ATLANTA HYPERTENSION INITIATIVE SEPTEMBER LEARNING SERIES

A Continued Conversation on Using Implementation Science to Improve Blood Pressure Control

September 3, 2026
12:00pm-1:00pm

THE ATLANTA HYPERTENSION INITIATIVE (AHI)



- A **collaborative group** (government, health care, community organizations, and professional associations)
- To **harness the power of collaboration**
- For **one shared vision:**

Healthier Atlantans through equitable hypertension control

Backbone Organizations

- CDC Foundation
- Atlanta Regional Collaborative for Health Improvement (ARCHI)
- American Medical Association (AMA)
- Atlanta-area American Heart Association (AHA)
- *Centers for Disease Control and Prevention (CDC)**

+

90+

Metro Atlanta Organizations *To-Date*

**Founding Organization; Technical Advising Only*

A Continued Conversation on Using Implementation Science to Improve Blood Pressure Control

Hilary K. Wall, MPH
Senior Scientist/Million Hearts Science Lead
Centers for Disease Control and Prevention

Atlanta Hypertension Webinar
September 3, 2026

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Disclaimer

No disclosures

The opinions expressed by authors contributing to this project do not necessarily reflect the opinions of the US Department of Health and Human Services, the Public Health Service, the Centers for Disease Control and Prevention, or the authors' affiliated institutions. Use of trade names is for identification only and does not imply endorsement by any of the groups named below.

This presentation is intended for members of the Atlanta Hypertension Initiative and not for broad dissemination.

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Learning Objectives

- Understand what implementation science is
- Explain the difference between evidence-based interventions and implementation strategies
- Learn a four-step process for selecting implementation strategies
- Describe why implementation outcomes are important

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Morris ZS, et al. J R Soc Med. 2011;104(12):510-20.

Simplified Implementation Science

The intervention/practice/innovation is THE THING
Implementation strategies are the stuff we do to try to help people/places **DO THE THING**
Main implementation outcomes are **HOW MUCH** and **HOW WELL** they **DO THE THING**

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Adapted from Curran GM. Implement Sci Commun. 2020. 25;1:27.

How to Select Implementation Strategies

Step	Tasks
Step 1 – Determine who needs to do what, differently	• Identify the evidence-to-practice gap • Specify the behavior change needed to reduce the gap • Specify applicable health professional group(s)
Step 2 – Determine which barriers/facilitators need to be addressed/leveraged	• Use qualitative and/or quantitative methods to identify barriers and enablers to behavior change
Step 3 – What can we do about it?	• Identify what is likely to be feasible, locally relevant, and acceptable and combine identified components into an acceptable intervention that can be delivered
Step 4 – Evaluate the results	• Choose appropriate outcome measures

French SD, et al. Implement Sci. 2012;7:38.

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Improving Blood Pressure Measurement Accuracy

Examples of evidence-to-practice gaps:

- Improper positioning of patient – exam room
- Improper preparation/positioning of patient – technique
- No confirmatory BP measurements as appropriate

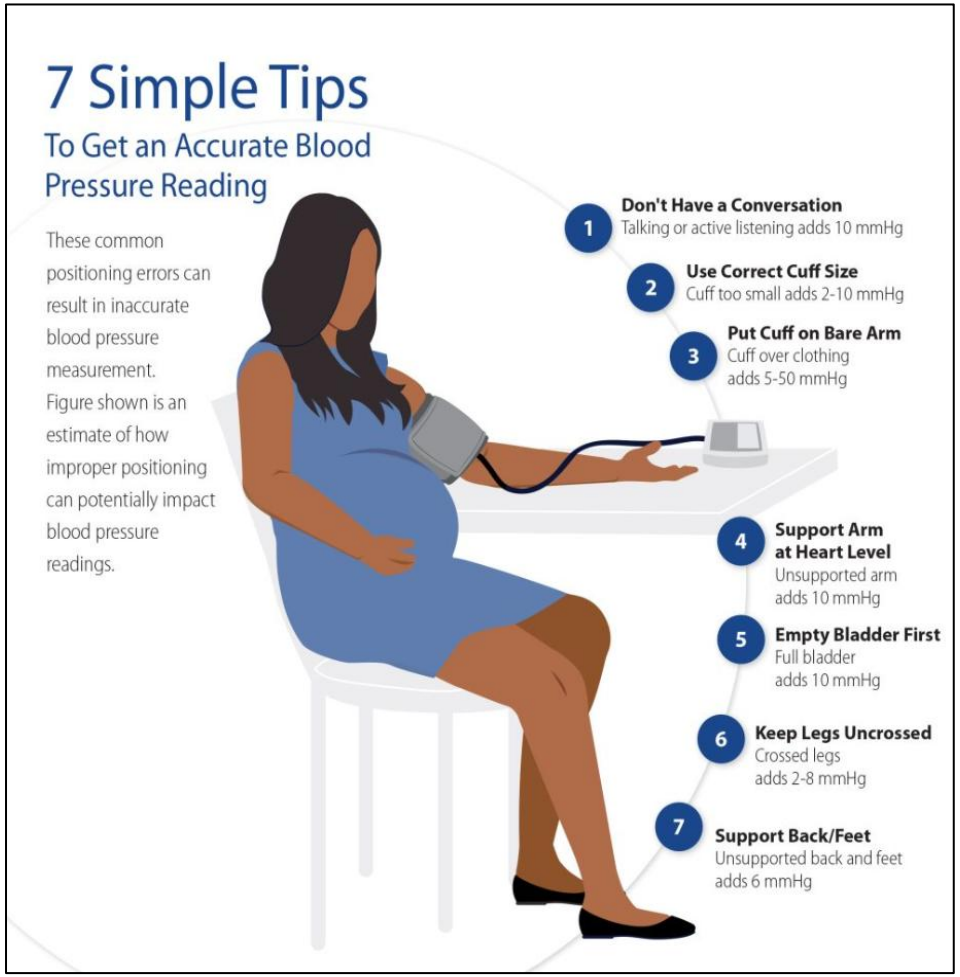


Image source: https://millionhearts.hhs.gov/images/HPCP-BP-infographic.jpg

National Blood Pressure Control Data

- Almost half of U.S. adults have hypertension (119.9M; ≥130/80 mmHg)

- 67.9M people with uncontrolled high BP are recommended to be on antihypertensive medication(s)
  - 51.2% are untreated
  - 48.8% are undertreated

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Source: Estimated Hypertension Prevalence, Treatment, and Control Among U.S. Adults | Million Hearts®

Improved Medication Initiation and Intensification

Examples of evidence-to-practice gaps for patients with uncontrolled hypertension:

1. Patients on no antihypertensive medications for stage 2 HTN
2. Patients on monotherapy for stage 2 HTN
3. Under-prescribing fixed-dose combination medications for stage 2 HTN
4. Not using first-line recommended therapies
5. 1-month follow-up after medication changes

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6. Patients on no antihypertensive medications for high-risk stage 1 HTN
7. Patients on no antihypertensive medications for low-risk stage 1 HTN after 3-6 months of LM

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HTN = hypertension; LM = lifestyle modifications

Improved Diagnosis and Evaluation

Examples of evidence-to-practice gaps for patients with potentially undiagnosed HTN or CKD:

1. Patients with multiple high blood pressure readings with no HTN diagnosis
2. Patients with hypertension who have abnormal labs for eGFR (<60 mL/min/1.73 m^2) or uACR (≥30 mg/g) with no CKD diagnosis
3. Appropriate labs run for patients with suspected HTN or CKD

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HTN – hypertension; CKD – chronic kidney disease; eGFR – estimated glomerular filtration rate; uACR – urine albumin-to-creatinine ratio

Improving Aspirin Prophylaxis for Preeclampsia Prevention



Examples of evidence-to-practice gaps:

- No aspirin prescription for pregnant patients with one or more high risk features (e.g., hx of preeclampsia, chronic HTN, pregestational DM 1 or 2)



- No aspirin prescription for pregnant patients with two or more moderate risk features (e.g., age ≥35, BMI>30, IVF)

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American College of Obstetricians and Gynecologists. Practice Advisory: Low Dose Aspirin Use for the Prevention of Preeclampsia and Related Morbidity and Mortality.
U.S. Preventive Services Task Force. JAMA. 2021;326(12):1186–1191.
hx – history, HTN – hypertension, DM – diabetes mellitus, BMI – body mass index, IVF – in vitro fertilization

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Step 2 – Determine Which Barriers to Address

Barriers assessment – based on the **Consolidated Framework for Implementation Research (CFIR)**

Five Domains

1. Innovation – The “thing” being implemented
2. Individuals – People involved with the innovation (e.g., leadership, clinicians, staff, patients)
3. Inner Setting – The setting in which the innovation is implemented (e.g., the clinic, health center, team, pod)
4. Outer Setting – The setting in which the inner setting exists (e.g.. community, state)
5. Implementation Process – Strategies used to implement the innovation

Updated CFIR Constructs – The Consolidated Framework for Implementation Research

Step 2 – Determine Which Barriers to Address

Evidence-to-practice gap – inaccurate blood pressure measurement

	Barriers	Importance (0, +, ++)	Changeability (0, +, ++)
Prioritize	Inaccurate knowledge of proper technique	++	++
	Misguided attitudes and beliefs (e.g., “manual is best”)	++	+
	Suboptimal examination room set up	++	+
	Lack of leadership support	+	+
	No incentives/lack of motivation	0	+

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0 – not important; not changeable
+ – somewhat important; somewhat changeable
++ – important; changeable

How to Select Implementation Strategies

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Types of Implementation Strategies

Expert Recommendations for Implementing Change (ERIC)

1. Use Evaluative and Iterative Strategies – audit and feedback reports, "report cards", registries; PDSAs	**2. Support Clinicians** – nudges, reminders, team-based care, point-of-care clinical data to providers	**3. Engage Consumers** – SMBP, intervene with patients to enhance uptake and adherence, patient reminders
4. Train and Educate Stakeholders – conduct ongoing training, develop and distribute educational materials	**5. Change Infrastructure** – adding equipment, mandate change, change e-workflows, C-suite support	**6. Develop Stakeholder Relationships** – identify and prepare champions, early adopters, exec boards
7. Provide Interactive Assistance – facilitation, supervision	**8. Utilize Financial Strategies** – alter patient fees, incentives	**9. Adapt and Tailor to the Context** – tailor strategies (cultural tailoring, translations)

SMBP = self-measured blood pressure monitoring;
Waltz TJ, et al. Implement Sci. 2015;10:109.

Mechanisms

Explanations for how an implementation strategy works
→ i.e., how does an implementation strategy remove a barrier?

- Knowledge Δ
- Awareness Δ
- Belief Δ
- Self-efficacy
- Skill building
- Salience
- Culture alignment
- Motivation
- Persuasion
- Competition
- Restructuring
- Accountability
- Mandate Δ
- Habit-forming
- Reinforcement

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Butler MJ, et al. Cardiol Clin. 2026;44(2):287-300.
Springer MV, et al. Implement Sci. 2021;16(1):35.
Carey RN, et al. Ann Behav Med. 2019;53(8):693-707.

Barriers and Select Related Mechanisms

Evidence-to-practice gap – inaccurate blood pressure measurement

Barriers	Potential Mechanisms
Inaccurate knowledge of proper technique	Increased knowledge, awareness, self-efficacy
Misguided attitudes and beliefs (e.g., “manual is best”)	Changed attitudes and beliefs; mandated change
Suboptimal examination room set up	Physical restructuring, behavioral cueing
Lack of leadership support	Increased salience, mandated change
No incentives/lack of motivation	Improved motivation, public reinforcement, increased incentives

Barriers and Select Related Mechanisms

Evidence-to-practice gap – inaccurate blood pressure measurement

Barriers	Potential Mechanisms	Potential Implementation Strategies			
Inaccurate knowledge of proper technique	Increased knowledge, awareness, self-efficacy	**4. Train and Educate Stakeholders** – conduct ongoing training, develop and distribute educational materials	**6. Develop Stakeholder Relationships** – identify and prepare champions, early adopters, exec boards	**7. Provide Interactive Assistance** – facilitation, supervision	...
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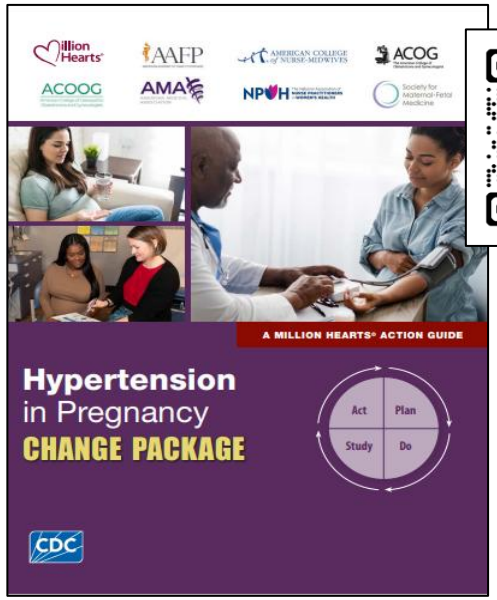
Step 3 – What Can We Do About It?

AMA MAP™ Hypertension

NATIONAL ASSOCIATION OF COMMUNITY HEALTH CENTERS®
NACHC MILLION HEARTS® INITIATIVE

TARGET: BP™







Putting it Together

Evidence-to-Practice Gap	Change Package Focus Areas	Select Change Ideas (i.e., implementation strategies)	Potentially Related Barriers
Improve BP Measurement Accuracy	**Key Foundations**	Redesign office or exam space to support proper BP measurement technique	Suboptimal examination room set up
	Equipping Care Teams	Adopt a clinician/staff training policy to train and retrain staff	Mandate change, leadership support, incentives
		Provide guidance on measuring BP accurately	Knowledge, attitudes
		Assess adherence to proper BP measurement technique	Knowledge, attitudes
	Population Health Management	Determine HTN control and related process metrics for the practice	Leadership support, attitudes
		Regularly provide a dashboard with BP goals, metrics, and performance	Leadership support, attitudes, incentives
	Individual Patient Supports	Measure, document, and repeat BP correctly as indicated; flag abnormal readings	Knowledge

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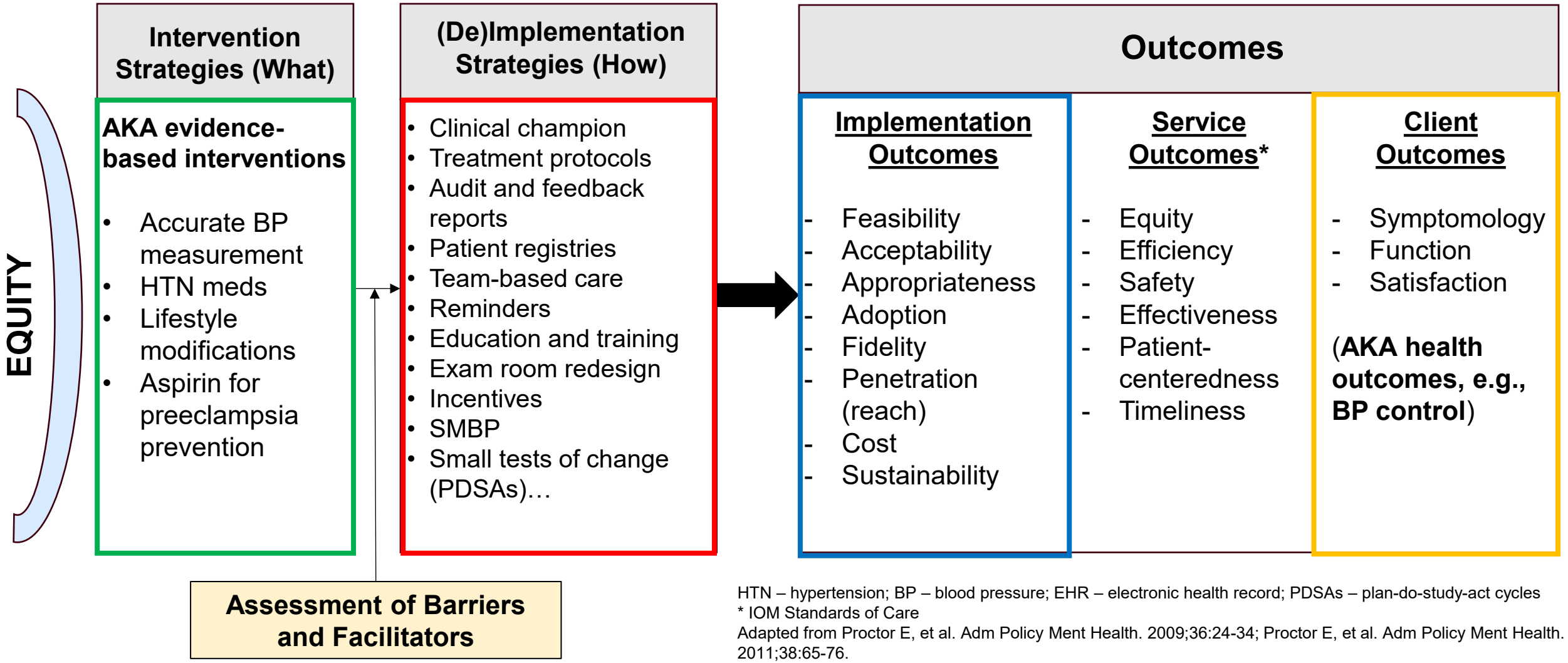
Step 4 – Evaluate the Results

Choose appropriate outcome measures

- Blood pressure control?
- More proximal health measures?
  - Average blood pressure
- Something directly related to your implementation?
  - Confirmatory BP measurements
  - Antihypertensive medication intensification
  - Timely follow-up
  - Use of fixed-dose combinations or other first line medications

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"Proctor" Model



HTN – hypertension; BP – blood pressure; EHR – electronic health record; PDSAs – plan-do-study-act cycles
* IOM Standards of Care
Adapted from Proctor E, et al. Adm Policy Ment Health. 2009;36:24-34; Proctor E, et al. Adm Policy Ment Health. 2011;38:65-76.

Implementation Outcomes

Outcome	Definition	How to Measure
Acceptability	The perception that a given treatment, service, practice, or innovation is agreeable, palatable, or satisfactory.	• Acceptability of Intervention Measure (AIM) • Qualitatively
Feasibility	The extent to which a new treatment, or an innovation, can be successfully used or carried out within a given agency or setting	• Feasibility of Intervention Measure (FIM) • Qualitatively
Appropriateness	The perceived fit, relevance, or compatibility of the innovation or evidence-based practice for a given practice setting, provider, or consumer; and/or perceived fit of the innovation to address a particular issue or problem.	• Intervention Appropriateness Measure (IAM) • Qualitatively
Penetration (Reach)	The absolute number, proportion, and representativeness of individuals who receive the intervention	• # of eligible persons who use a service, divided by the # of persons eligible for the service

Implementation Outcomes (cont'd)

Outcome	Definition	How to Measure
Adoption	AKA uptake; the proportion and representativeness of clinicians and/or settings that adopt the intervention	• # of providers/staff/teams who deliver a given service or treatment, divided by the # of providers/staff/teams trained in or expected to deliver the service
Fidelity	The degree to which an intervention was implemented as it was intended by developers • Adherence, quality of delivery, program component differentiation, exposure to the intervention, and participant responsiveness or involvement	• Observations • Checklist • Self-report
Cost	The cost of an implementation effort • NOT cost-benefit or cost-effectiveness	• Aggregate costs of intervention components – staff time, materials, equipment, EHR augmentation
Sustainability	The extent to which a newly implemented treatment is maintained or institutionalized within a service setting's ongoing, stable operations	• Indicated by dedicated staff, funding, changed clinical workflow, part of strategic plan, new policy

AIM, IAM, FIM Tools

Acceptability of Intervention Measure (AIM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
1. (INSERT INTERVENTION) meets my approval.	①	②	③	④	⑤
2. (INSERT INTERVENTION) is appealing to me.	①	②	③	④	⑤
3. I like (INSERT INTERVENTION).	①	②	③	④	⑤
4. I welcome (INSERT INTERVENTION).	①	②	③	④	⑤

Intervention Appropriateness Measure (IAM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
1. (INSERT INTERVENTION) seems fitting.	①	②	③	④	⑤
2. (INSERT INTERVENTION) seems suitable.	①	②	③	④	⑤
3. (INSERT INTERVENTION) seems applicable.	①	②	③	④	⑤
4. (INSERT INTERVENTION) seems like a good match.	①	②	③	④	⑤

AIM, IAM, FIM Tools (cont'd)

Feasibility of Intervention Measure (FIM)

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
1. (INSERT INTERVENTION) seems implementable.	①	②	③	④	⑤
2. (INSERT INTERVENTION) seems possible.	①	②	③	④	⑤
3. (INSERT INTERVENTION) seems doable.	①	②	③	④	⑤
4. (INSERT INTERVENTION) seems easy to use.	①	②	③	④	⑤

- No specialized training is needed to administer, score, or interpret the measures.
- Average scores; higher scores indicate greater acceptability, appropriateness, or feasibility.
- There is no cost to use these measures.
- Time to complete: less than 5 minutes per measure.
- The IAM items could be modified to specify a referent organization, situation, or population (e.g., my clients).

Weiner BJ, et al. Implement Sci. 2017;12(1):108.

RE-AIM Model

Reach (penetration)

Effectiveness

Adoption

Implementation – fidelity, feasibility, cost, adaptation

Maintenance (sustainability)

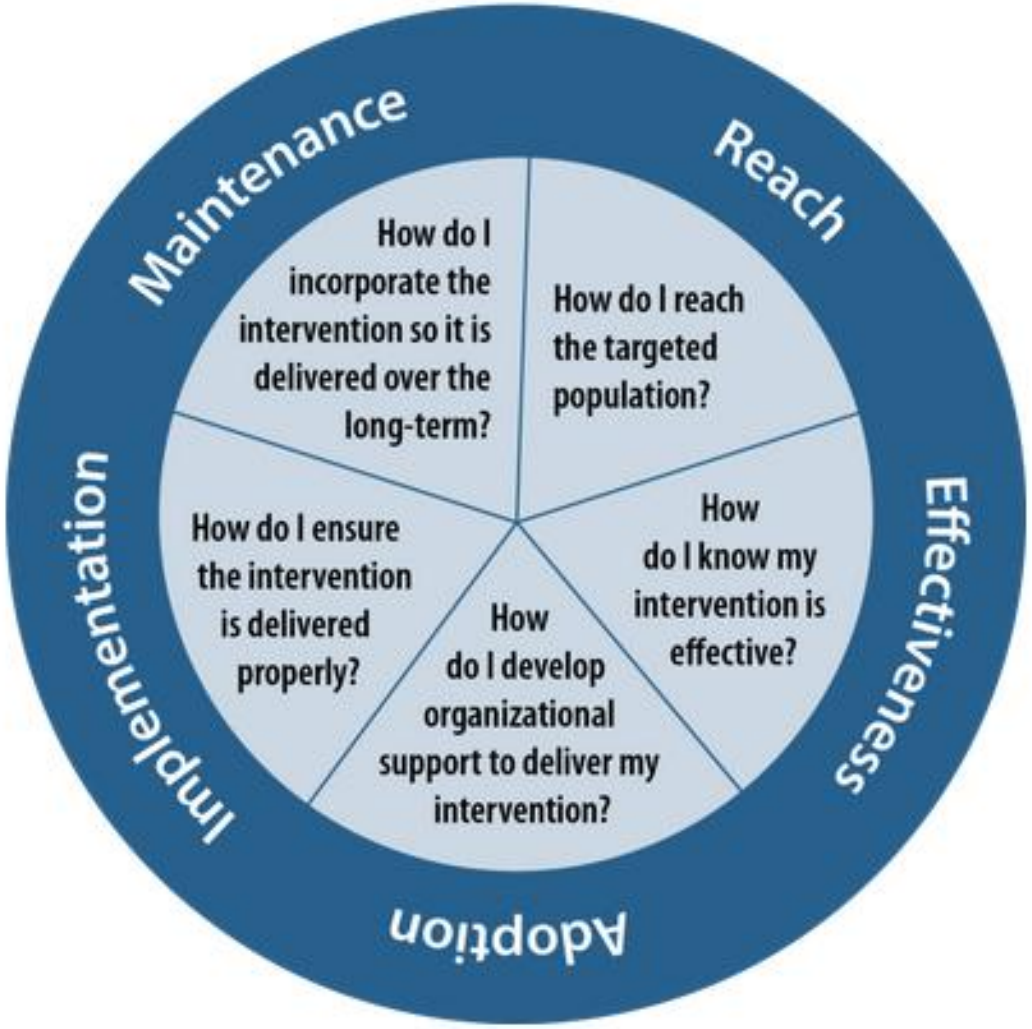


Image source: [RE-AIM 1.0 Framework – Dissemination Implementation]

Model for Improvement + Implementation Science

The Model for Improvement

Implementation Science

Pertinent Questions	Output
1. What are we trying to accomplish?	**Goal** – e.g., Improve care delivered to patients with hypertension
2. How will we know that a change is an improvement?	**Patient Outcome Measure** – e.g., blood pressure control
3. What **clinical practice** changes can we make that will result in improvement?	**Clinical Practice Change** (a.k.a. evidence-to-practice gap) – e.g., medication initiation, medication intensification
4. How can we help clinicians make the clinical practice changes?	**Implementation Strategies** – e.g., registries, treatment protocols, team-based care, education → Million Hearts Change Packages
5. How will we know if our strategies to help are working?	**Implementation Outcomes** – feasibility, acceptability, appropriateness, adoption, reach, fidelity, cost, sustainability

Adapted from Callaghan-Koru J, et al. Clin Perinatol. 2023; ;50:343-361.

Take-Home Messages

- Implementation science can enhance quality efforts – **how do we encourage, support, incentivize, or mandate people to do "the thing"**
- Robustly assess barriers (and understand facilitators)
- Select implementation strategies that best address barriers (or leverage facilitators)
- Use change packages and other resources
- Assess pertinent implementation outcomes

...

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Questions?

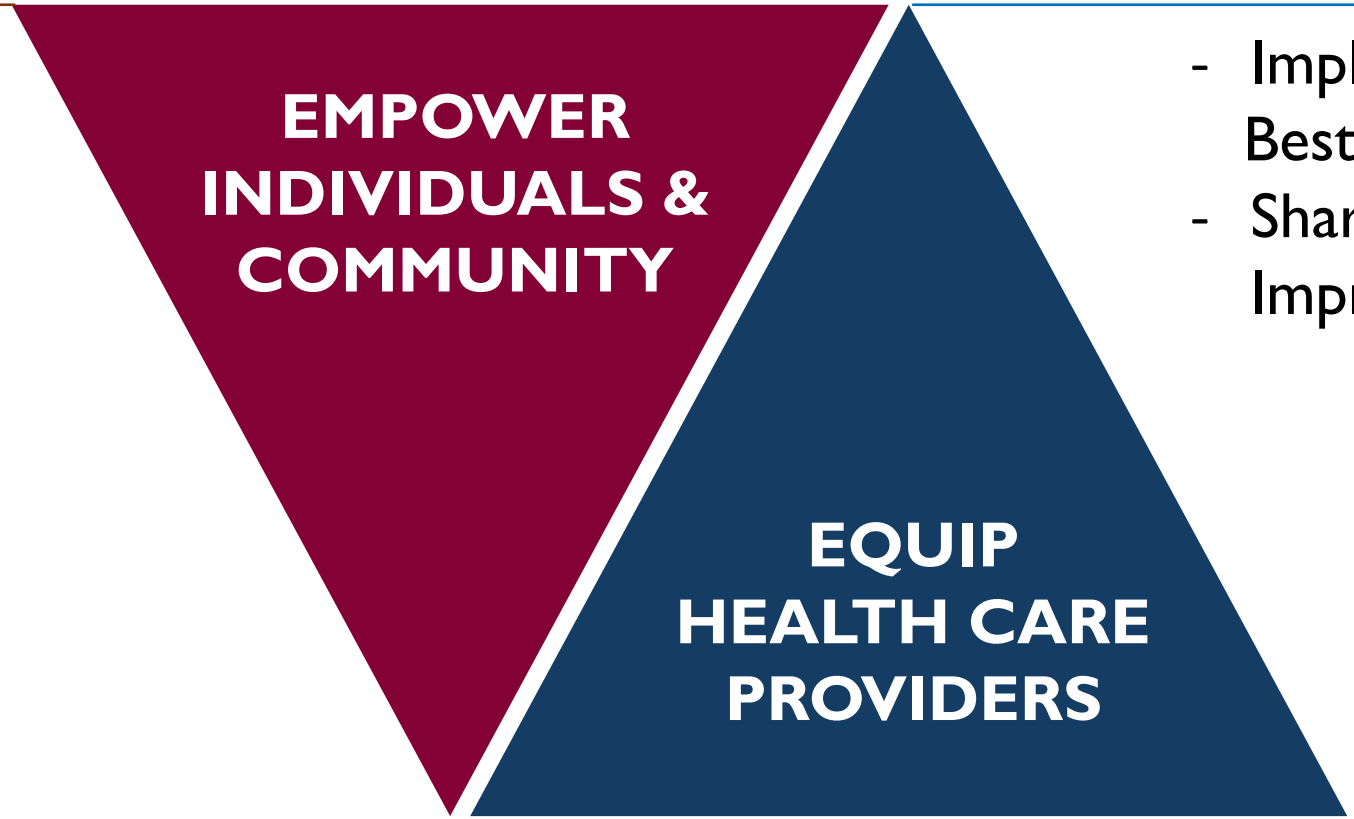
Hilary Wall – hwall@cdc.gov



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AHI CHAMPION COMMITMENTS

- Health Education
- Community Programs & Screenings
- SMBP
- AHI Training and Community



- Implement Clinical QI Best Practices
- Share HTN Improvements

AHI provides evaluation support via digital Commitments Collection Form & Commitments Survey Tracker to help Champions share and track their commitments.

BECOMING AN ATLANTA HYPERTENSION INITIATIVE CHAMPION

Participate * Implement * Report



Participate in AHI convenings, webinars and trainings



Implement AHI Commitments

- Organizations and individuals that make a commitment will receive an AHI Champion Pin



Report: Complete a commitment and complete AHI annual report

- Organizations and individuals that complete an AHI commitment will be recognized at the AHI Annual Meeting.

UPCOMING WEBINAR:

LEVERAGING SELF-MEASURED APPROACHES TO IGNITE HEART HEALTHY COMMUNITIES

Monday, September 14, 2026

12:00–1:00 PM ET

Expanding on conversations from the SMBP breakout session at the May 2026 AHI Convening, this webinar, featuring Brittany Taylor from the American Heart Association, will highlight practical strategies for using self-measured blood pressure monitoring (SMBP) and community-clinical partnerships to strengthen cardiovascular health.

Participants will learn approaches to:

- Address heart disease and improve heart health through innovative strategies
- Strengthen chronic disease prevention and management
- Build effective community-clinical linkages
- Connect individuals and organizations with resources available across Metro Atlanta

Register for the September 14 Webinar

SAVE THE DATE!
ATLANTA HYPERTENSION INITIATIVE (AHI) SUMMIT 2027

Date: April 29, 2027

Time: 8:00 AM – 1:30 PM

Location: TBD

From Policy to Patient: Closing the Hypertension Gap

Closing the hypertension gap requires action at every level—from policy and payment strategies to clinical care, community partnerships, and patient engagement. Together, we can ensure that every Atlanta resident has an equitable opportunity to achieve blood pressure control and better cardiovascular health.

THANK YOU!

Aisha Williams, ARCHI

Email: awilliams635@gsu.edu
AHI Email: info@atlhypertensioninitiative.org
Website: https://atlhypertensioninitiative.org