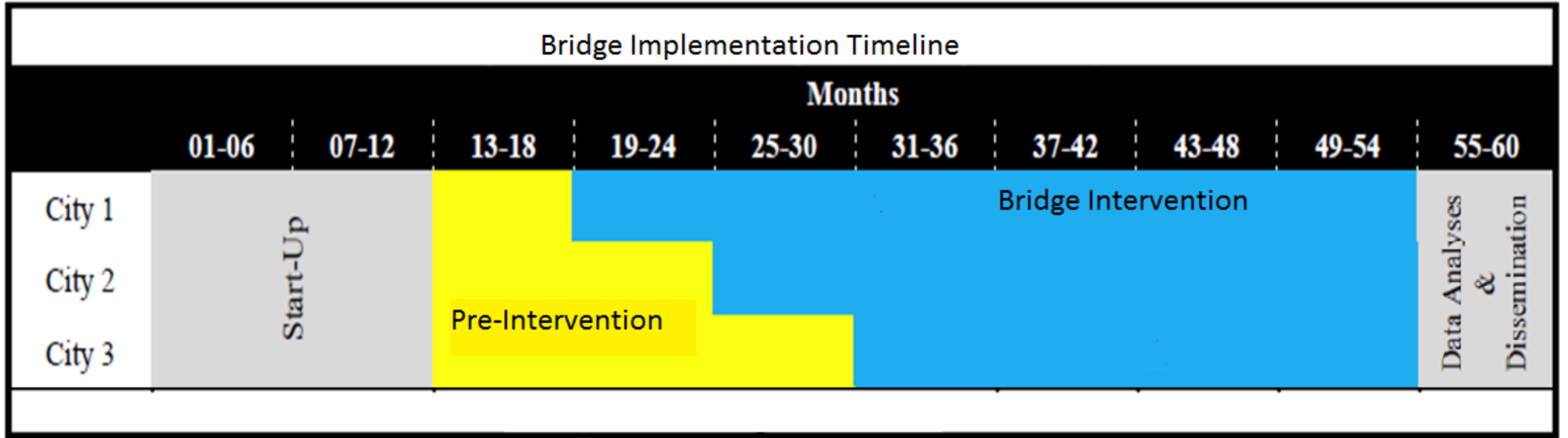
- Monthly meetings
- Text messaging community of practice

## Technical Assistance

- Proactive and reactive
- Specialized training
- Requests and provision tracking system



# Bridge Timeline & Design



3 cities, 24 sites

# Bridge Timeline & Design

BRIDGE uses four forms of data collection:

- 1) Service & Linkage tracking system
  - Allows us to compare agency-level data on services received
- 2) Epidemiological-Clinical Data from AIDS Centers
  - Allows us to see effects of intervention on treatment/adherence

# Bridge Timeline & Design

BRIDGE uses four forms of data collection:

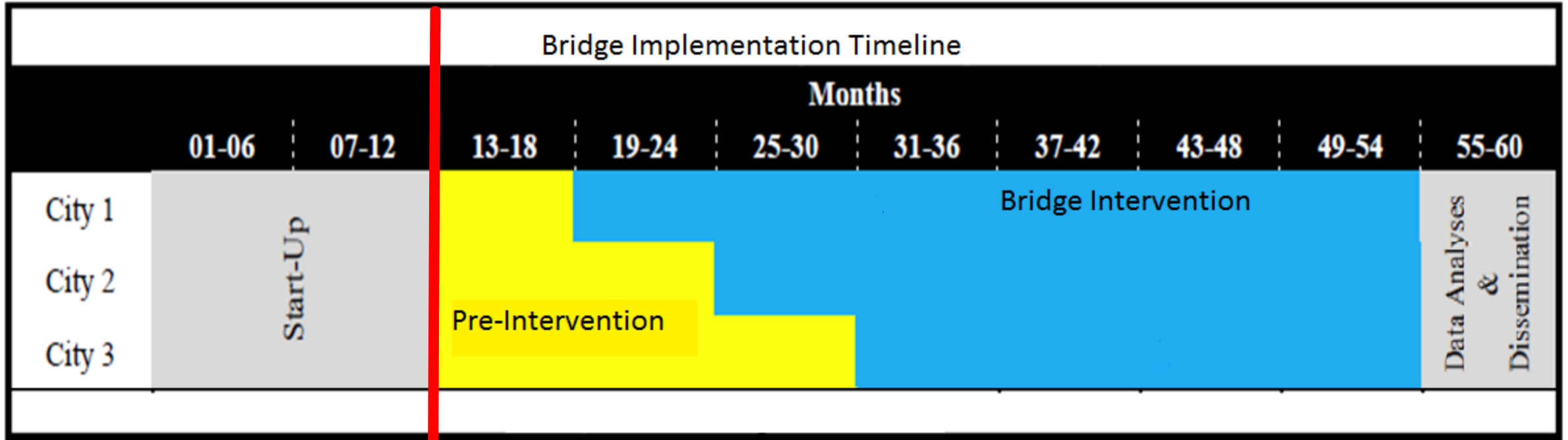
## 3) Longitudinal panel study

- HIV+ participants only
- Allows us to have a more in-depth look at factors influencing intervention

## 4) Implementation data

- Aims 3 & 4
- Based on CFIR framework

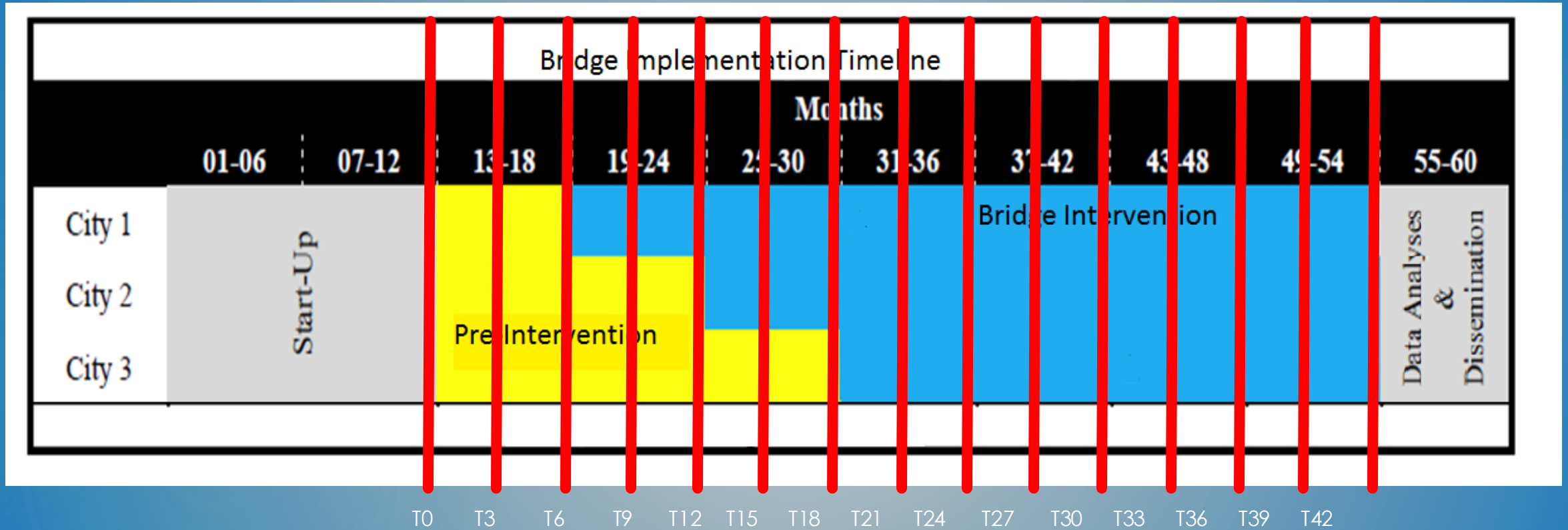
# Services & Linkage tracking system:



Implement client tracking system in August 2016 – T0

DATA COLLECTION BEGINS FROM THIS POINT

# Services & Linkage tracking system:



- Continuous collection of data, grouped into past 90 day windows (15 windows over course of project)
- Also used to keep track of process measures for intervention itself

# Data Sources to Assess Program Outcomes



## AppSheet

Google-based application run on tablets as a data collection tool



*Used by nurses and social workers at SEPs and AIDS Center*

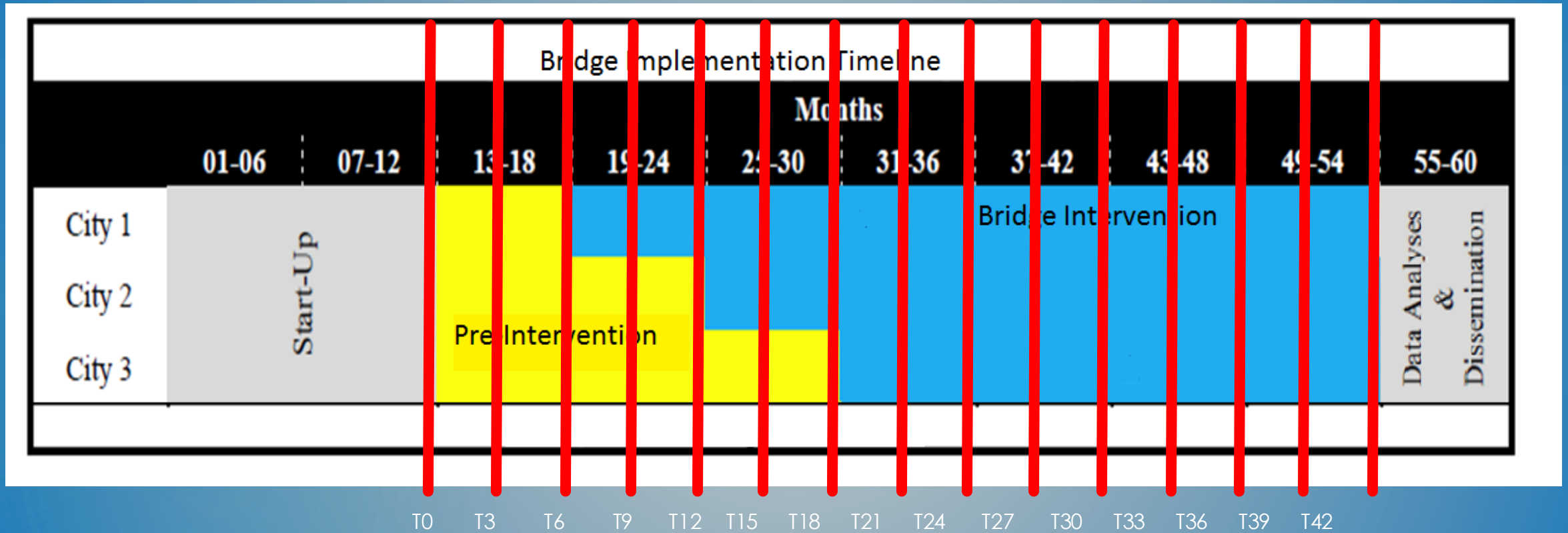


## Keychain

Each SEP client is given a keychain with a unique QR code

*SEP clients bring keychain to their regular SEP and AIDS Center visits*

# Epidemiological-Clinical Data from ACs:



- Quarterly reports from City AIDS Centers in each site (Karaganda & Temirtau separately)

# Epidemiological-Clinical Data from AC:

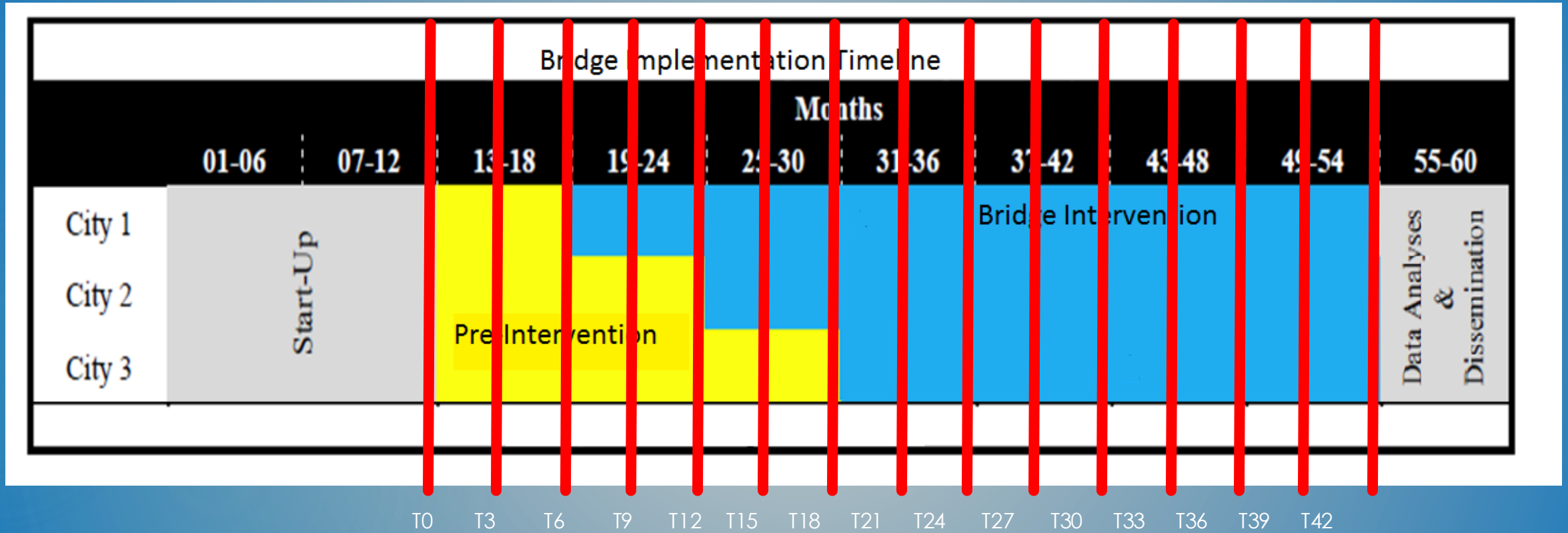
What data are we collecting?

- Visits to AC & purpose of visit
- Any testing done (confirmatory, CD4, Viral Load, STI) & results
- Medication & adherence information

How is data provided?

- AIDS Centers will provide report in excel format
- Deidentified data, but participants will be identified by:
  - Age
  - Gender
  - Randomly assigned ID
  - UIC or other indicator as to which NSP they receive services at

# Implementation Measures:



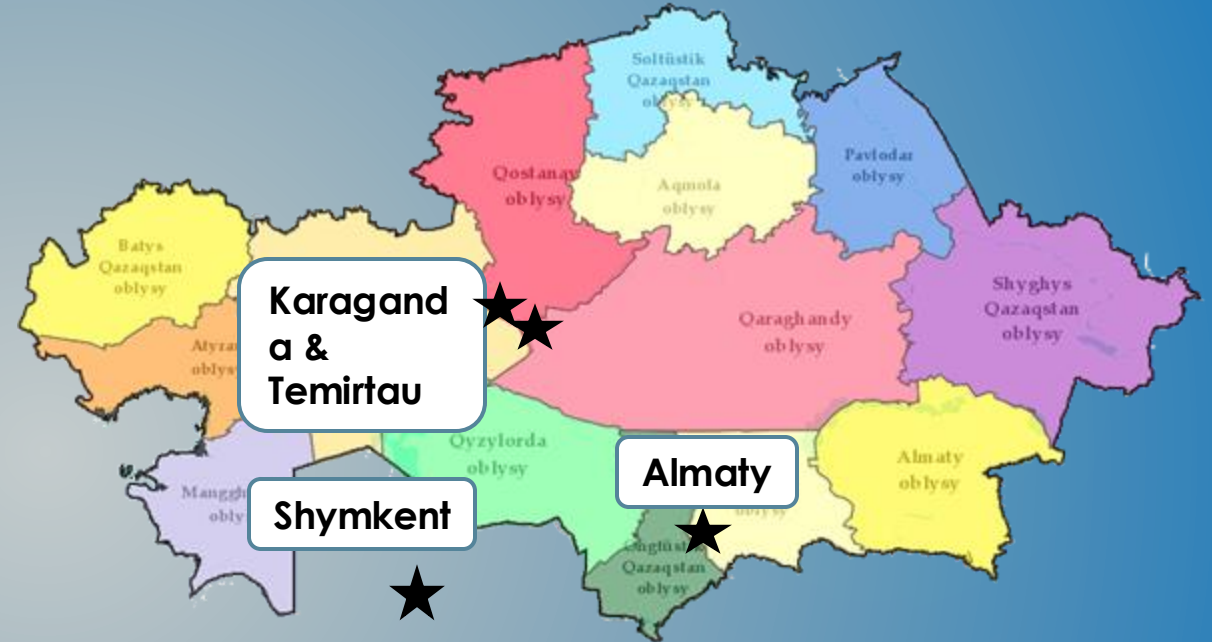
- Assessed quarterly

# Implementation measures:

- Acceptability
- Feasibility
- Fidelity
- Coverage and Reach
- Adoption and Penetration
- Sustainability

# Bridge Implementation

- ▶ Bridge was conducted in three cities throughout Kazakhstan
- ▶ 24 SEPs were selected for inclusion



Each city has:



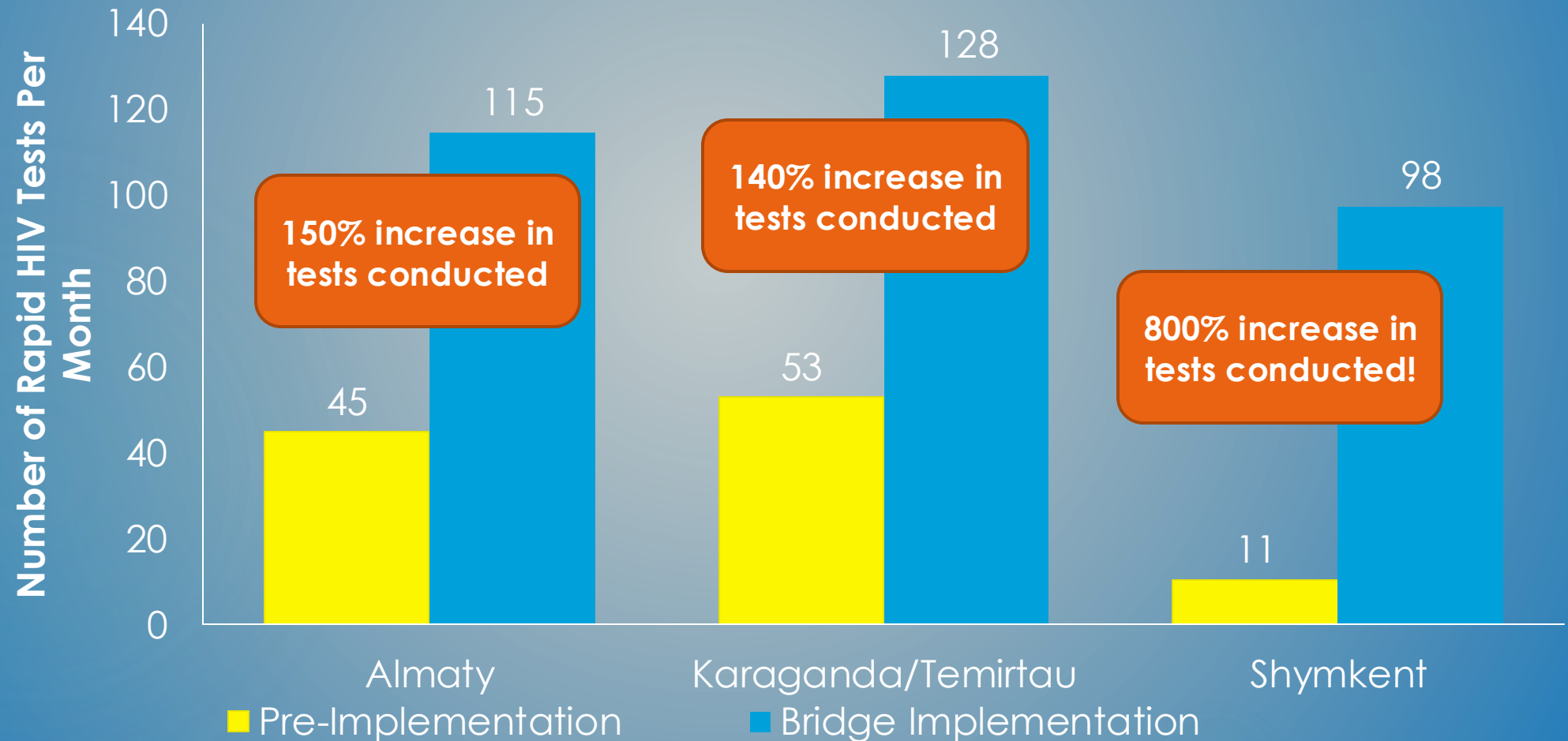
- 8 SEPs
- 8 nurses or social workers
- 16 outreach workers
- 1 supervisor from the local AIDS Center



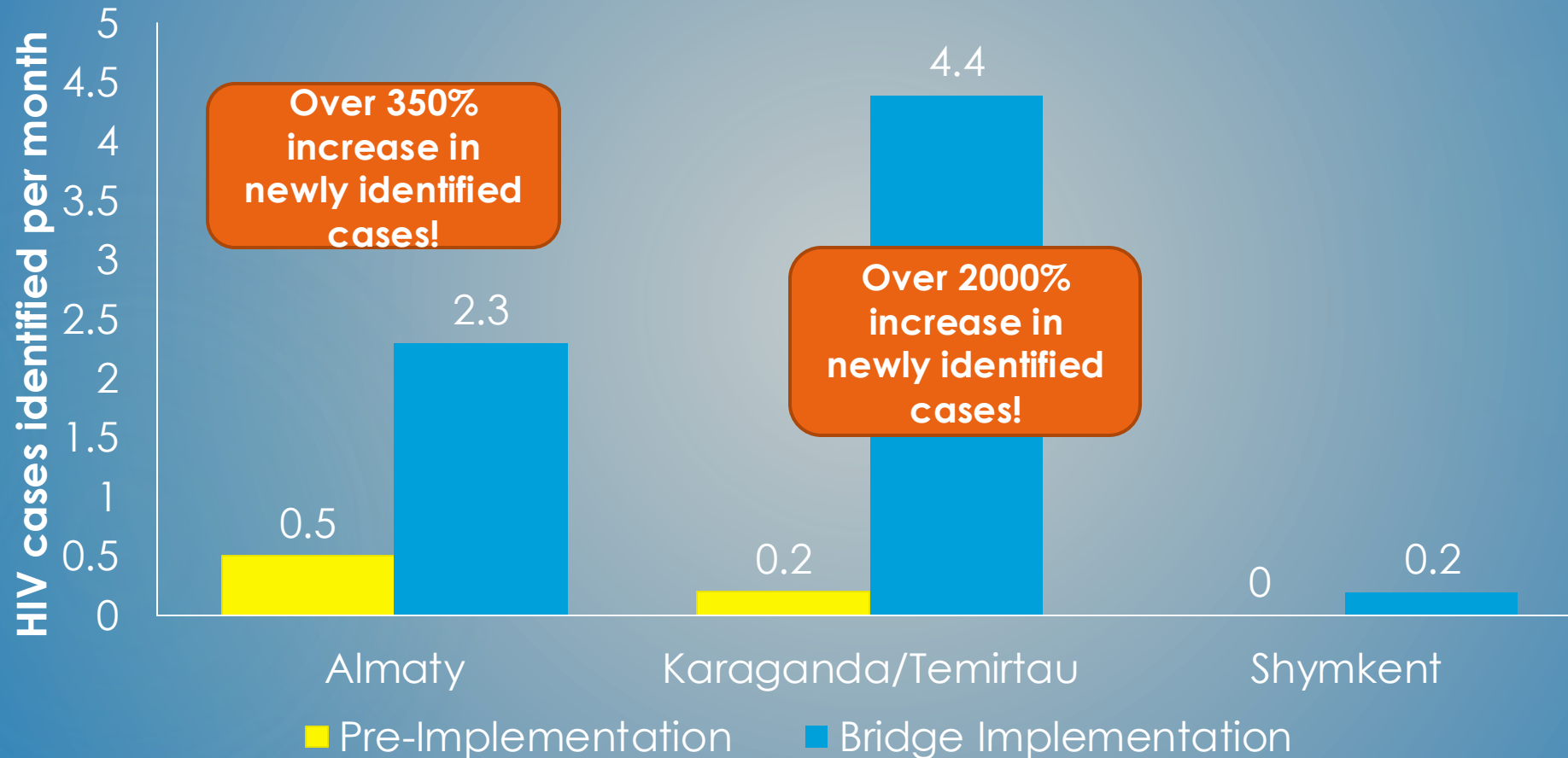
# Results

<b>Indicator</b>	<b>Value</b>
<b>Total clients enrolled</b>	24,093
<b>Clients tested for HIV</b>	13,943 (58%)
<b>New HIV diagnoses</b>	1,052
<b>Linked to HIV care (within 90 days)</b>	84%
<b>ART initiation</b>	72%
<b>ART adherence (among ART users)</b>	90%
<b>Viral suppression (among ART users)</b>	55%

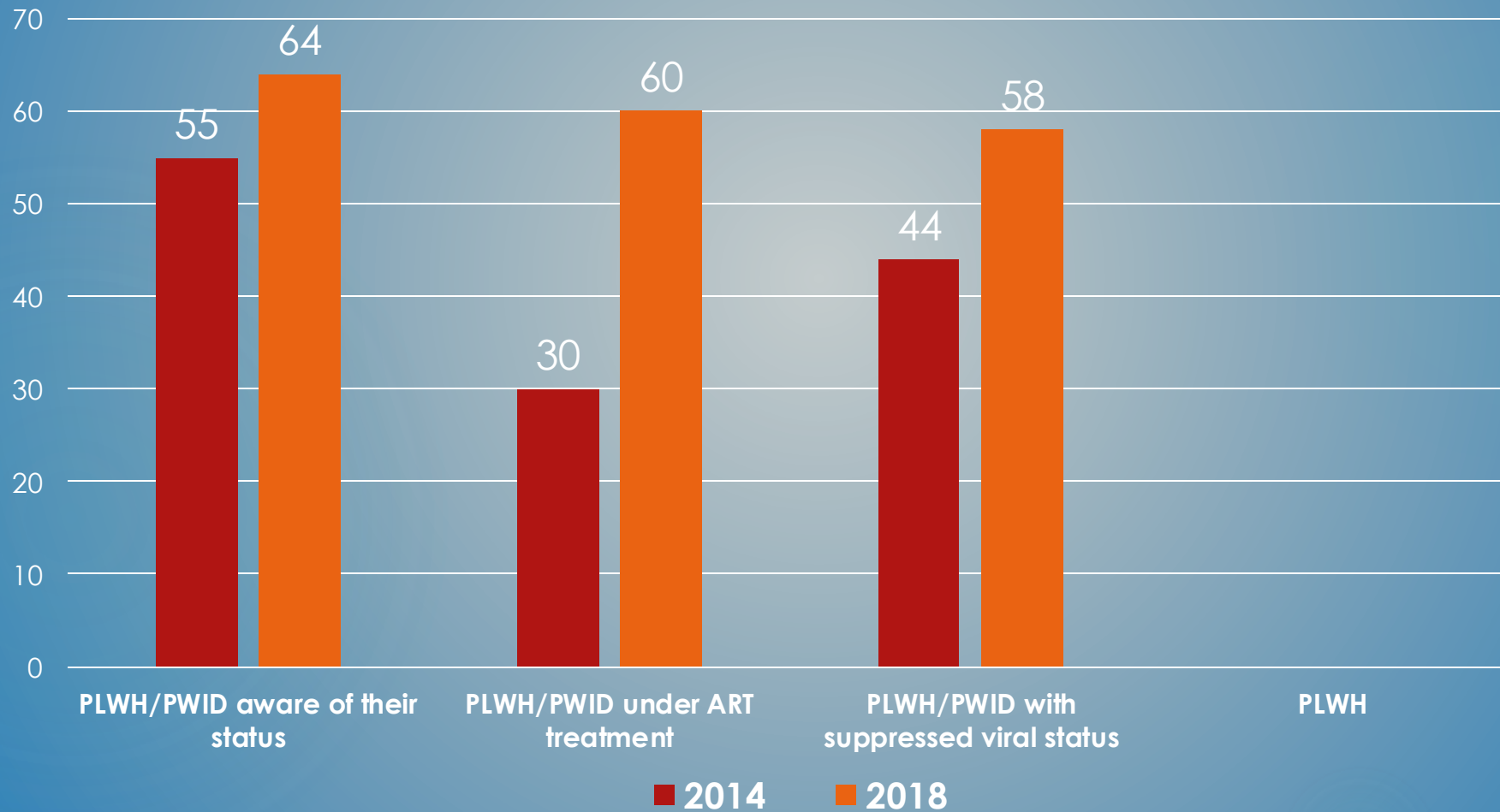
# Results: Bridge Increased Rapid Testing in SEPs



# Results: Bridge Identified More HIV Cases



# Cascade of HIV Care for PWID services in 2014-2018 in Bridge sites



# Real-world challenges & Lessons learned

Domain	Key Challenges	Lessons Learned
<b>Clients</b>	<ul style="list-style-type: none"><li>• Structural barriers (transportation, registration)</li><li>• Mistrust of medical system</li><li>• Lack of mental health/social services</li></ul>	<ul style="list-style-type: none"><li>• Build trust through peer engagement</li><li>• Co-locate services where possible</li><li>• Address psychosocial needs alongside HIV care</li></ul>
<b>Staff</b>	<ul style="list-style-type: none"><li>• Role redefinition was challenging</li><li>• Tension between data collection and service delivery</li></ul>	<ul style="list-style-type: none"><li>• Provide tailored training &amp; supervision</li><li>• Streamline data tools to reduce burden</li></ul>
<b>Organizational/System</b>	<ul style="list-style-type: none"><li>• Pressure to over-report services</li><li>• Confusion from overlapping programs</li><li>• Policy shifts (e.g., ART guidelines)</li></ul>	<ul style="list-style-type: none"><li>• Ensure harmonization with national programs</li><li>• Engage policymakers early</li><li>• Remain adaptive to changing standards</li></ul>

# Data from the study is used to provide recommendations to :

- ▶ **the Ministry of Health:** on to the structure, staffing, functional responsibilities, monitoring and performance improvement of Syringe exchange Points (changes to the Order #115) of Trust
- ▶ Departments of Health: on further integration of Syringe exchange Points with Primary Care; enhanced referral to social workers, narcologists and TB doctors within Primary Care, social contracting to NGOs
- ▶ Social Network Strategy, rapid testing and parts of ARTAS intervention were integrated into routine NGO practice and received social contracting and/or Global Fund funding

# Conclusion

- Bridge demonstrated that **integrated HIV services in harm reduction settings are both feasible and effective**
- The study resulted in **significant improvements** in HIV testing, diagnosis, treatment initiation, and viral suppression among PWID
- Implementation challenges were **dynamic and context-specific**, requiring real-time adaptation and flexible strategies
- Bridge informed **national policy**, leading to institutionalization of services and social contracting mechanisms
- The model is **scalable and transferable**, with lessons relevant for PrEP, overdose prevention, and broader health systems integration

# Acknowledgements:

- ▶ Columbia University and Social Intervention Group: Pis: Drs. Nabila El-Bassel Louisa Gilbert
- ▶ National Institute on Drug Abuse
- ▶ Republican AIDS Center & city/regional AIDS centers in Almaty, Karaganda, Temirtau & Shymkent
- ▶ SEP staff
- ▶ Participants of our research