

# Project VIDA

## *Decentralization of HIV Services in Peru*

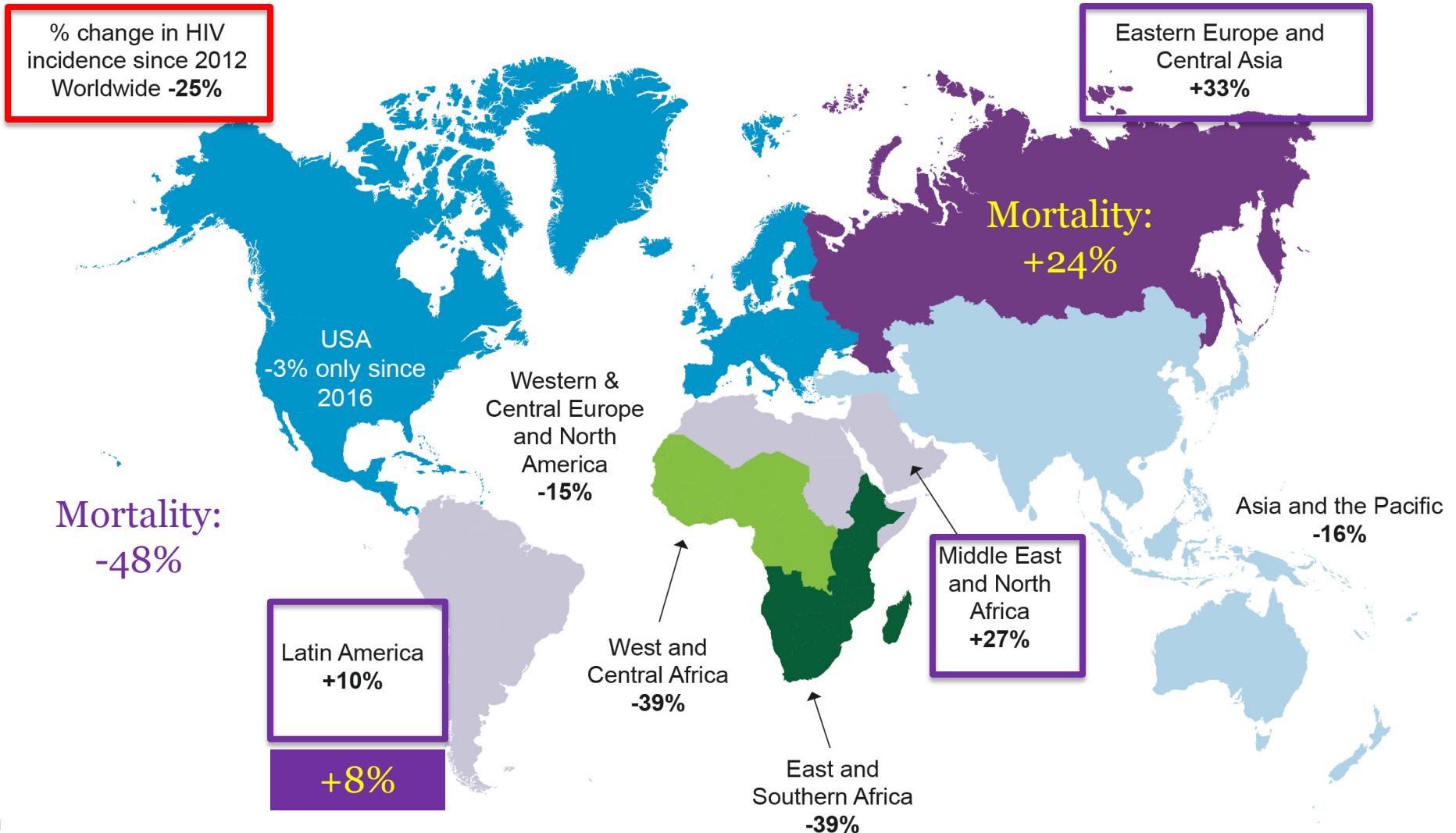
*Frederick L. Altice, M.D.*

*Professor of Medicine and Public Health*

*Yale University*



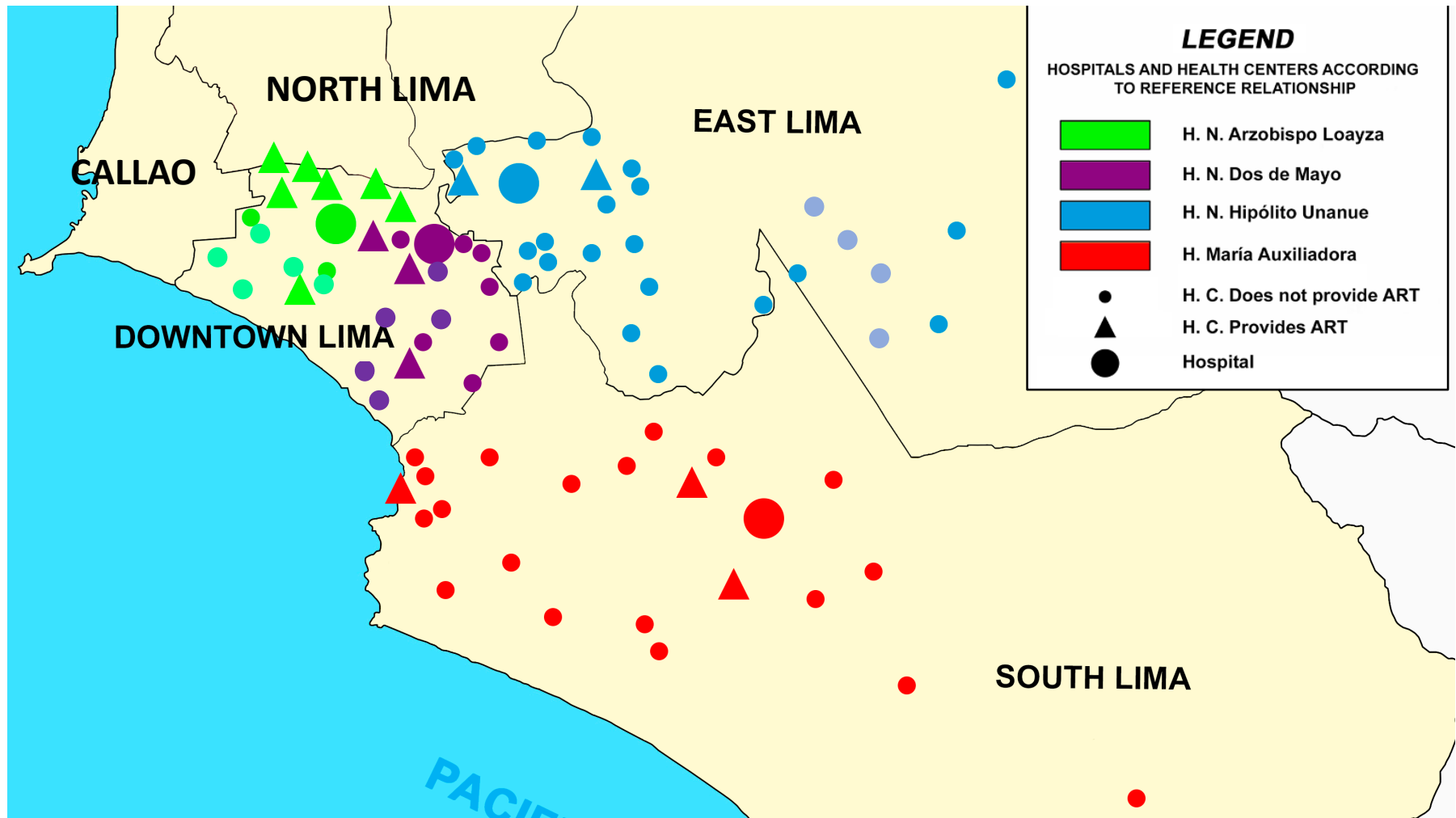
# UNAIDS: Percentage Change in HIV Incidence (2012-2022)



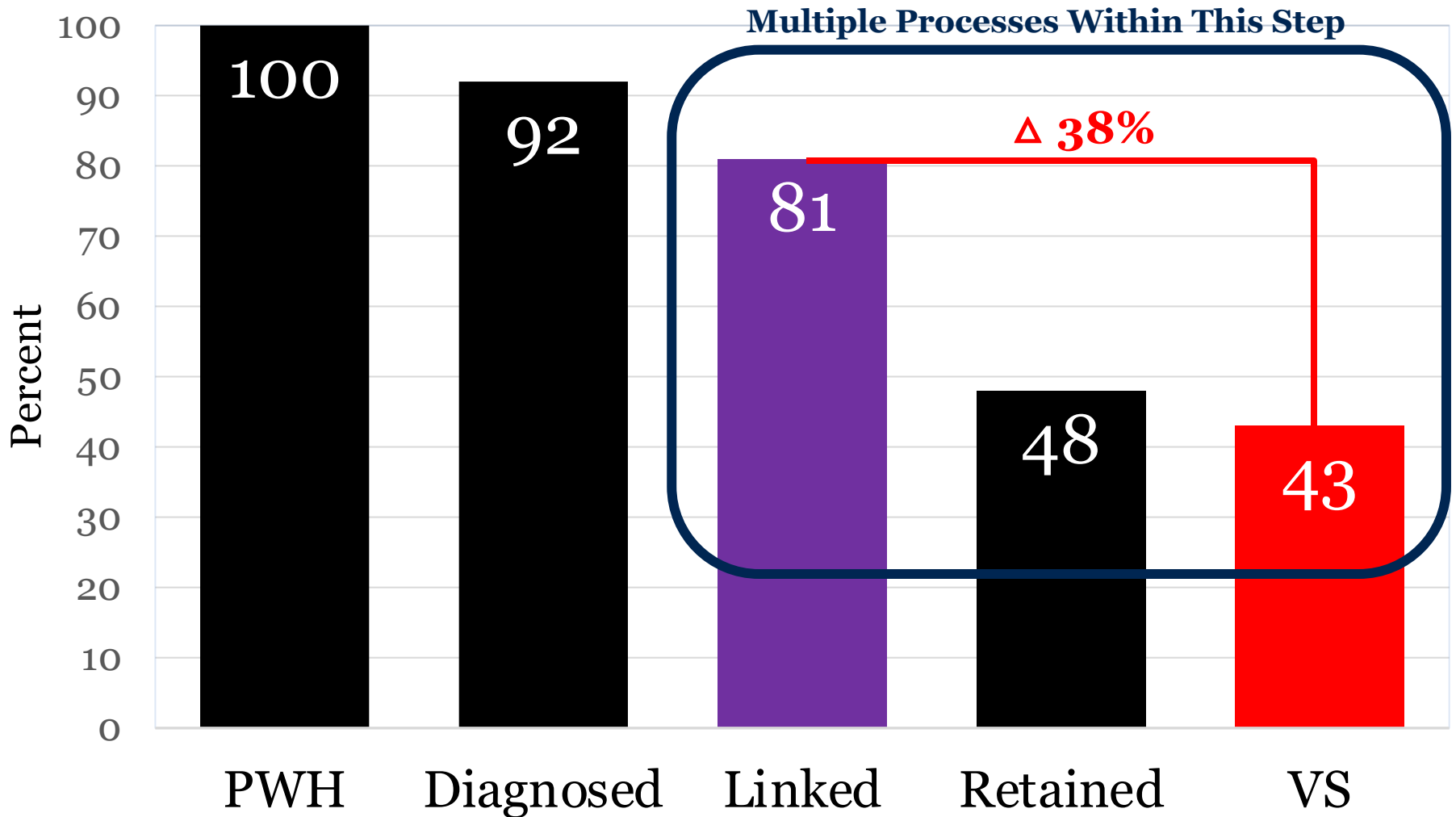
# Peruvian Context

- LMIC in South America with 33 million people
- PWH: 120,000
  - HIV incidence: +31%
  - HIV mortality: +24%
- HIV is concentrated in key populations, mostly MSM and TGW – 60% of all new infections
- Lima – the country's capital
  - a massive urban sprawl with 11 million people
  - 64% of all PWH

# Lima and HIV Services



# The HIV Treatment Cascade in Peru and HIV Treatment as Prevention



# HIV and Healthcare Service Delivery in Peru

- All HIV care and services are free by the MoH
- Centralized HIV care system
  - HIV care is concentrated in large specialty HIV clinics housed in large secondary health centers (SHCs)
  - 3,500 to 6,000 patients per clinic
- Peru's MoH set targets in 2019 to decentralize HIV services so that 80% of PWH are in primary health clinics (PHCs)
  - By 2022, only 10% of all PWH were treated in PHCs
- PHCs are capacitated by the MoH (district authorities) to ensure staffing, training, laboratory services and an onsite pharmacy

# Problem Statement

*Decentralized HIV care is an EBP recommended by WHO and UNAIDS, yet HOW do you decentralize care (in urban settings)?*



# Decentralized Care

## It works, but relatively little guidance on how!

- A systematic review in LMICs: 56 studies in 26 countries
  - INCREASES retention in care!
  - PHCs are more agile and accountable
  - Must have sufficient technical and clinical skills to be successful
  - PHCs, however, can make decisions more deftly
  - Quantitative findings: reduced mortality, reduced costs to the system and to patients, more convenient geographically, and generally better performance indicators
  - Qualitative findings: reduced access to specialists, concerns about patients receiving “quality” care, and stakeholder disagreements in terms of whether specialty care providers interfere in service delivery
- Concerns by PHCs: lack of confidence that they can manage PWH and they were too busy to take on more
- Concerns by SHCs: concerns that PHCs would not provide quality care and that they would lose their relationship with patients

# Decentralized Care – What is novel?

- Has never been tested using an experimental design
- No implementation studies were conducted – all health services outcomes
- Few studies of decentralized care in large urban settings
- Using innovative implementation strategies
  - Hub and Spoke reorganization

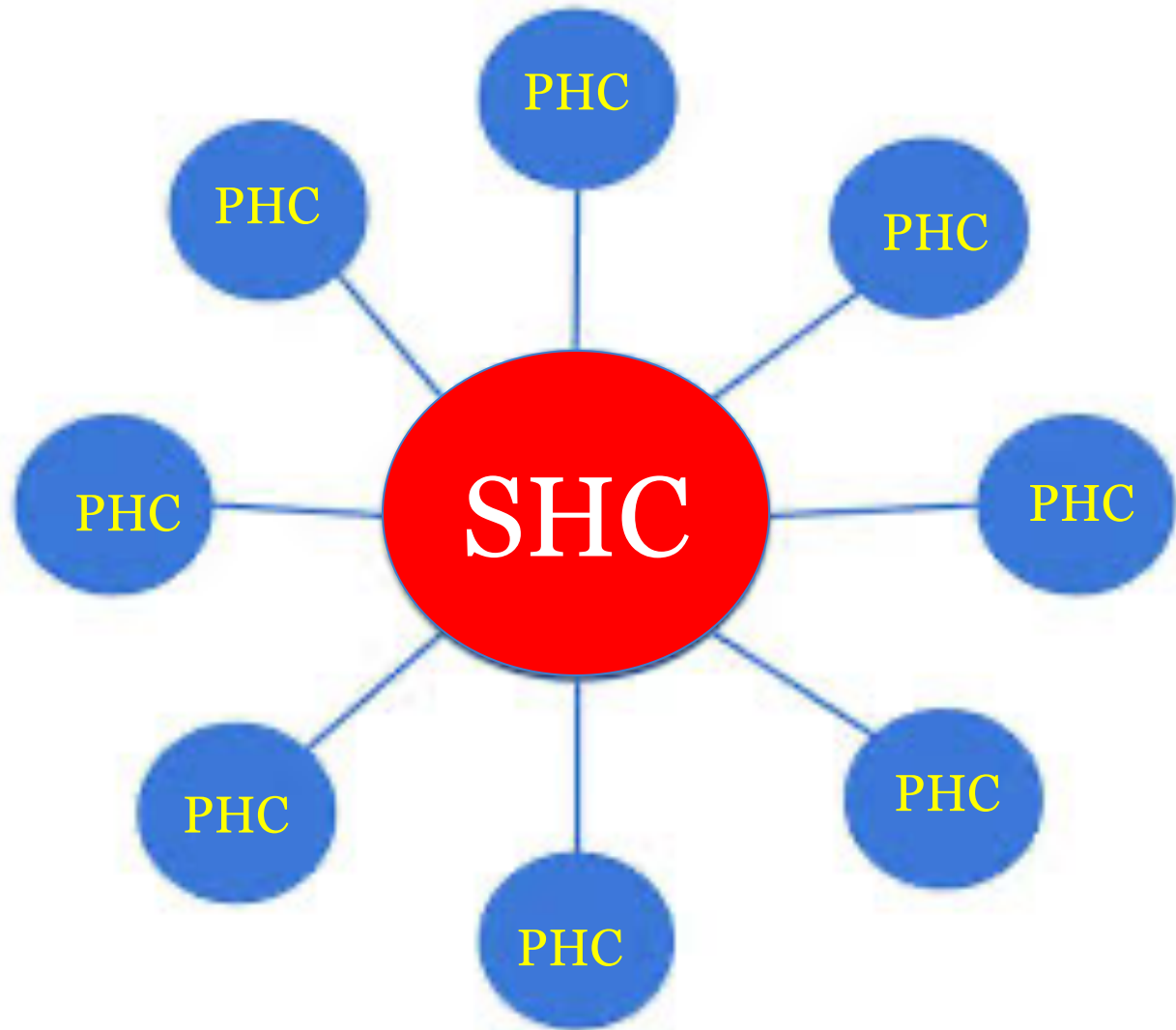
# Specific Aims

1. Develop guidelines for decentralizing care using the Delphi method:
  - Criteria for transferring patients between hub and spoke and for initiating treatment in PHCs
  - The most important quality health indicators (QHIs) needed to be assessed at PHCs to improve retention in care and VS.
2. To identify the barriers and facilitators to decentralized HIV care from patients and clinicians in SHCs and PHCs in Peru. Findings will guide a hub and spoke decentralized care model to facilitate decentralized HIV care.
3. Conduct a Type 2 hybrid, step-wedge trial with 5 spoke/hubs using the RE-AIM framework to assess the extent to which decentralized HIV services are adopted and scaled-up in PHCs over 24 months.

# Implementation Strategies

- Organizational Re-design: Spoke and Hub Model
- Blended: NIATx to guide and support service delivery
- Project ECHO: tele-education to train and longitudinally support clinicians

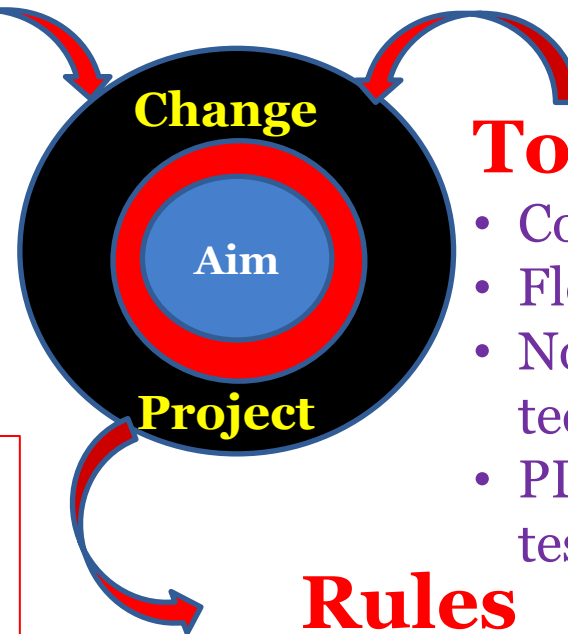
# Hub and Spoke Model



# The NIATx Model: Principles & Assumptions

## People

- Executive Sponsor
- Change Leader
- Change Team



## Tools

- Conduct walk-through
- Flow-charting
- Nominal group technique - barriers
- PDSA/Rapid cycle testing

## Rules

- Use existing resources
- Measure change objectively
- Sustain the gains

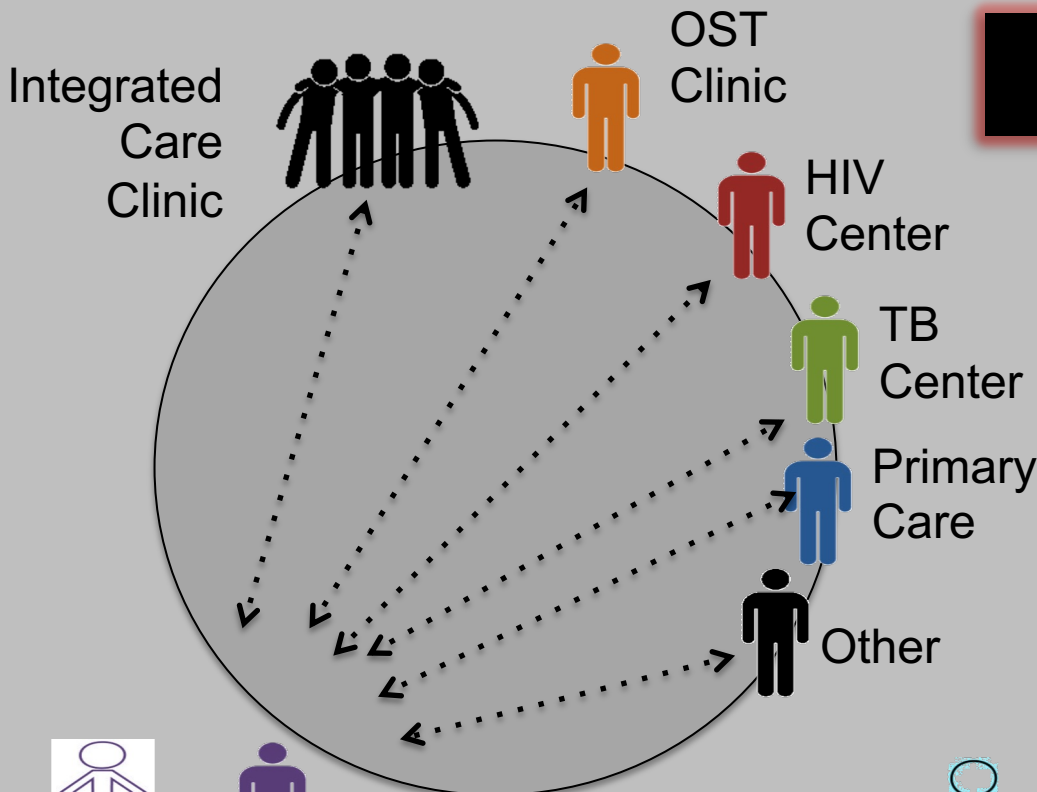
## Five Principles

- Understand/Involve the customer
- Fix Key Problems
- Choose a Powerful Change Leader
- Get Ideas from Outside the Organization
- Use Rapid-Cycle Testing

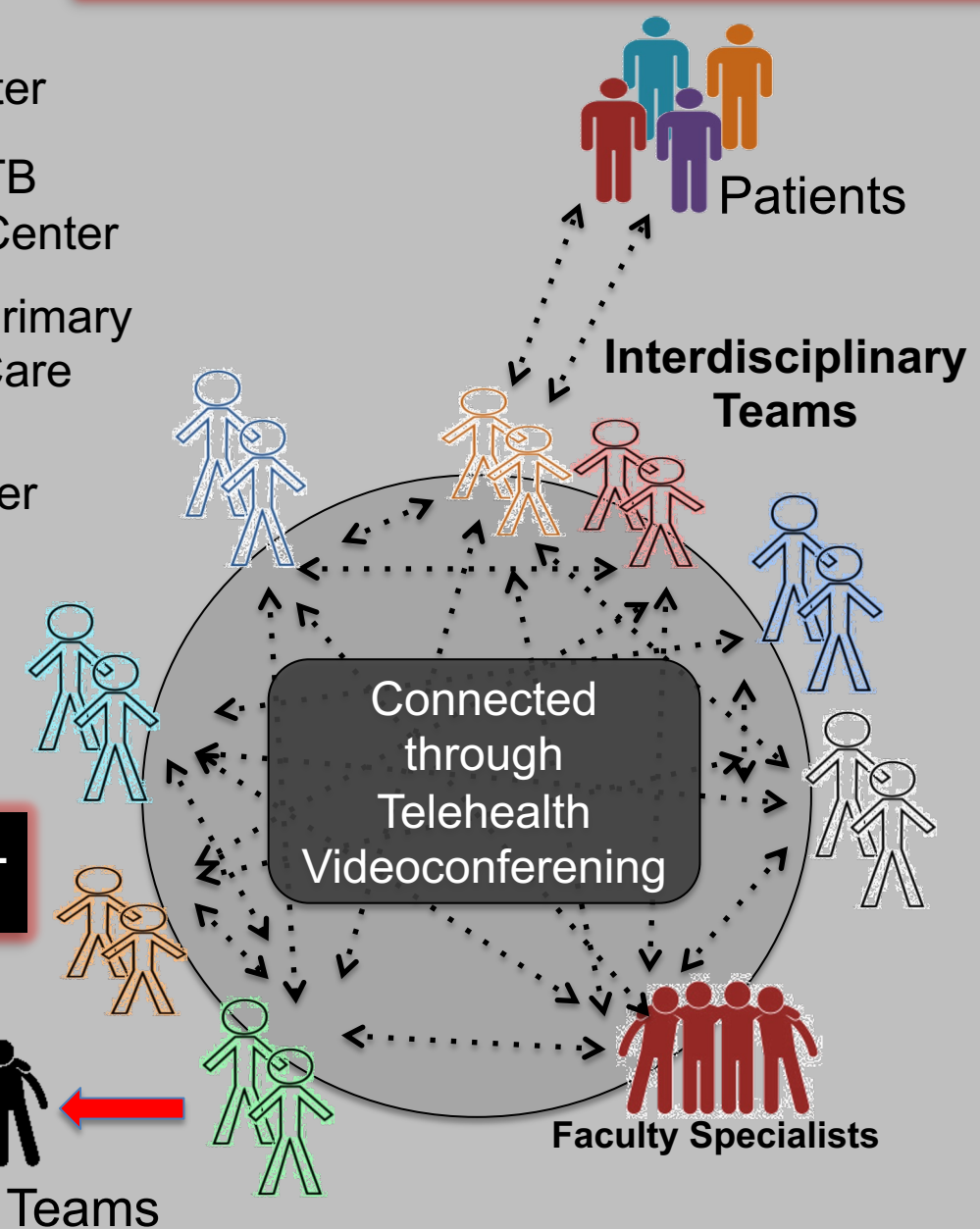
See: [www.niatx.net](http://www.niatx.net)

# ECHO KNOWLEDGE NETWORK MODEL

## Interactive Learning Environment



**NON-COLLABORATIVE REFERRAL MODEL**  
Patient Must Seek Independent Care



# A Selection of Implementation Strategies

## Use evaluative and iterative strategies

- Assess for readiness and identify barriers and facilitators
- Audit and provide feedback
- Purposefully reexamine the implementation

## Adapt and tailor to context

- Tailor strategies
- Promote adaptability
- Use data experts

## Train and educate stakeholders

- Conduct ongoing training
- Distribute educational materials
- Use train-the trainer techniques

## Engage consumers

- Increase demand
- Use mass media
- Involve patients/consumers and family members

## Change infrastructure

- Mandate change
- Change record systems
- Change physical structure and equipment

Hub and Spoke

NIATx

Project ECHO

# A Selection of Implementation Strategies

Hub and Spoke

NIATx

Project ECHO

- Facilitation
- Provide local technical assistance
- Provide clinical supervision

**Provide interactive assistance**

- Identify and prepare champions
- Organize meetings
- Identify early adopters

**Develop stakeholder interrelationships**

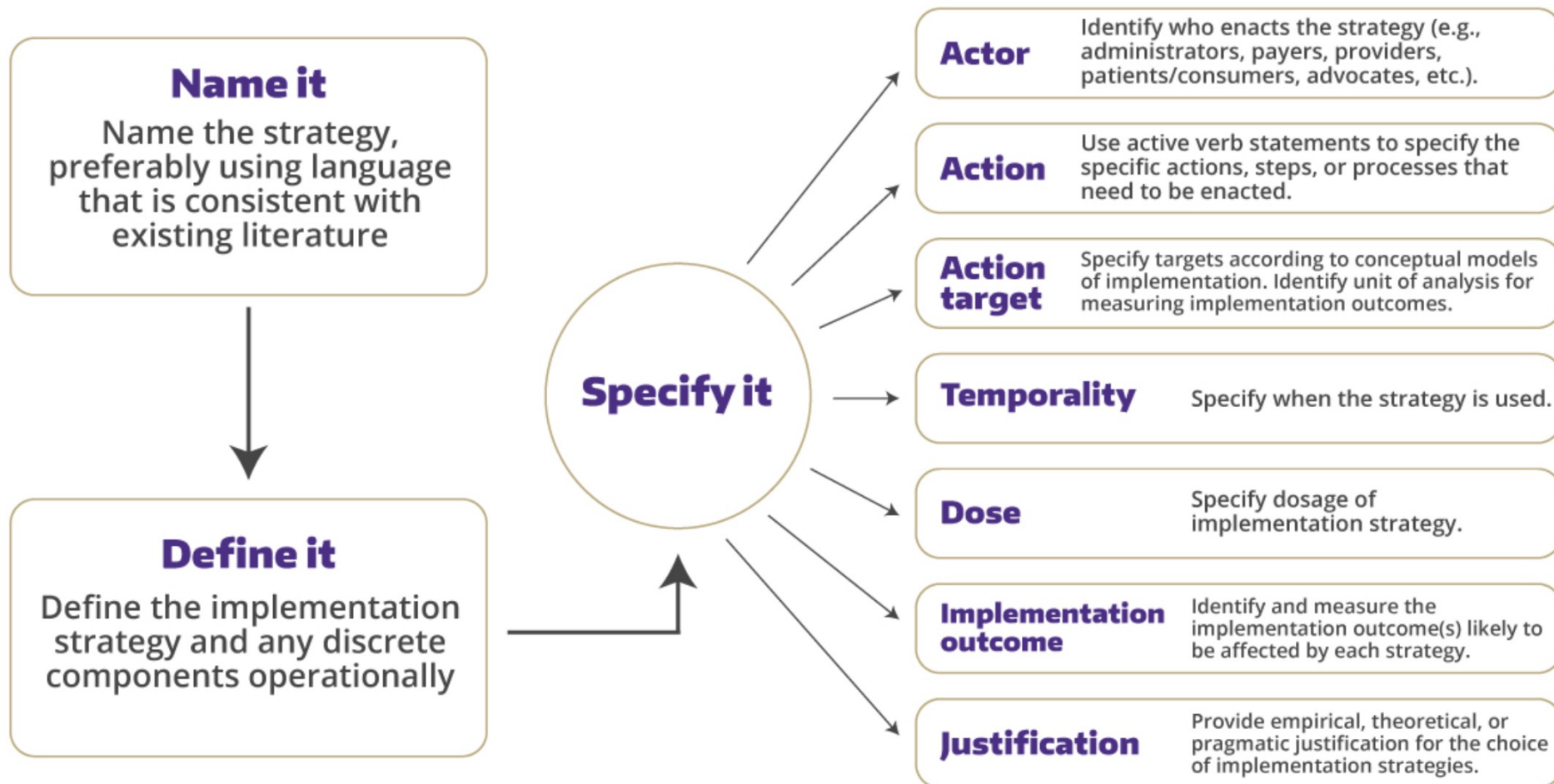
- Remind clinicians
- Revise professional roles
- Facilitate relay of clinical data to providers

**Support clinicians**

- Alter incentive/allowance structures
- Access new funding
- Fund and contract for the clinical innovation

**Utilize financial strategies**

# Specifying and Reporting Implementation Strategies for Reporting



# Clinics Involved in Hub and Spoke Model

Characteristics of the Hubs and Spokes in Urban Lima				
Characteristic	<b>HUBS:</b> Secondary Health Center (SHC)			
	Dos de Mayo	Loayza	Maria Auxiliadora	Unanue
Lima Region	Downtown (Central)	Downtown	South	East
Health Districts	Surquillo, La Victoria, San Borja, San Luis	Cercado, Breña	VMT, SJM, Chorrillos, Barranco, Miraflores	El Agustino, La Molina, Cieneguilla,
Patients/district	739,232	396,884	1,242,750	1,313,867
Pop. Density/km <sup>2</sup>	15,513	13,187	9,083	6,228
Total PWH	4,667	3,073	3,598	2,923
PWH in SHC	4,112	3,569	3,084	2,282
PWH in PHC	555	504	514	641
<b>SPOKES:</b> Total (1 <sup>o</sup> /2 <sup>o</sup> ) PHCs	15 (10/5)	18 (10/8)	77 (26/51)	55 (24/21)
PHCs w/PWH, N	3	7	3	2
Range of PWH, N	19-513	1-426	12-399	60-581
ID specialists, N	11	13	5	10

# Study Design

Month	0-6	7-12	13-18	19-24	25-30	31-36	37-42	43-48	49-54	55-60
<b>Group 3*</b>		Control	Control	Control	NIATx + ECHO	NIATx + ECHO	NIATx + ECHO	NIATx + ECHO	Main-tain	Analyze
<b>Group 2</b>		Control	Control	NIATx + ECHO	NIATx + ECHO	NIATx + ECHO	NIATx + ECHO	Main-tain	Main-tain	Analyze
<b>Group 1</b>		Control	NIATx + ECHO	NIATx + ECHO	NIATx + ECHO	NIATx + ECHO	Main-tain	Main-tain	Main-tain	Analyze

**Figure 3: Stepped Wedge Design**

\*Group 3 will consist of two Hub/Spokes

# RE-AIM Outcomes

**Table 2: Implementation measures within the RE-AIM framework (represents source of data)**

Domain	Definition	PWH	Clinicians at SHC (SHC-C) & PHC (PHC-C)	Policy-makers (MoH)
<b>Reach</b>	Absolute number, proportion, and representativeness of PWH who are considered for decentralization	Number of PWH who transfer from SHC to PHC in Lima and outside Lima (ED)	Characteristics of SHCs and PHCs (size, location, staffing) (S and ED)	MoH plans for decentralizing in Lima and throughout Peru (I)
<b>Effectiveness</b>	The extent to which PWH are transferred from SHCs to PHCs and consequently are RIC and achieve VS	% of PWH in each district: a) in PHCs; b) VS; and c) <b>RIC</b> . 2 <sup>o</sup> outcome: mortality (ED)	Clinical confidence, satisfaction, collaboration, role clarity, self-efficacy (S)	Perceived impact of treating PWH relative to other conditions (II)
<b>Adoption</b>	The extent to which new PHCs in each hub begin to accept PWH	Not assessed	Level of interest in treating PWH (S), treating PWH (S & ED)	Interviews with MoH & administrators at SHCs and district PHCs (II)
<b>Implementation</b>	NIATx and ECHO are delivered as intended	Ease of transfer, experience with PHCs, confidence in treatment (NGT)	<b>NIATx (C) &amp; ECHO fidelity</b> (C); Confidence in transferring and managing PWH (S); Self-efficacy (S); Collaboration and workplace climate (S)	What are the opportunities to decentralize outside of urban Lima and how? (II)
<b>Maintenance</b>	When and how much decentralization will occur in Peru? (ED)	Extent to which they want to continue care in PHCs (NGT)	Recommends decentralization to others (S/NGT); continued HIV care in PHCs	How will decentralization expand to other regions? (II)

ED: electronic database; NGT: nominal group technique; II: in-depth interviews; S: surveys; C: checklists; SD: stakeholder discussion

# Barriers to Transfer of HIV care to PHCs

## *PWH at SHCs*

- Stigma within the community if seen at PHCs – 11
- Stable relationship with current HIV provider – 4
- No ART available at PHCs – 3

## *Staff at SHCs*

- Lack of confidentiality and community stigma at PHCs – 22
- PHC physicians are not adequately trained in HIV care – 3
- Difficulty creating new relationships with PHC staff – 3
- Delays in transferring patient medical records to PHCs – 3

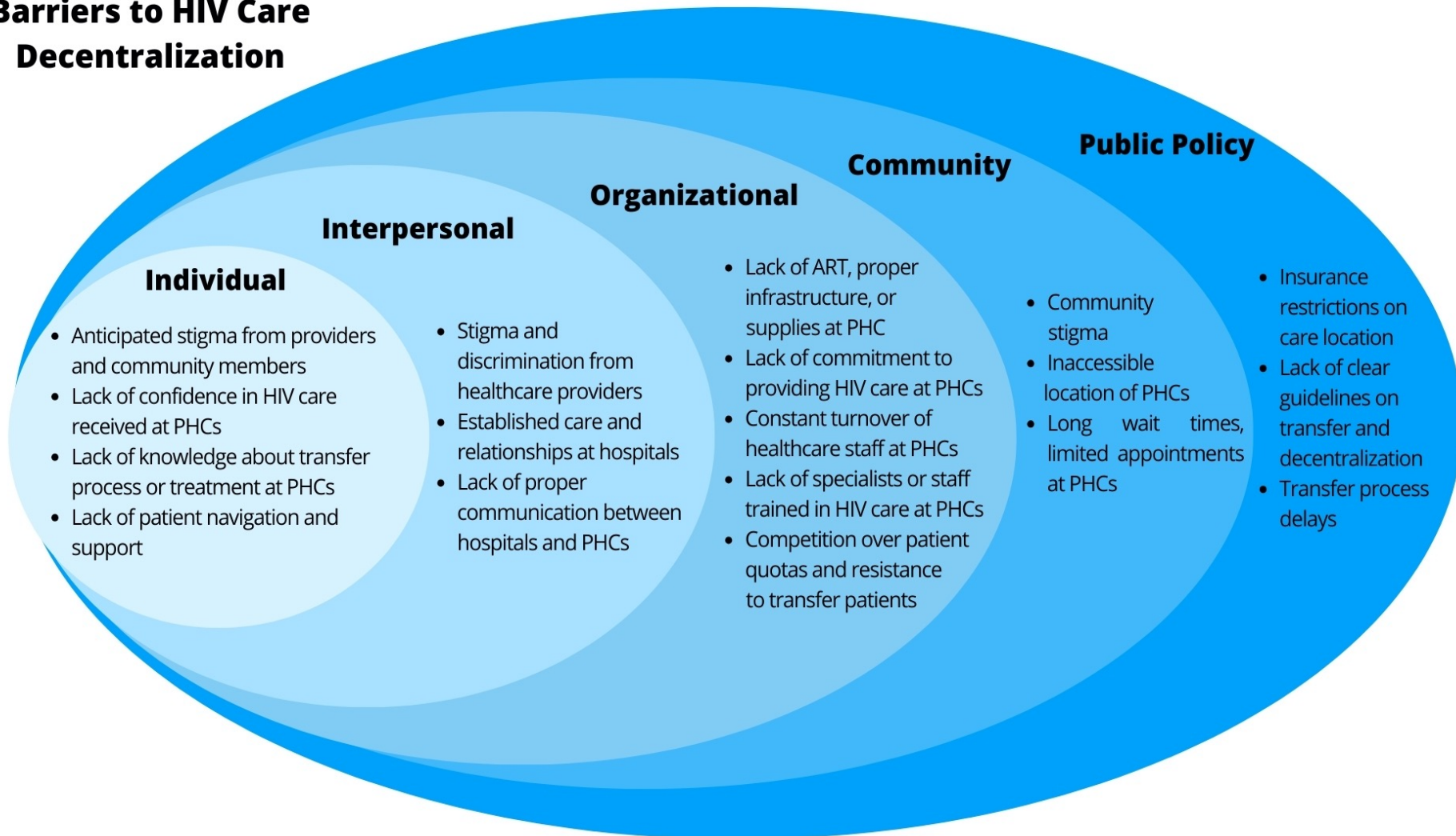
# Barriers to Transfer of PWH from SHCs to PHCs

## *Mixture of PHC and SHC clinical personnel*

<b>Barrier</b>	<b>Votes</b>
Concerns that PWH will receive suboptimal care in PHCs	23
Suboptimal infrastructure (ART, laboratory testing)	23
Lack of confidentiality and community stigma in PHCs	22
Lack of sufficient transfer and communication between SHCs and PHCs	21

# Socioecological Model of Barriers and Facilitators to Decentralization of HIV Care

## Barriers to HIV Care Decentralization



# Implementation Progress

- Added a fifth hub and spoke
- NIATx training, coaching, and collaborative learning started
- Project ECHO training started and is underway with high engagement – so far
- Hybrid data sources – national and local district-level
- Getting baseline data has been challenging - now we have more data than originally planned

# Questions?

