THE EFFECTIVE COVERAGE CASCADE

A research and program framework for optimizing effective coverage of equitable HIV/STBBI prevention and care services for priority populations

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Despite substantial progress over many decades, continued improvements in programming remain essential to address HIV/STBBI epidemics.

Persistent gaps between public health science and approaches to optimize service coverage within public health programs for priority populations contribute to these shortcomings.

- Service coverage among priority populations remains low in many contexts
- Geographic heterogeneity within epidemics means that certain areas require more intensive programming and expanded services

Programs require timely, context-specific evidence for refinement and adaptation to address gaps and improve inequitable health outcomes.

Traditional cascade models[1,2] are useful for examining progress along a continuum of HIV prevention and care services at the population-level but are ***limited in their identification and examination of inequities in service coverage*** within and between different population subgroups.

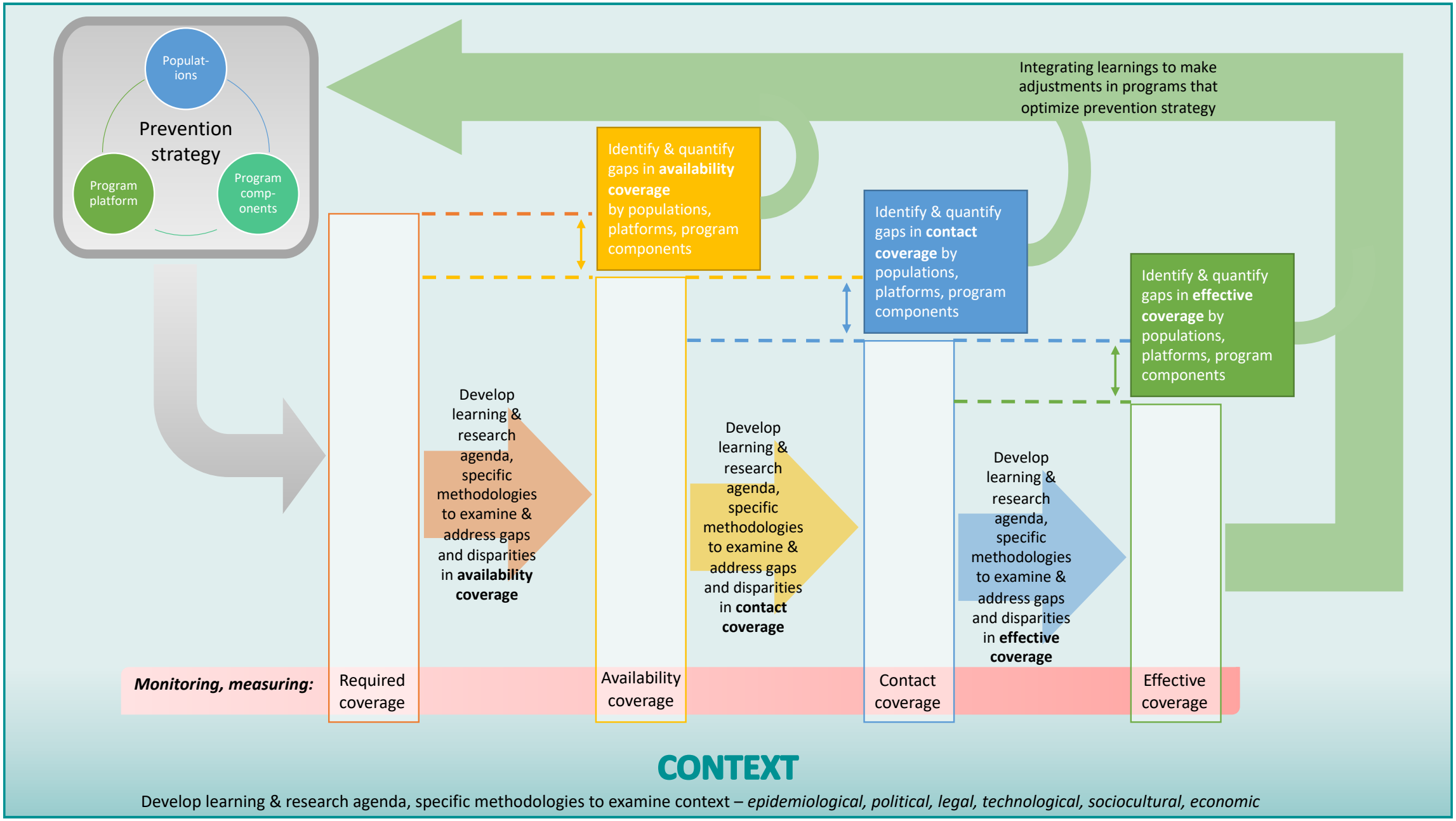
FRAMEWORK DEVELOPMENT & CONCEPTS

During February-July 2021, we hosted a series of virtual workshops to ***develop a research and program framework*** for HIV/STBBI prevention and care programs.

Centred on Program Science[3] and grounded in public health programming, the ***Effective Coverage Cascade framework*** guides the development of program-embedded research agendas that iteratively generate evidence for program optimization and equitable population-level health outcomes.

The Effective Coverage Cascade framework adapts and expands upon prevention and treatment cascades[1,2] and Tanahashi's health service coverage model.[4]

By identifying and quantifying gaps in four dimensions of HIV/STBBI service coverage (required-, availability-, contact-, effective-), this framework examines inequities in coverage, considers how context influences them, and informs strategies to address them through program-generated, evidence-informed refinements.


Populat-ions
Prevention strategy
Program platform
Program comp-onents
Integrating learnings to make adjustments in programs that optimize prevention strategy
Identify & quantify gaps in **availability coverage** by populations, platforms, program components
Identify & quantify gaps in **contact coverage** by populations, platforms, program components
Identify & quantify gaps in **effective coverage** by populations, platforms, program components
Develop learning & research agenda, specific methodologies to examine & address gaps and disparities in **availability coverage**
Develop learning & research agenda, specific methodologies to examine & address gaps and disparities in **contact coverage**
Develop learning & research agenda, specific methodologies to examine & address gaps and disparities in **effective coverage**
Monitoring, measuring:
Required coverage
Availability coverage
Contact coverage
Effective coverage
CONTEXT
Develop learning & research agenda, specific methodologies to examine context – *epidemiological, political, legal, technological, sociocultural, economic*

FRAMEWORK COMPONENTS& PROCESS

Program's prevention strategy

Informed by local context, shapes implementation process depending on the *population*, *program components* (i.e., intervention mix) and *program platform* (how services are delivered, and the providers delivering those services).

Required coverage

The proportion of a population that must receive program services, based on assessed need.

Availability coverage

The resources, infrastructure, and relevant services available through a program. Measured as a proportion of required coverage.

Contact coverage

Service output vis-à-vis contact between provider and user. Measured as a proportion of required coverage.

Effective coverage

Health benefits derived from program services, among those in contact with the program. Measured as a proportion of required coverage. This is really getting at measuring service coverage with quality.

During implementation, programs **measure coverage** by deriving estimates for each coverage cascade step.

- Gaps in service coverage along the cascade should be **examined through an equity lens**.

Once gaps are identified and quantified, a program can focus on **examining, understanding, and addressing** them by developing a program-embedded research or learning agenda.

As knowledge, evidence, and learnings are generated, it is also being **fed back, iteratively and rapidly**, into the program to inform, adjust, and re-design the prevention strategy as well as specific implementation approaches.

The **context** (epidemiological, political, legal, technological, sociocultural, economic) in which a program is embedded influences, and is influenced by, the program implementation and optimization processes.

IMPLICATIONS

- Strategies and frameworks for operationalizing principles of health equity and measuring progress toward equity remain scarce.
    - The Effective Coverage Cascade framework is a novel tool to address this gap.
- If service coverage is conceptualised as a fundamental element of achieving equity in HIV/STBBI outcomes, greater consideration should be given to the expansion and optimization of service delivery strategies and platforms to provide a wider range of health and social services for priority populations.
- While many countries and policy makers may have committed to improving health equity, implementers are struggling with operationalizing these important commitments and identifying the pathways required to ensure the pledge to *leave no one behind*.[5]

References

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