Penn Medicine

Division of Infectious Diseases

Using Community Health Workers to Deliver Managed Problem Solving to Improve the HIV Continuum of Care

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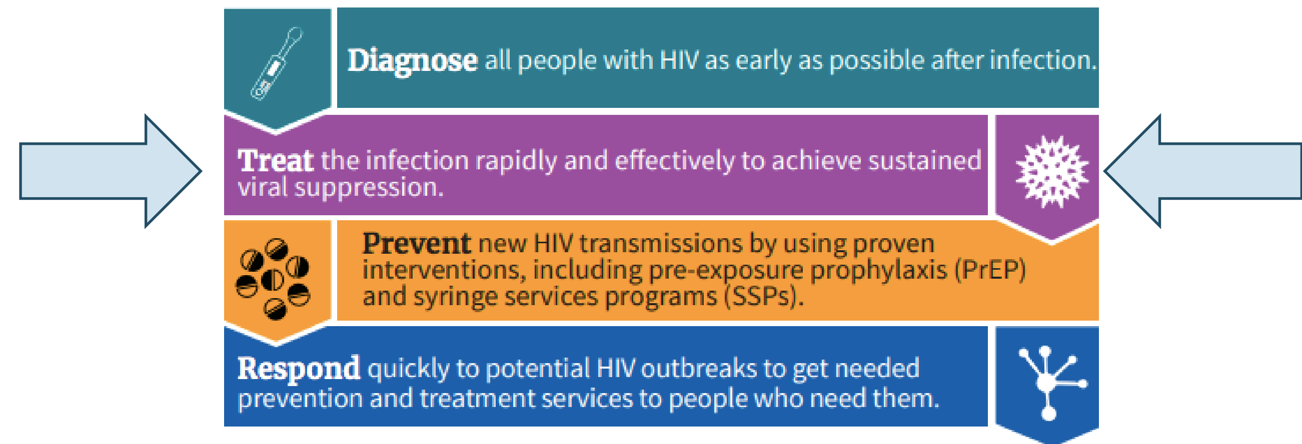
Ending
the
HIV
Epidemic

- The United States End the HIV Epidemic (EHE) initiative has set ambitious goals for 2030 to decrease new HIV infections by 90%
- Currently, many US counties fail to meet these goals, signaling a need for concentrated efforts in these counties to improve the HIV continuum of care by applying implementation science.

Image Source: https://files.hiv.gov/s3fs-public/ending-the-hiv-epidemic-flyer.pdf

Philadelphia is one of the 48 counties prioritized in the EHE initiative.

- In Philadelphia, 45% of people living with HIV (PLWH) are retained in care
- Only 49% have achieved viral suppression
  - The Philadelphia Department of Public Health (PDPH) established the goal of having 91% of PLWH with evidence of care in the last 5 years, achieve viral suppression
- Individuals not retained are responsible for 35% of HIV transmission



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MAPS targets adherence barriers through an iterative five-step process

1) IDENTIFYING BARRIERS TO ADHERENCE

2) BRAINSTORMING TO GENERATE POTENTIAL SOLUTIONS

3) MAKING DECISIONS AND DEVELOPING A PLAN OF ACTION

4) IMPLEMENTING THE PLAN

5) EVALUATING AND MODIFYING THE PLAN AS NECESSARY

Gross et al., *JAMA internal medicine.* 2013

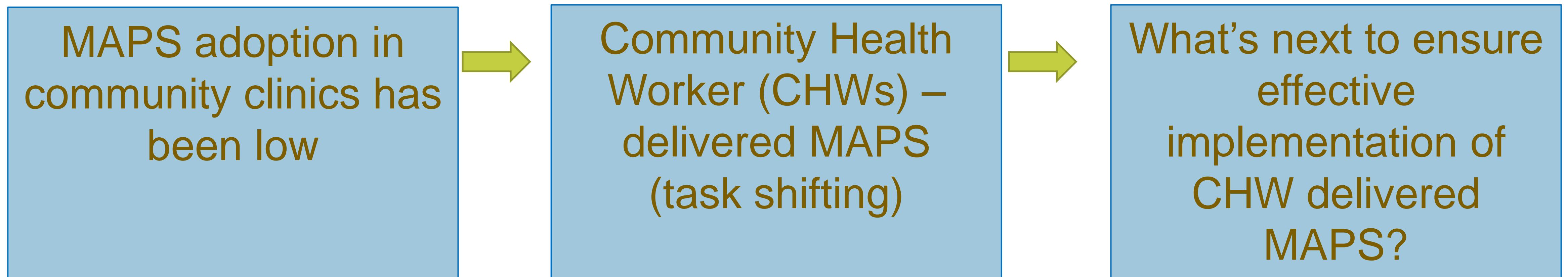
Intervention Delivery

- Initial visit
  - Duration 60-90 min
- 3 monthly follow-up visits
  - Duration 45-60 min
- Weekly phone calls for 3 month
  - Duration 5-20 min
- Monthly refill calls for 1 year
  - Duration 1-5 min

MAPS WORKS!

- MAPS associated with higher adherence
  - Odds of being in a higher category of adherence 2.33 (1.35-4.05) for MAPS vs. UC
- MAPS associated with higher odds of UDVL
  - Odds of UDVL=1.98 (1.15-3.41) favoring MAPS

MAPS implementation



Big Picture of Entire Project

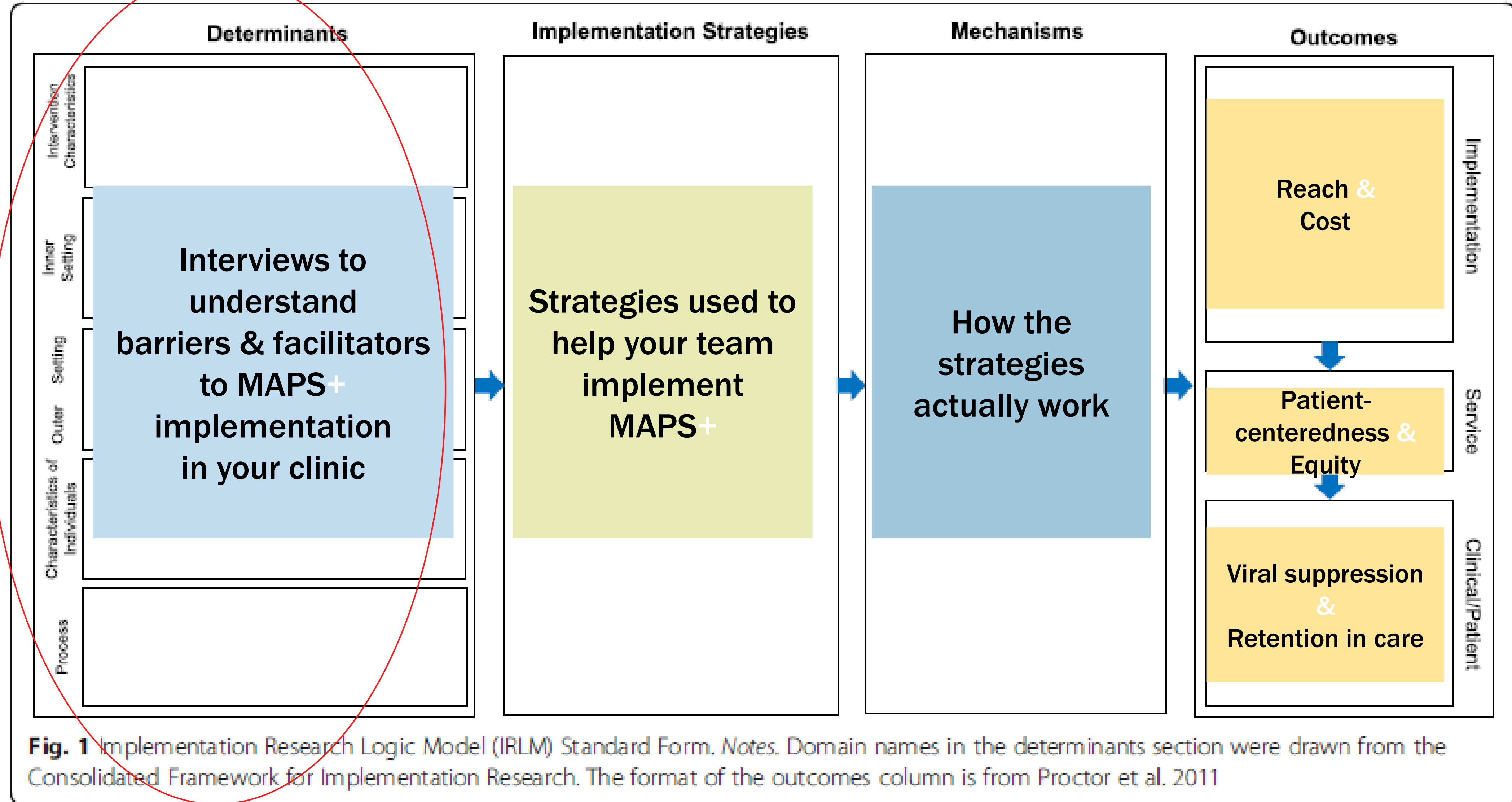


Fig. 1 Implementation Research Logic Model (IRLM) Standard Form. *Notes.* Domain names in the determinants section were drawn from the Consolidated Framework for Implementation Research. The format of the outcomes column is from Proctor et al. 2011

(Smith, Li & Rafferty, 2020)

Pre-implementation phase

Understand multilevel implementation context to maximize the likelihood that MAPS is equitably deployed into practice

Assess stakeholder perspectives of barriers and facilitators to CHW-delivered MAPS

- Utilizing rapid qualitative approach

Inform implementation planning for a subsequent hybrid Type 2 effectiveness-implementation trial

Participants: Stakeholder Groups from 13 HIV clinics

Stakeholders N=31	
Prescribing clinicians	6 (19.3%)
Non-prescribing clinical team members	14 (45.2%)
Clinical administrators	7 (22.6%)
Policymakers (PDPH)	4 (12.9%)

Methods: Qualitative Interviews

Consolidated Framework for Implementation Research (CFIR)

Intervention characteristics
MAPS characteristics

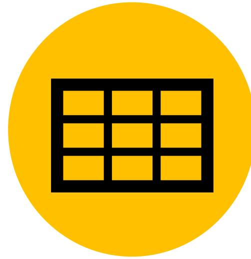
Outer setting
Economic, political, and social context

Inner setting
Ryan White clinics

Individuals Involved
Characteristics of CHWs and other staff

Implementation process

Rapid Qualitative Approach



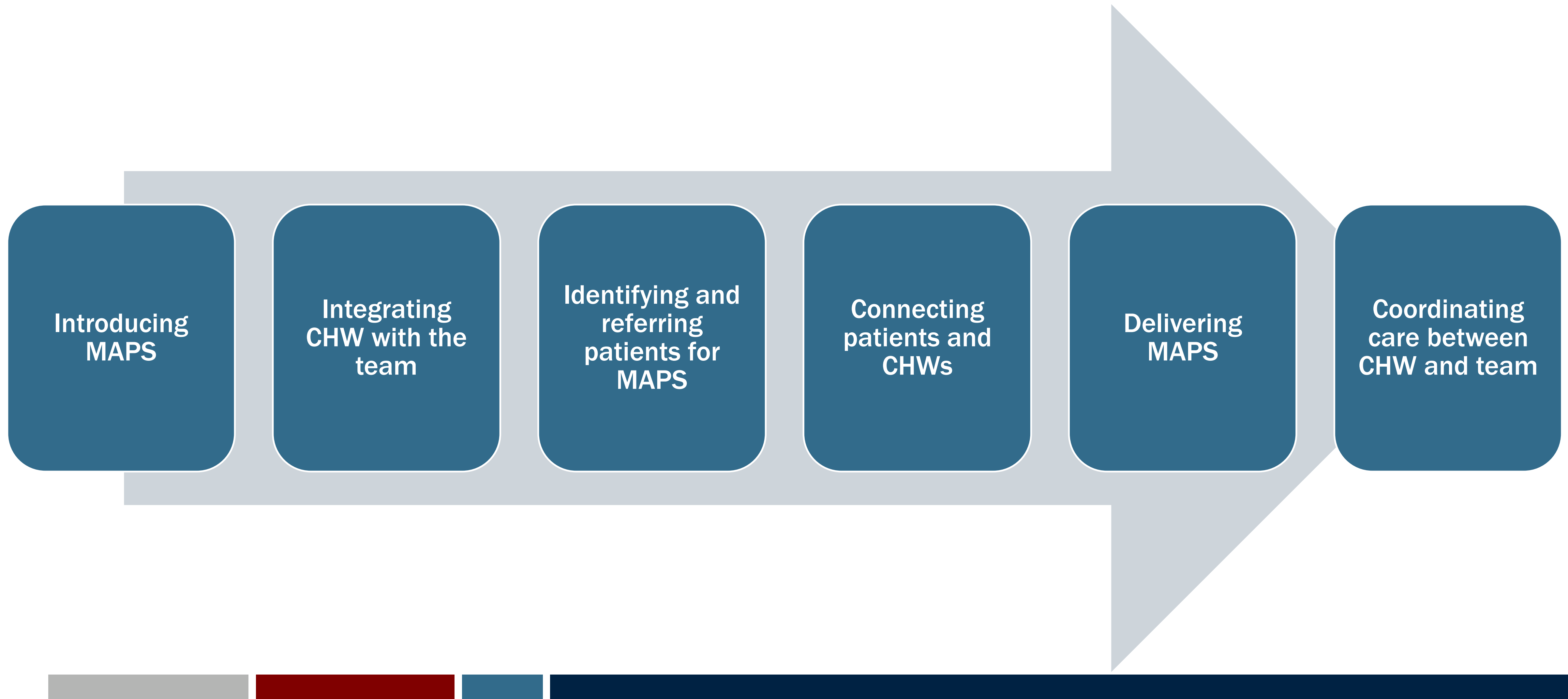
SUMMARY SHEETS

MATRIX DISPLAYS

SYNTHESIZE DETERMINANTS

IMPLEMENTATION PATHWAY

Preliminary Findings



MAPS IMPLEMENTATION PATHWAY

Introducing MAPS

- Leadership buy-in
- Messaging within clinics
- Education for the whole team on both MAPS and the CHW role

Integrating CHW with the team

- CHW onboarding & training process
- Workflow & role clarity across the team
- Clinic-level consultation/supervision for CHW

Identifying and referring patients for MAPS

- Existing processes for referral (e.g., data-generated lists, QI reports)
- Provider, outreach coordinator, administrator identification
- QI Meetings for identification
- CHW presence on-site

Connecting patients and CHWs

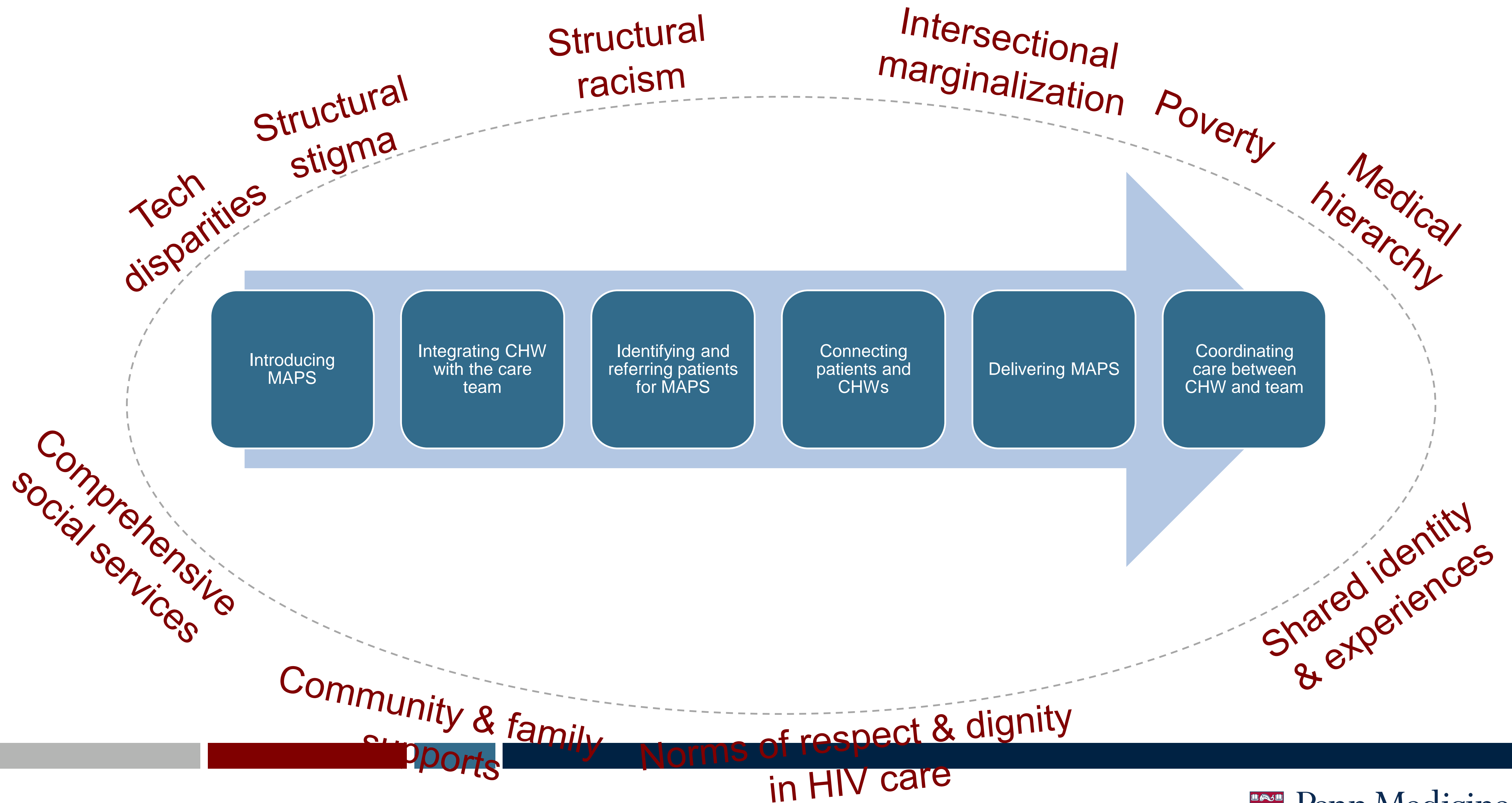
- CHW scheduling and availability
- Establishment of initial contact (e.g., warm handoff)
- CHW characteristics (e.g., representative of community, lived experience)
- Navigation of stigma/fostering trust

Delivering MAPS

- MAPS characteristics (e.g., length, number of sessions, language, literacy, patient-centered, structured)
- Flexibility of MAPS delivery (e.g., time/location/method)
- Potential patient burden

Coordinating care between CHW and team

- Existing technology platforms for communication
- CHW knowledge of cross-clinic processes
- Clear communication of patient needs
- Dissemination of effectiveness & outcomes


Introducing MAPS
Integrating CHW with the care team
Identifying and referring patients for MAPS
Connecting patients and CHWs
Delivering MAPS
Coordinating care between CHW and team
Tech disparities
Structural stigma
Structural racism
Intersectional marginalization
Poverty
Medical hierarchy
Shared identity & experiences
Norms of respect & dignity in HIV care
Community & family supports
Comprehensive social services

Limitations and Future Directions

Lack of patient and CHW involvement in this phase of contextual inquiry

Future work will include the perspectives and experiences of those delivering and receiving the intervention

Results may be more generalizable for urban settings and may not speak to unique challenges of rural or suburban clinics serving PLWH

Conclusion

1. CHW must be welcomed into the ***local clinic community***.
    - For successful integration, role clarity is essential
2. Teams must be ***on the same page*** with their messaging to patients.
    - Framing MAPS+ as an extra support (not a burden) is important
3. Processes must be tailored to ***promote efficiency*** with information sharing.
    - Brief, shared treatment plans may augment EHR-based communication

Early Implementation Phase

Figure 3. Observational (Control) and Active (Experimental) Phases by Randomized Site

Yr	-1				1				2				3				4			
Qtr	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Clinic																				
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

- Clinics are randomized to end the observational stage and move to the experimental phase
- Crossover is unidirectional
- Assess VL and retention before and at 1 year after implementation of MAPS

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