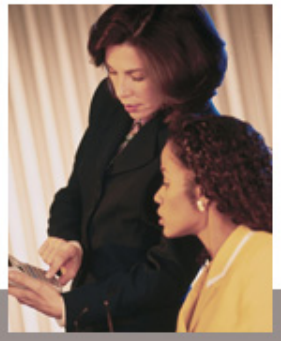
NATIONAL ASSOCIATION OF
Community Health Centers





America's Voice for Community Health Care

Models of Care & Innovations in Identifying and Managing High Risk CVD Populations:

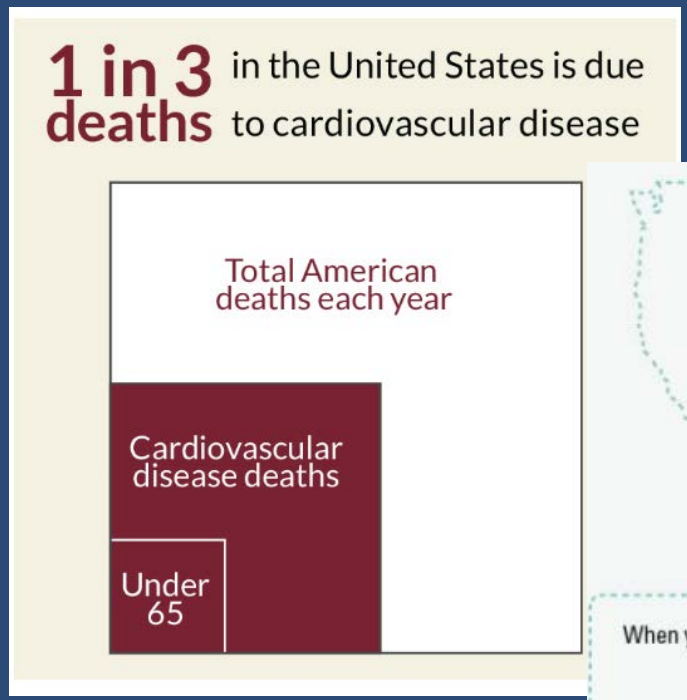
Million Hearts Hiding in Plain Sight and Acceleration of SMBP Projects

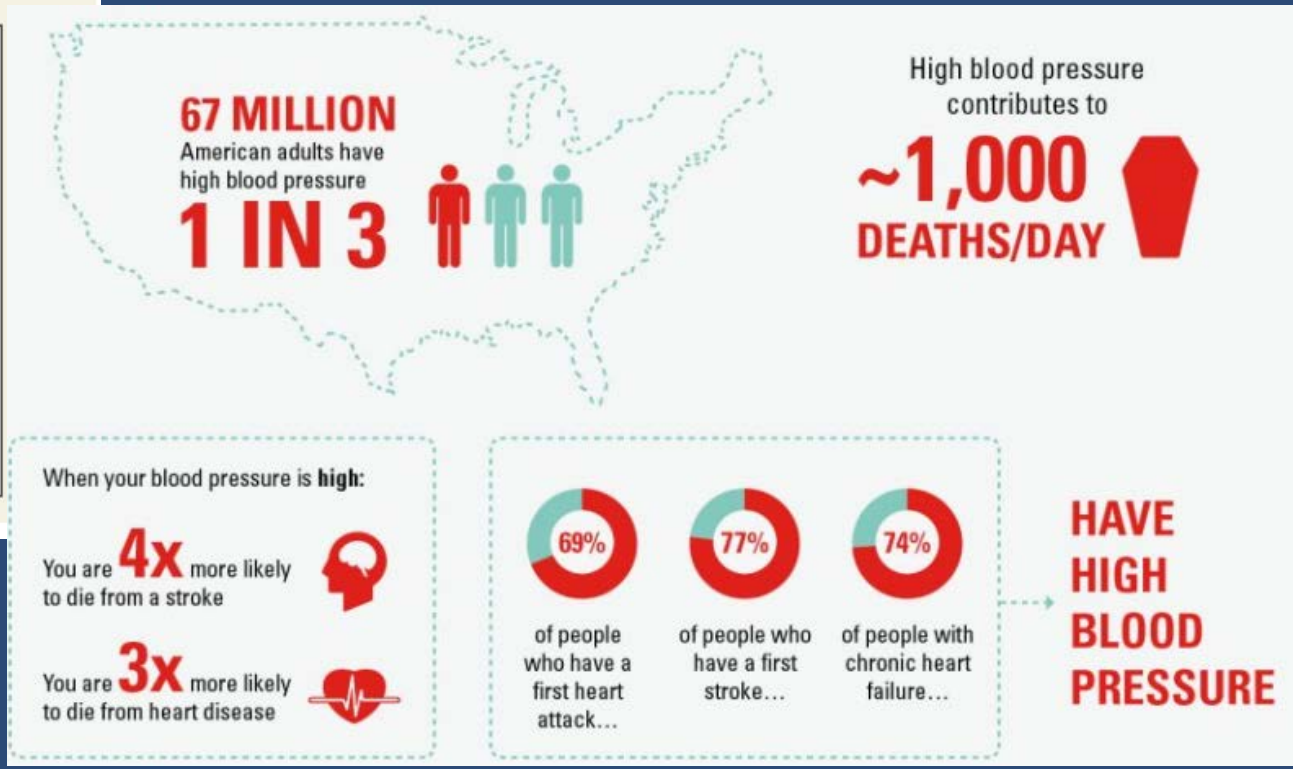
MEG MEADOR, MPH, C-PHI
DIRECTOR, CLINICAL INTEGRATION & EDUCATION, NACHC

MARCH 2, 2017

ALL HEART CONVENING, HUNTINGTON BEACH, CA

Health Impacts of Hypertension





Source:
CDC, Million Hearts: Costs and Consequences. Available: http://millionhearts.hhs.gov/learn-prevent/cost-consequences.html CDC, High Blood Pressure Facts

Cost Impacts of Hypertension

Annual per person cost of treating HTN[1]

- Medication: $407
- Outpatient visits: $454

Estimated average costs of HTN-related hospitalization[2]

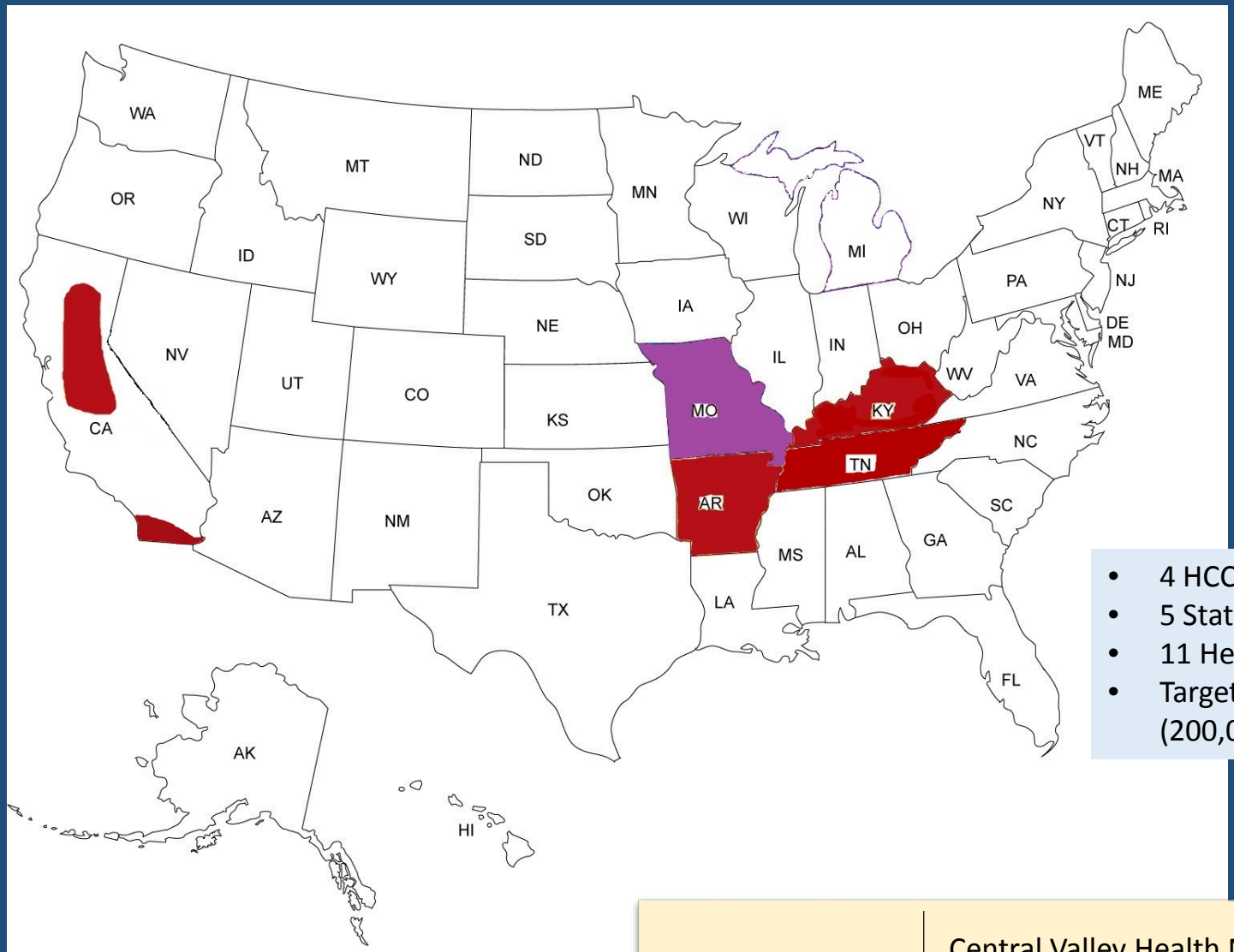
- $31,106 for pts. w/ ischemic heart disease (IHD)
- $17,298 for pts. w/ cardiovascular disease (CVD)
- $18,693 for pts. w/o IHD or CVD

1. Medical Expenditure Panel Survey, Agency for Healthcare Research and Quality, 2013
2. Wang G, Zhang Z, Ayala C. Hospitalization costs associated with hypertension as a secondary diagnosis among insured patients aged 18-64 years. *Am J Hypertens* 2010;23:275-281.

Million Hearts Hiding in Plain Sight Project

Project Overview

HIPS Project Partners



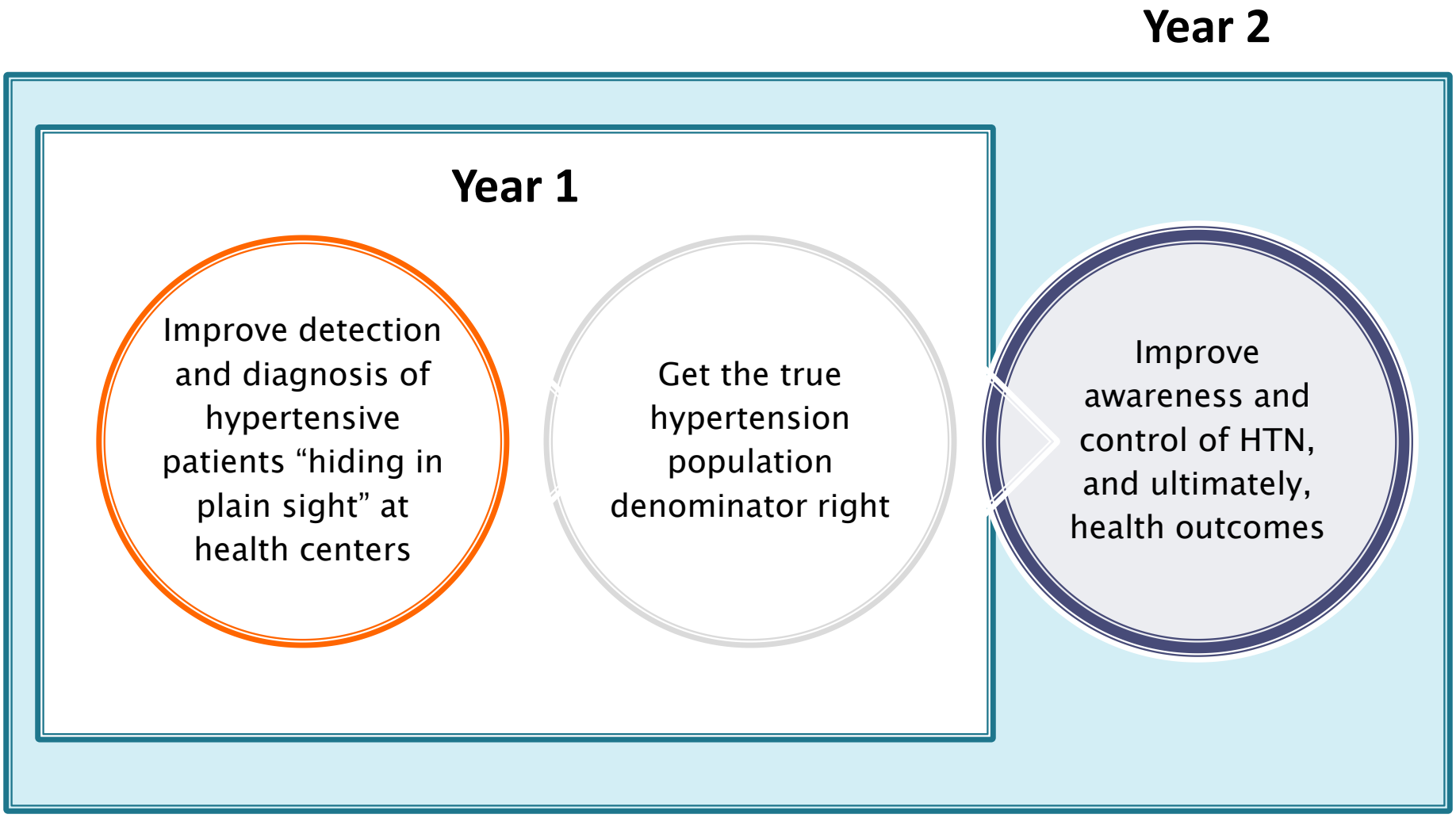
- 4 HCCNs
- 5 States
- 11 Health Centers
- Target: Adults ages 18-85 (200,000+ patients)

HCCN

PCA/HCCN

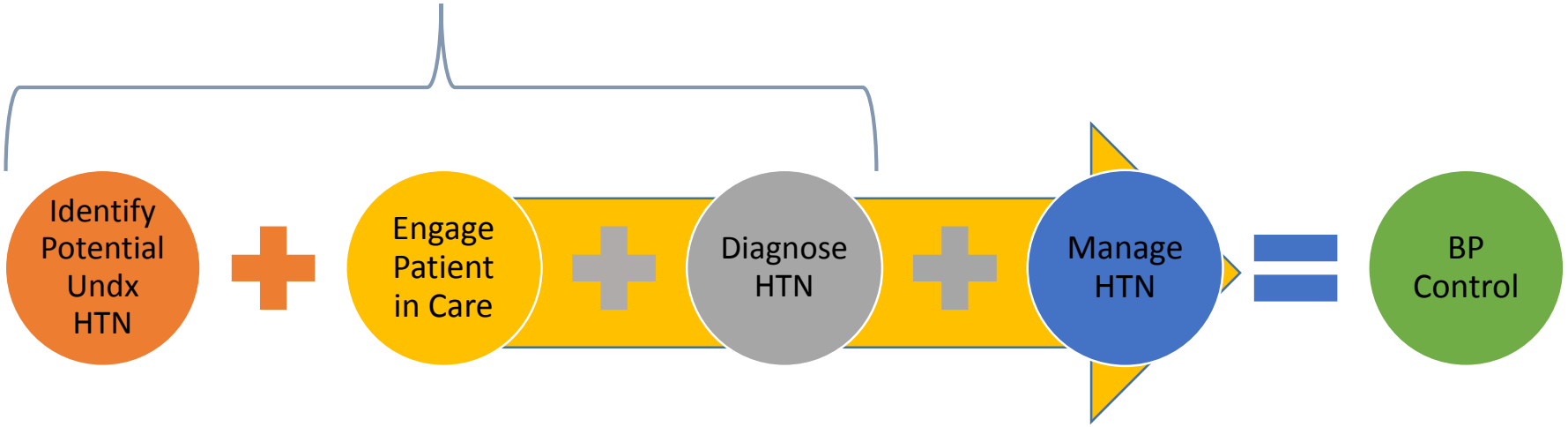
Central Valley Health Network (CA)
Health Center Partners of Southern California
Kentucky Health Center Network (KY/AR/TN)
Missouri Quality Improvement Network (MO)

Project Purpose



The Hypertension Continuum

Addressing HTN requires these initial steps



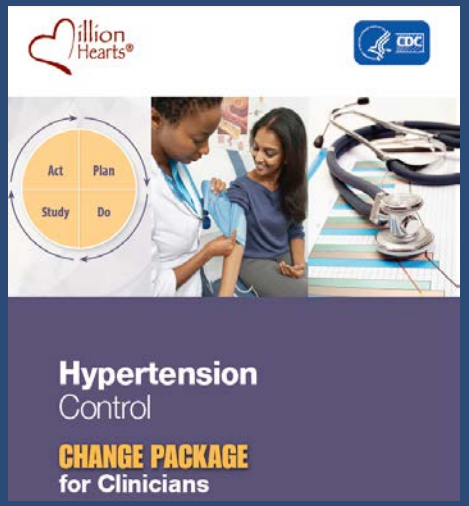
Year 2

- Set ambitious target: 10% ↑ in BP control
- Apply HTN Control Change Package
- Deploy change strategies in each focus area.

Year 1

- Workflow for undiagnosed HTN
- Engage patients in care
- Timely diagnosis

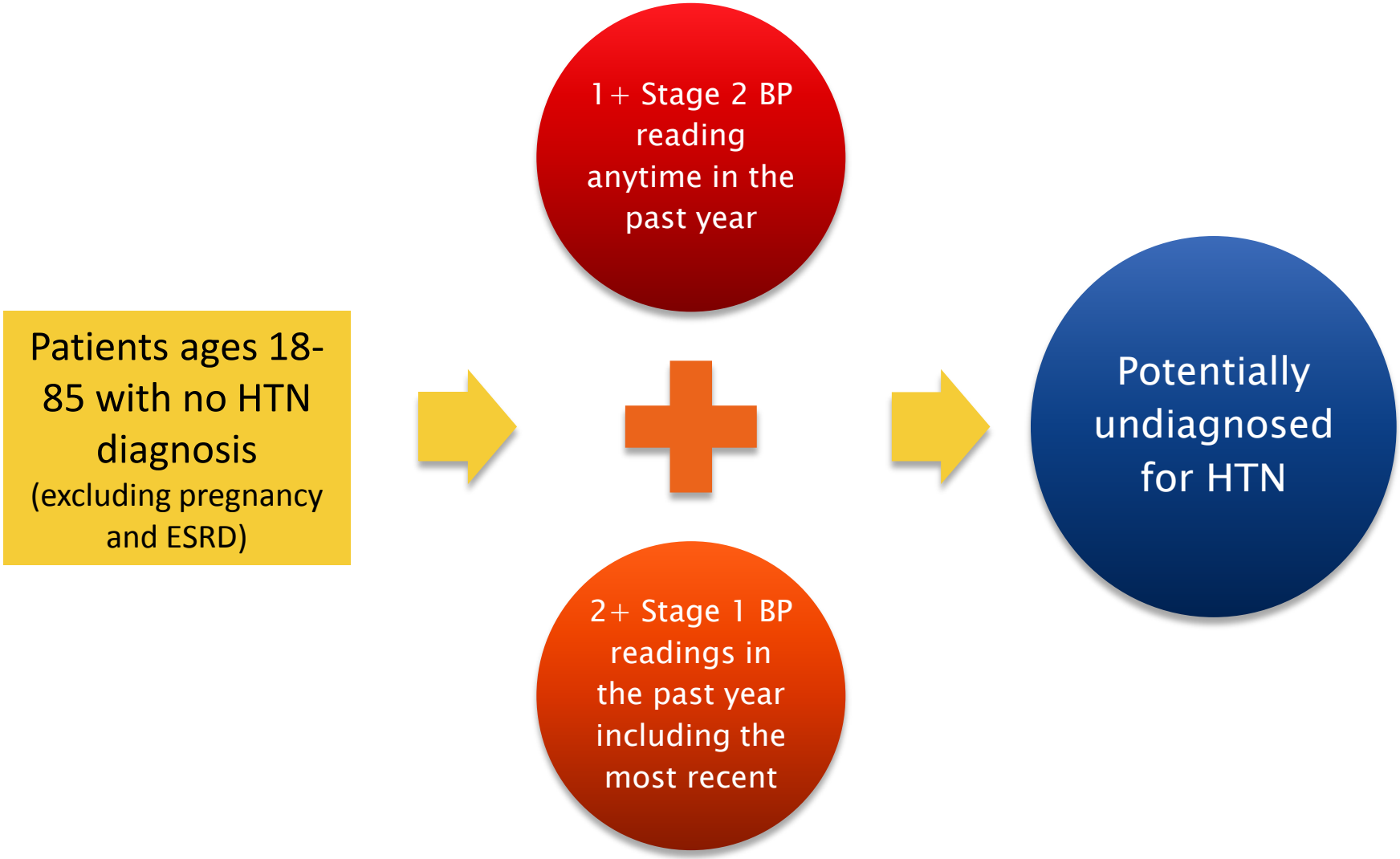
Million Hearts®



Undiagnosed HTN Change Package: http://mylearning.nachc.com/diweb/fs/file/id/229350

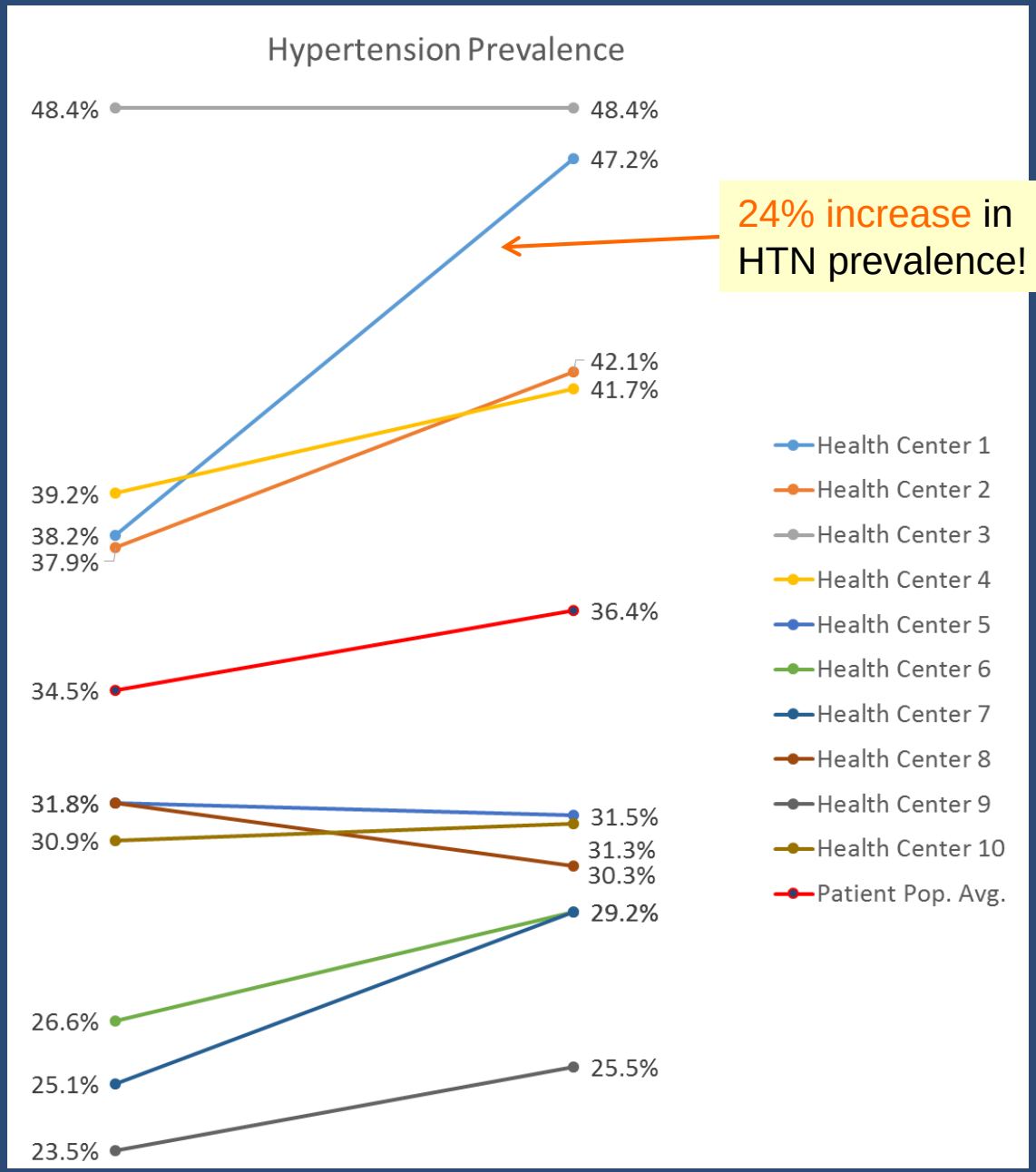
HTN Control Change Package: http://millionhearts.hhs.gov/Docs/HTN_Change_Package.PDF

The Undiagnosed Hypertension Algorithms



Million Hearts Hiding in Plain Sight Project

Outcome Data



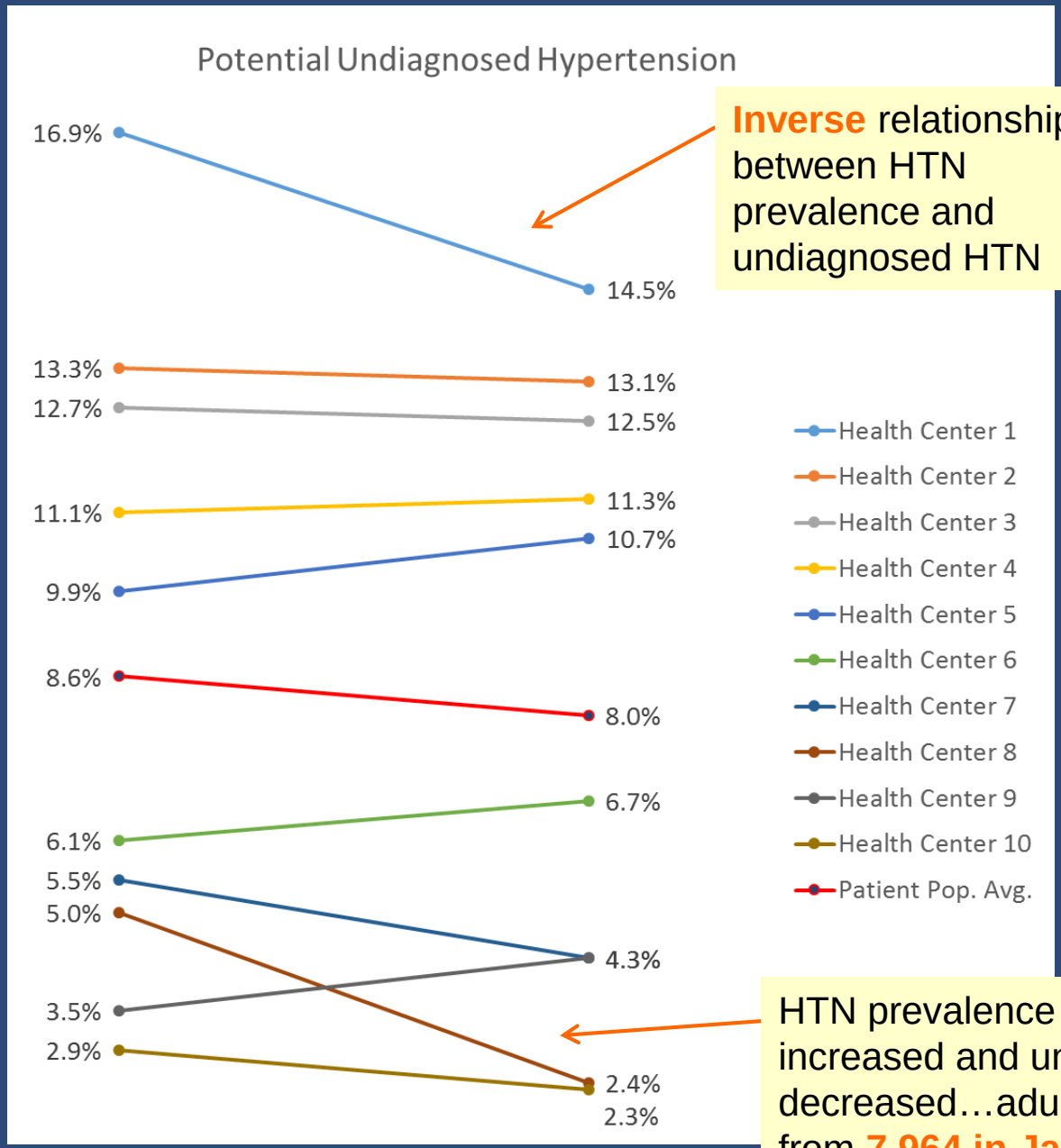
24% increase in HTN prevalence!

Jan 2015 (Baseline) Jun 2016

Hypertension Prevalence

Average change in HTN prevalence among participating health centers: **34.5% to 36.4%** from Jan 2015 – Jun 2016.

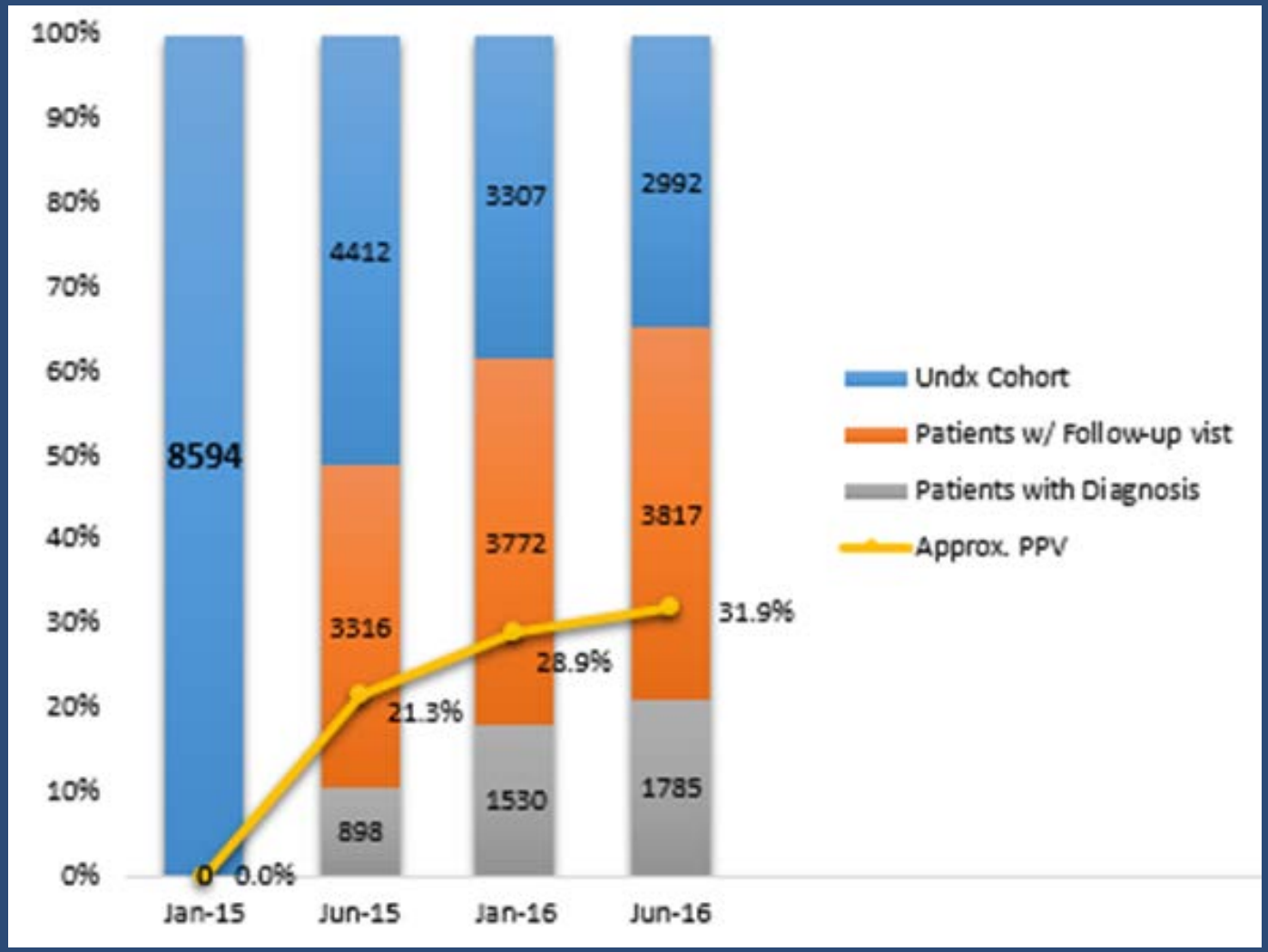
Undiagnosed Hypertension



Inverse relationship between HTN prevalence and undiagnosed HTN

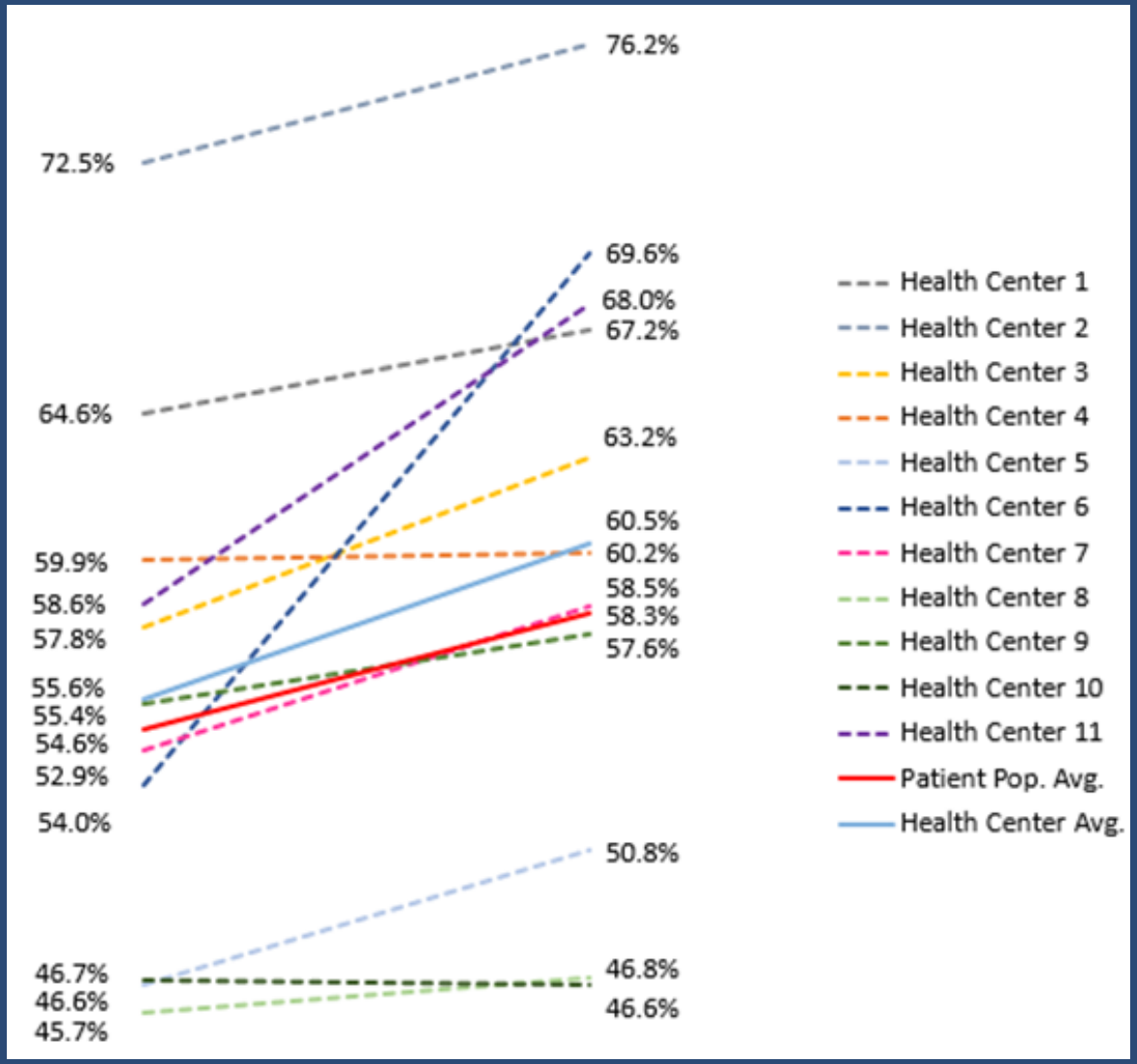
Average undiagnosed HTN among participating health centers: **8.6% to 8.0%** from Jan 2015 – Jun 2016.

HTN prevalence remained stable, BP control increased and undiagnosed HTN decreased…adult patients ages 18-85 increased from **7,964 in Jan 2015** to **14,166 in Jun 2016**



Undiagnosed Hypertension Cohort

65.2% had a follow up visit; of these, 31.9% were dx w/HTN



January 2015 (Baseline)

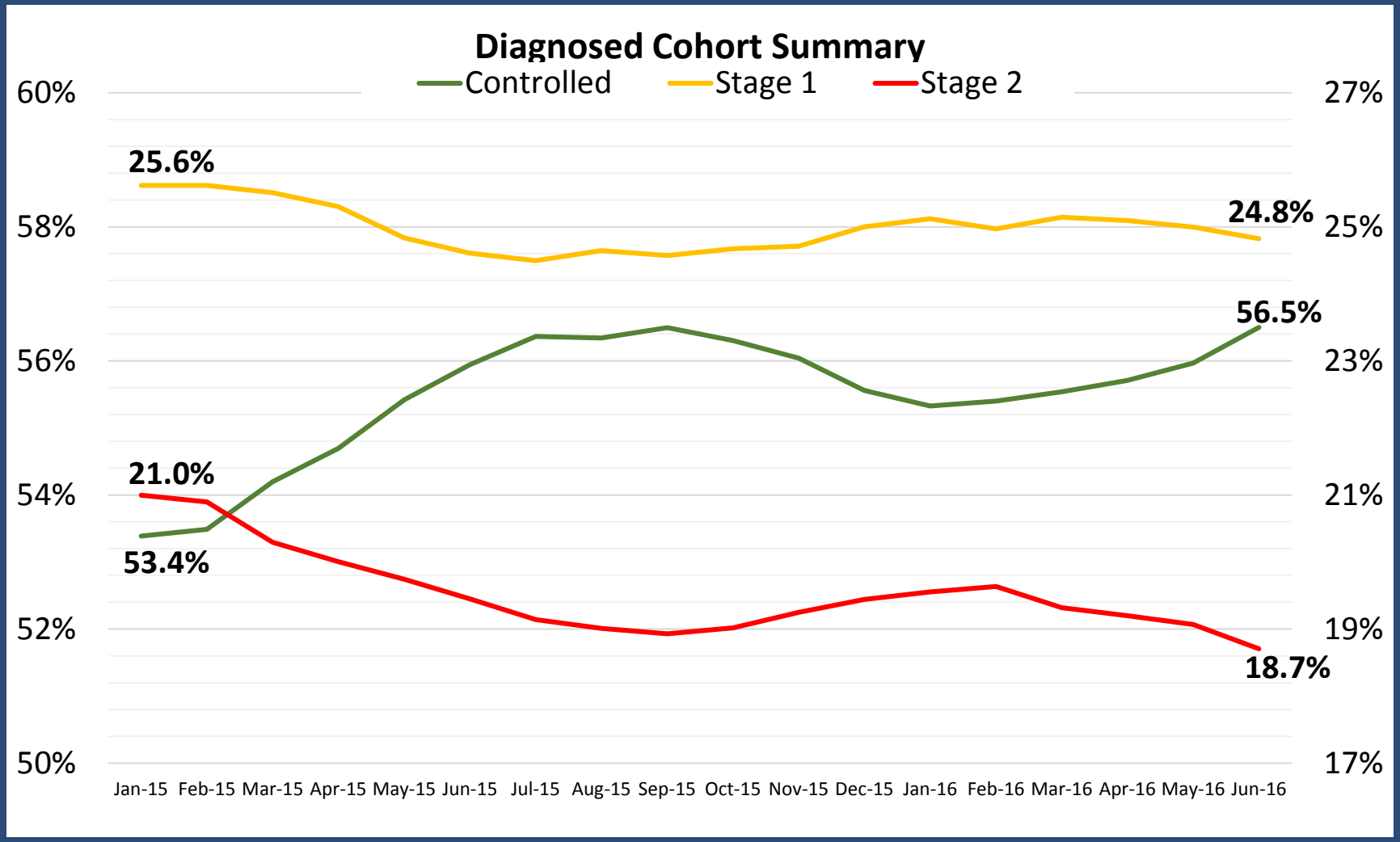
June 2016

Stretch Goal: 10% Improvement from Baseline

Blood Pressure Control – NQF 0018

You can successfully engage patients and clinicians in HTN management!

Average improvement in BP control among participating health centers: **8.7%** from Jan 2015 – Jun 2016.

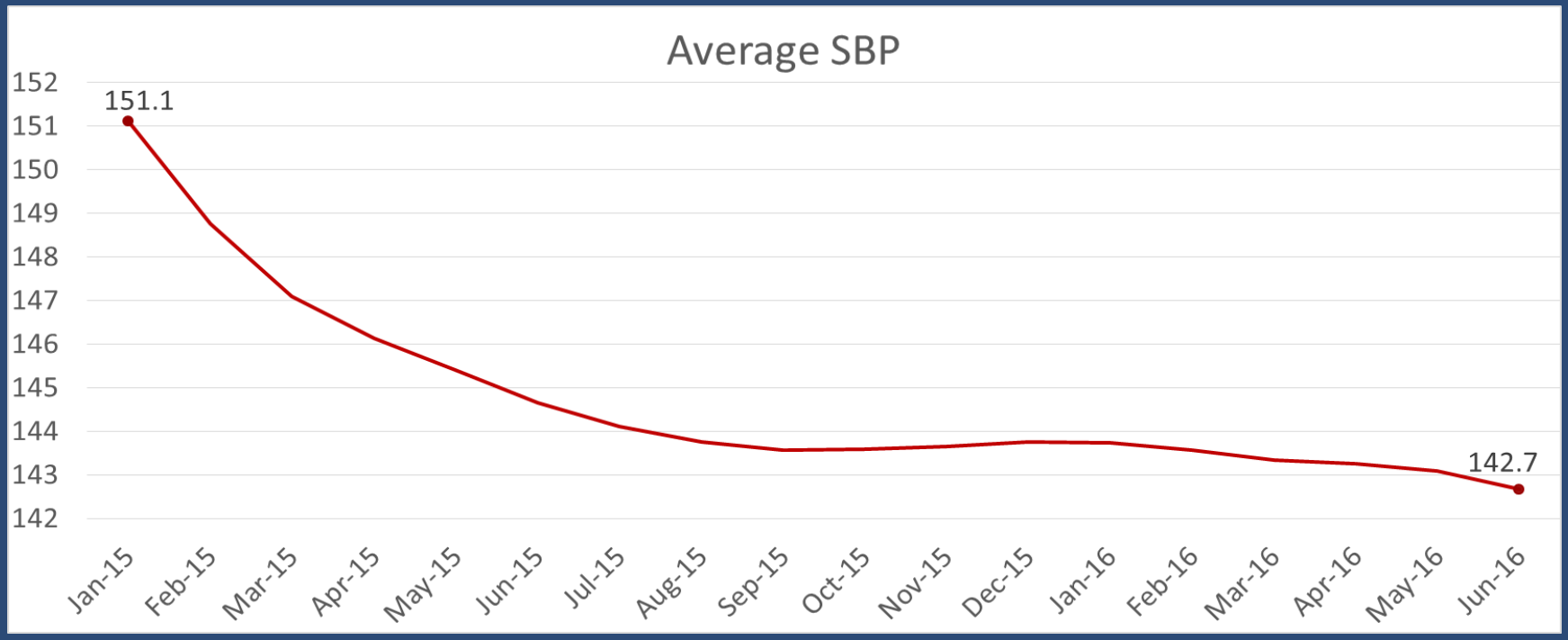


Diagnosed Hypertension Cohort

How did proportion of patients in Stage 1, Stage 2, and control change?

Control increased 5.4% – 1,396 patients brought to control

Stage 2 decreased 12.3% - 1,221 patients moved out of Stage 2



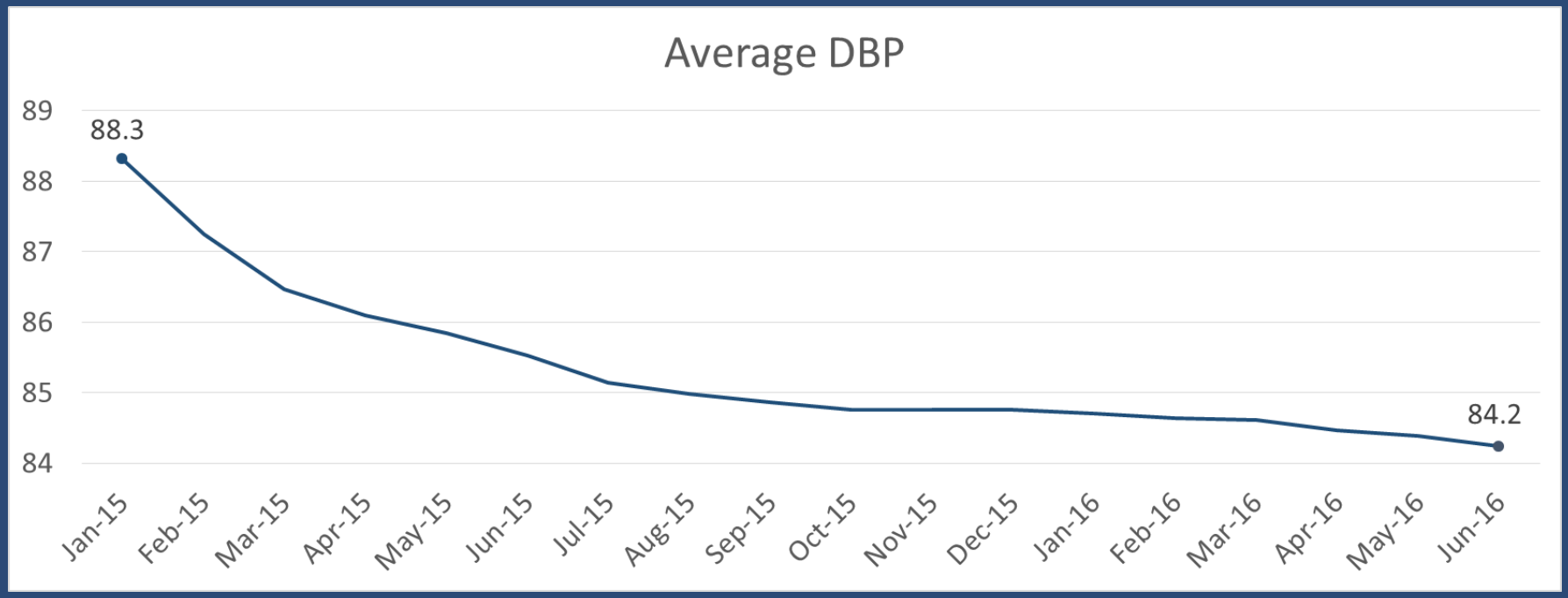
Diagnosed Hypertension Cohort (subgroup of uncontrolled)

How did the average systolic blood pressure (SBP) change?

1/31/2015 (Baseline): 151.1 mmHg
6/30/2016 (Current): 142.7 mmHg
} - 8.4 mmHg

Did you know? Lowering SBP by 12-13 mmHg reduces the risk of stroke by 37% and heart disease by 21%; and reduces deaths by cardiovascular disease by 25% and overall deaths by 13%.

Source: CDC. *A Snapshot: Blood Pressure in the U.S.: Make Control Your Goal*. Available: http://www.cdc.gov/bloodpressure/infographic.htm



Diagnosed Hypertension Cohort (subgroup of uncontrolled)

How did the average diastolic blood pressure (DBP) change?

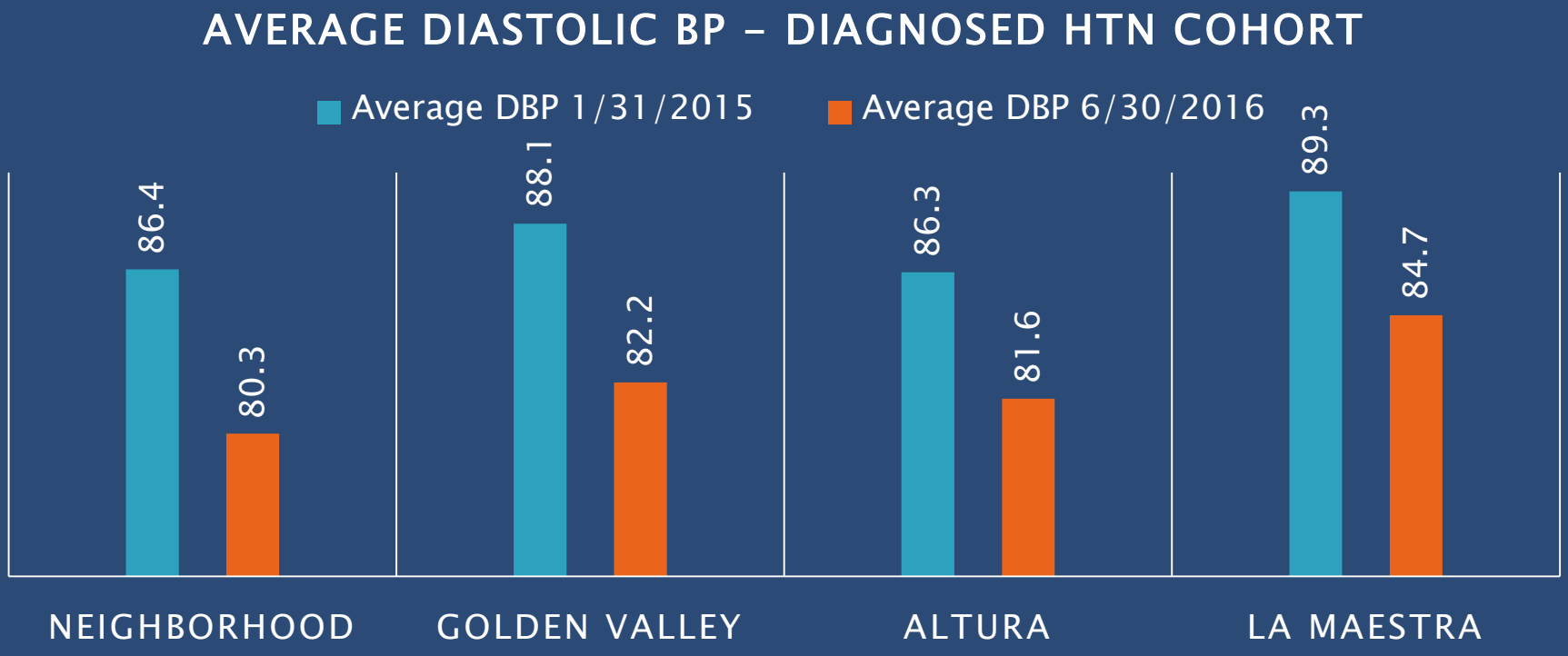
1/31/2015 (Baseline): ~88.3 mmHg
6/30/2016 (Current): ~ 84.2 mmHg

} - 4.1 mmHg

Did you know? Lowering DBP by 5 mmHg reduces the risk of stroke by 34% and heart disease by 21%

Source: Law M, Wald N, Morris J. Lowering blood pressure to prevent myocardial infarction and stroke: a new preventive strategy. *Health Technol Assess.* 2003;7(31):1-94

Who achieved a 5 mmHg reduction in DBP?



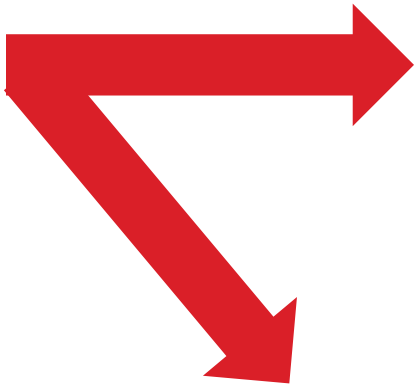
NHC also reduced SBP by 14.6 mmHg!

DBP Reduction

NHC:	-6.1 mmHg
Golden Valley:	-5.9 mmHg
Altura:	-4.8 mmHg
La Maestra:	-4.6 mmHg

Health Impacts!

2,491 HTN patients brought to control!



43 CVD events prevented!

22 CVD deaths prevented!

SOURCE: Health Partners Institute. (2016). Community Health Advisor. Available: http://www.communityhealthadvisor.org/cha3/

These calculations were based on Health Partners Institute's Community Health Advisor estimates on the modeled effects of improving blood pressure control on heart disease and stroke outcomes and applying them to the improvements we saw in our Million Hearts HIPS Project health centers from 1/31/2015 - 6/30/2016.

Cost Impacts!

2,491 HTN patients brought to control!

$2.2 million dollars in medical costs averted!

SOURCE: Health Partners Institute. (2016). Community Health Advisor. Available: http://www.communityhealthadvisor.org/cha3/

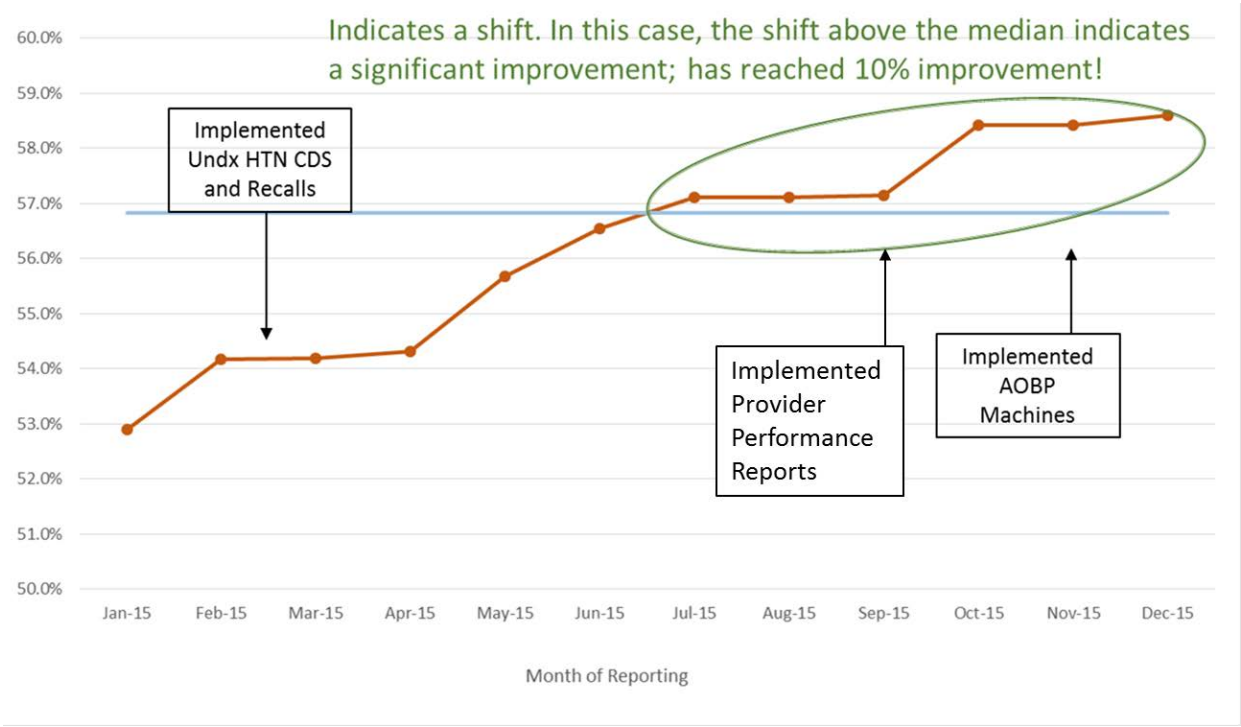
These calculations were based on Health Partners Institute's Community Health Advisor estimates on the modeled effects of improving blood pressure control on heart disease and stroke outcomes and applying them to the improvements we saw in our Million Hearts HIPS Project health centers from 1/31/2015 - 6/30/2016.

Million Hearts Hiding in Plain Sight Project

Health Center Survey Data – Part 1

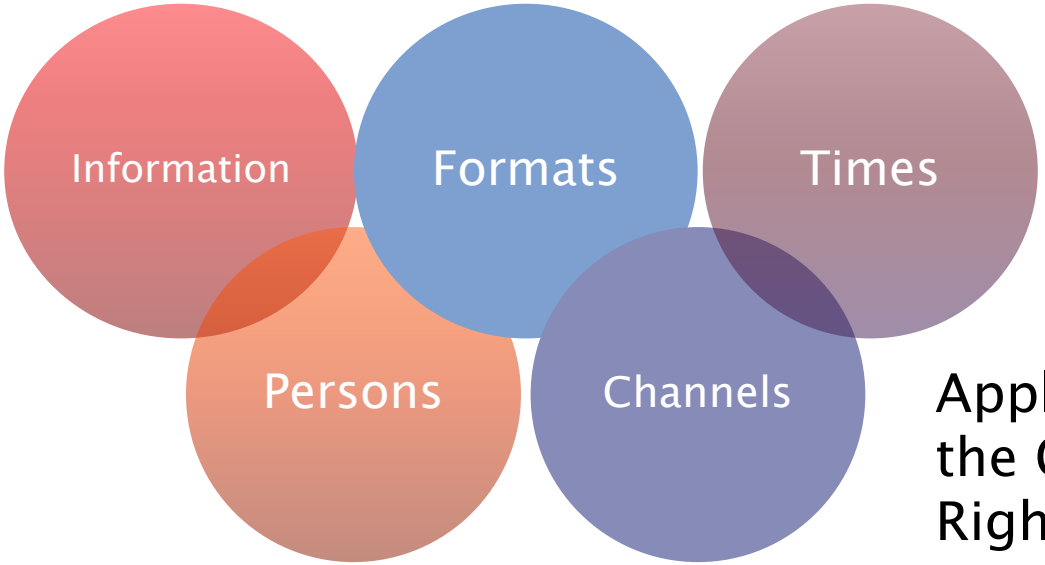
Most Important Tools – Project Management

"All Teams" Learning Collaborative Call

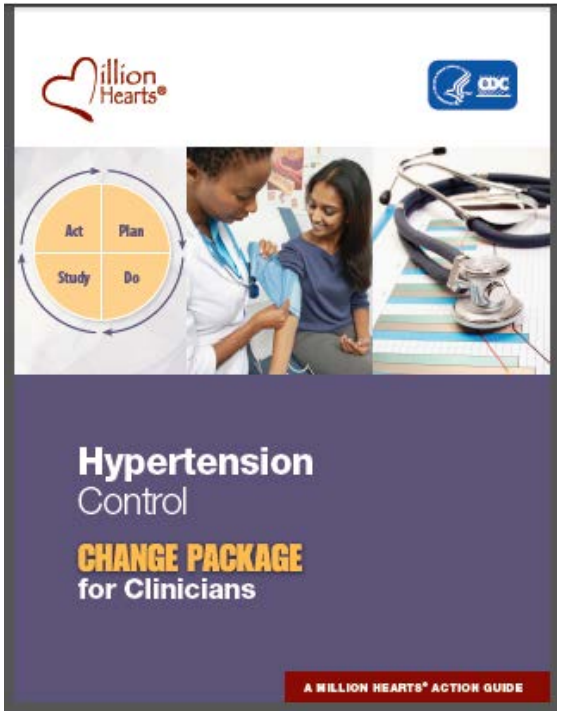


Run Charts

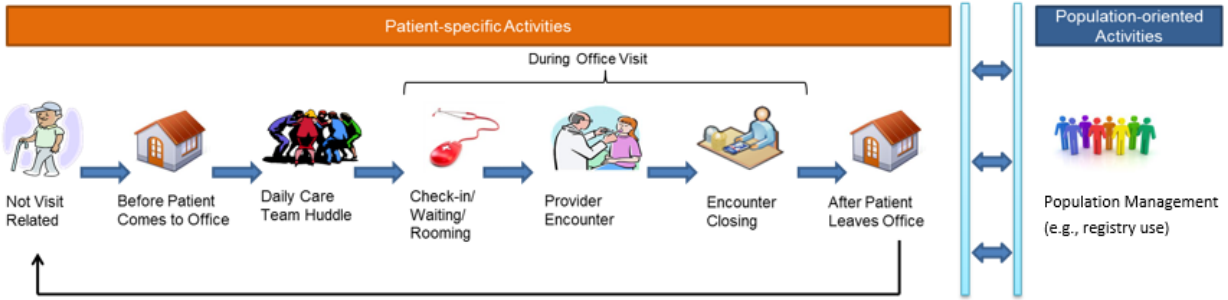
Most Important Tools – QI Framework



Applying the CDS 5 Rights



Million Hearts HCCP



CDS/QI Worksheet

What do the Highest Impact Interventions do?

Million Hearts Hiding in Plain Sight Project

Translating Highest Impact Changes into Practice

Ensure BP Measurement Accuracy

Measure accurately

When *screening* patients for high blood pressure:

- ❑ Use a validated, automated device to measure blood pressure
- ❑ Use the correct cuff size on a bare arm
- ❑ Ensure patient is positioned correctly

If blood pressure is ≥140/90 mm Hg, obtain a *confirmatory* measurement:

- ❑ Repeat *screening* steps above
- ❑ Ensure patient has an empty bladder
- ❑ Ensure patient has rested quietly for at least five minutes
- ❑ Obtain the average of at least three BP measurements

BP Tru cyclic automated office blood pressure machine

Source: AMA, 2015 M.A.P. Checklist for Improving BP Control. Available: http://www.abms.org/media/84846/6_american-medical-association_2015-abms-qi-forum-poster.pdf

Provide Care Team Performance Feedback

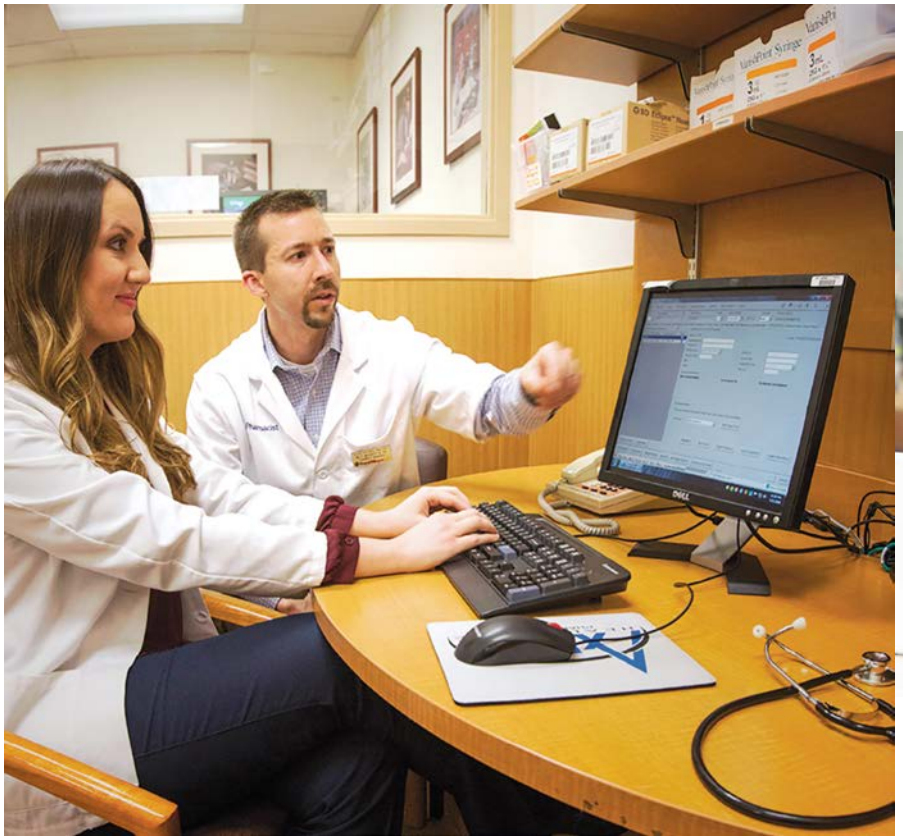
CARE TEAM DATA COMPARISON

	Undiagnosed Hypertension											
	Past Month						Past Year					
Submission Month	1	2	3	4	5	GVHC	1	2	3	4	5	GVHC
January/Baseline	7.65%	10.42%	6.19%	5.41%	7.88%	**6.00%**	8.17%	4.57%	4.74%	4.41%	5.07%	**4.00%**
February	7.86%	11.11%	8.11%	6.72%	7.89%	**5.00%**	8.50%	4.89%	4.89%	4.77%	5.34%	**4.00%**
March	5.08%	13.89%	5.65%	10.14%	8.28%	**5.00%**	8.11%	5.30%	4.63%	5.50%	5.28%	**4.00%**
April	8.97%	4.41%	7.14%	4.55%	5.02%	**6.00%**	13.34%	5.33%	4.61%	9.43%	13.45%	**4.00%**
AVERAGES	7.39%	9.96%	6.77%	6.70%	7.27%	5.50%	9.53%	5.02%	4.72%	6.03%	7.29%	4.00%

Missed Opportunities											
Past Month						Past Year					
1	2	3	4	5	GVHC	1	2	3	4	5	GVHC
92.86%	66.67%	100.00%	100.00%	64.29%	**74.00%**	78.95%	100.00%	93.75%	66.67%	53.33%	**71.00%**
90.91%	100.00%	88.89%	62.50%	60.00%	**73.00%**	82.14%	100.00%	88.89%	70.59%	57.14%	**71.00%**
90.00%	100.00%	87.50%	64.29%	38.46%	**71.00%**	82.69%	100.00%	90.00%	62.50%	57.69%	**71.00%**
84.62%	100.00%	100.00%	66.67%	72.73%	**70.00%**	76.00%	100.00%	100.00%	68.42%	59.26%	**71.00%**
89.60%	91.67%	94.10%	73.36%	58.87%	72.00%	79.95%	33.33%	31.05%	22.35%	18.95%	71.00%

Engage the Data Creators…

Leverage Pharmacists



Pharmacist Chart Reviews

Pharmacy Appointments

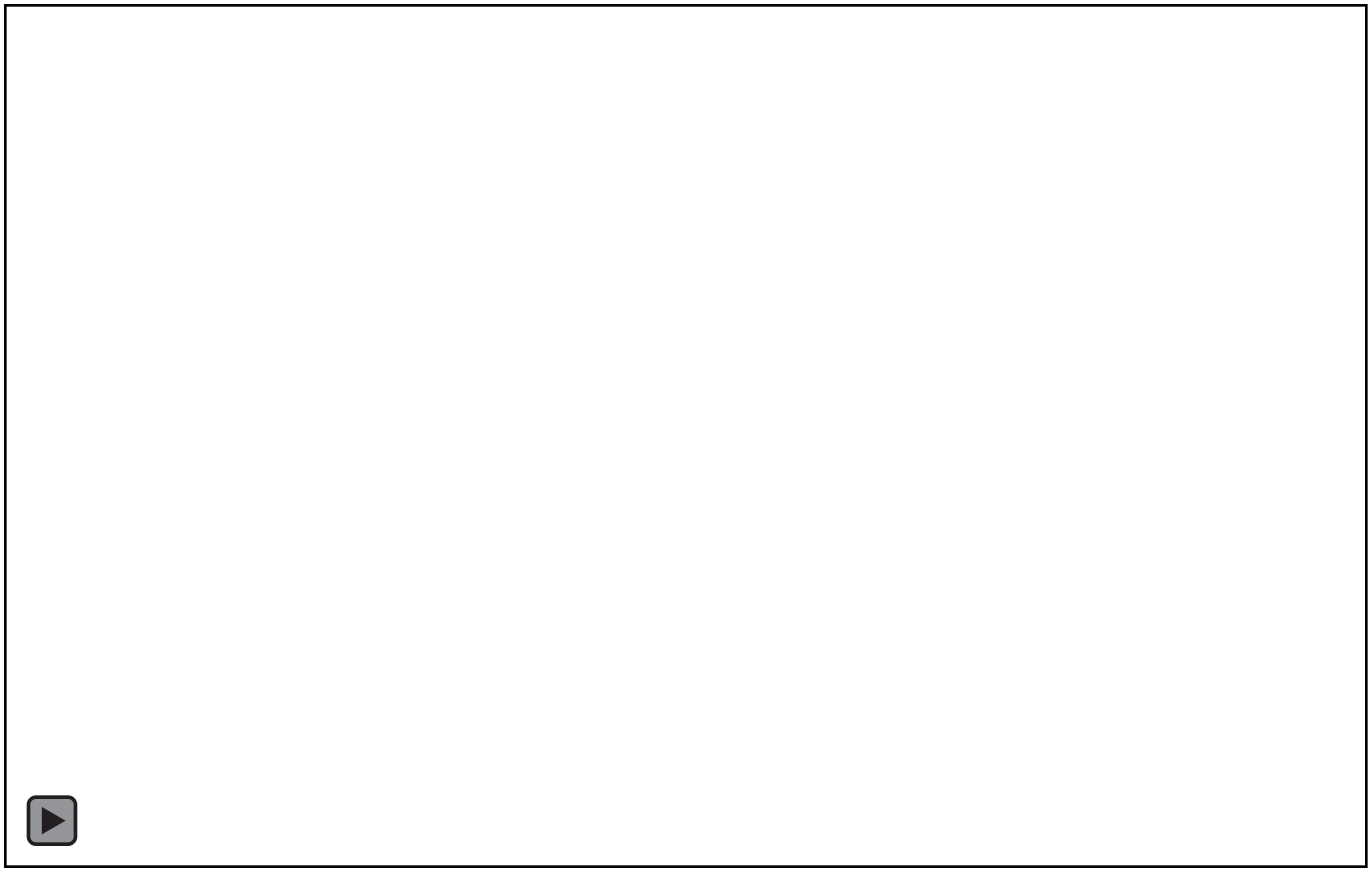
Assess Workforce/Care Team Roles

Are staff working to the top of their license?
Are they using their time optimally?

Site	PCC	Actual FTE	Goal FTE
Elm	Gloria C.	0.50 FTE Prior Auths blue pod 0.125 FTE P4P HEP/ IHA outreach 0.125 FTE BP/DM Care Management blue pod 0.25 FTE CRC tracking/oversight 0.05 FTE Childhood Obesity visits	0.50 FTE BP/ DM Care Management blue pod 0.25 FTE CRC tracking/ oversight 0.20 FTE P4P tracking/ oversight 0.05 FTE Childhood Obesity visits
	Tomas H.	0.50 FTE Prior Auths pink pod 0.20 FTE Complex care 0.20 FTE Ca Screening outreach 0.05 MTM Back up 0.05 MA for Retinal exams 0.05 FTE Childhood Obesity visits	0.50 FTE BP/ DM Care Management pink pod Including MTM Back up 0.20 FTE Transition Of Care 0.20 FTE Complex Care 0.05 FTE MA for Retinal exams 0.05 FTE Childhood Obesity visits
Lakeside	Maria R.	0.50 FTE Prior Auths 0.20 FTE BP Care Management 0.10 FTE WI pregnancy tests 0.10 FTE CRC tracking/oversight 0.10 FTE P4P tracking/oversight	0.70 FTE BP/ DM Care Management 0.20 FTE CRC tracking/ oversight 0.10 FTE P4P tracking/ oversight

Assess Workforce/Care Team Roles

Melissa Barajas, RN/BSN/PHN Director of Population Health Neighborhood Healthcare



Self-Measured Blood Pressure

Sterling Health Solutions

BLOOD PRESSURE TRACKING LOG

Facts about Blood Pressure:

The higher your blood pressure is, the higher your risk for health problems in the future. Hypertension can put strain on your arteries and on your heart. Overtime, it can cause the arteries to become thicker, less flexible, or weaker. This can lead to narrowing of the arteries which can cause heart attacks, stroke, and kidney disease.

What is a normal blood Pressure? Less than 120/80

WHAT CAN YOU DO TO MAINTAIN A NORMAL BLOOD PRESSURE?

Diet:

Eat a healthy well balanced diet that is low in sodium intake. Avoid caffeine, tea and soda. Eat a diet rich in fruits, vegetables and low fat dairy products.

Exercise:

Exercise regularly. Such as brisk walking at least 30 minutes each day.

Medication:

Take your medication as directed by your provider. Monitor your blood pressure while at home.

Bring all of your medications with you to each of your provider visits.

BLOOD PRESSURE TRACKING LOG

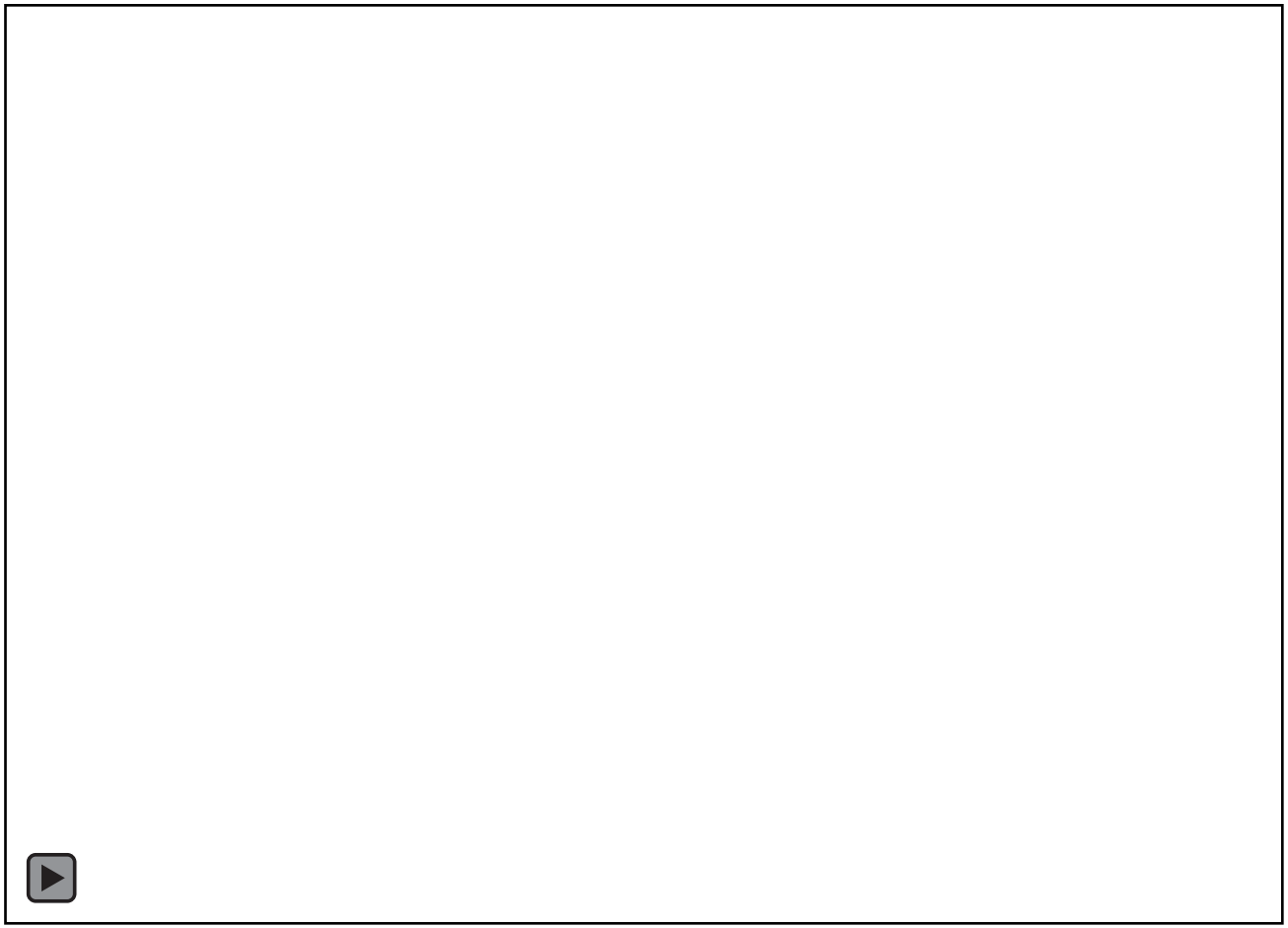
It is important to keep track of your blood pressure readings.

MY BLOOD PRESSURE TARGET GOAL IS: 120/80

DATE	TIME TAKEN	BP READING	PULSE

Use Health Educators to Provide SMBP and Self-Management Support

Amina Whalid
Health Educator
La Maestra Community
Health Center



Use Innovative CDS/Optimize Workflow
(Make the Right Thing to Do the Easy Thing to Do)

Time	Provider	Resource	Type	Patient	Age	Sex	Language	Race	PCP	Acuity
2:15 PM	[redacted]		ER Follow Up	[redacted]			Spanish; Castilian	White (uds)	[redacted]	0.95

H

Reason: History (12 Mo.): No Shows: 6 Canceled: 3 Visits: 7 ER: 0 Admits: 0 Last Visit DR: Cantu-Reyna MD, Guillermo Outstanding Referrals: 1

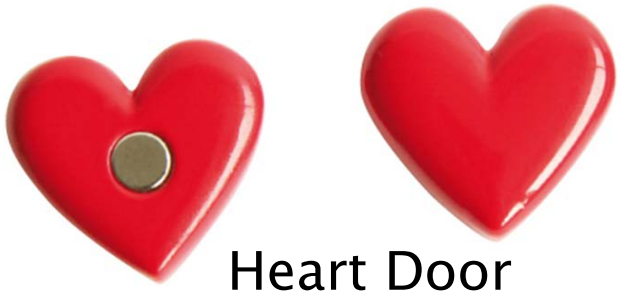
Last BMI: 33.65 (10/30/15) Weight Change (6 Mo.): -3.9 lbs. Last BP: 171/83 (10/30/15) Last PHQ: 8 (7/6/15)

Last Pap: LMP: Last Mammo: Last Colon Cancer Screening: Smoker: No Framingham Risk Factor:

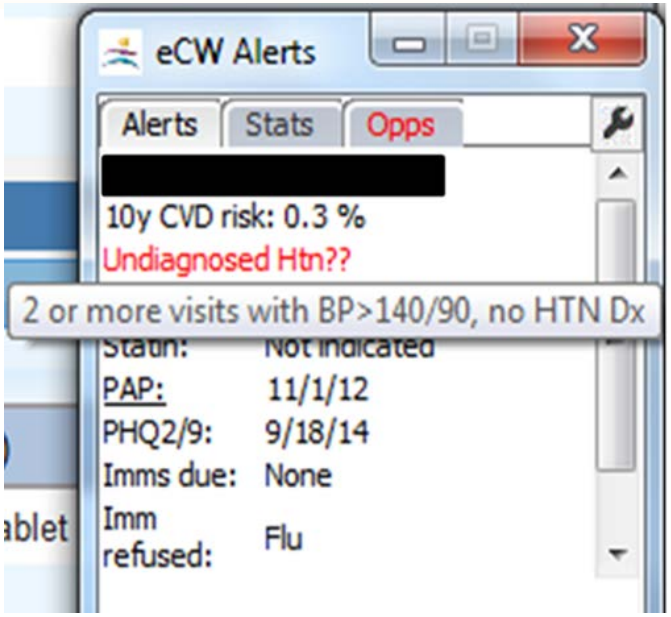
Last 3 BP: 171/83 (10/30/15), 161/75 (10/15/15), 156/69 (9/11/15) Last 2 LDL:

Due: Education: Exercise (i2i)

Last 3 BP readings on Pre-visit Planning Report



Heart Door Magnets



Static integrated alert

Targeted Outreach

Pre-Filters | Patient Searches

Search Group: i2i Cardiovascular Template

Search Name
Pt Management - CVD pts overdue for a visit
Pt Management - CVD pts overdue for indicators
Pt Management - CVD pts w/most recent BP >140/90
Tracking Type Management - CVD pts not seen in 3 yrs
Tracking Type Management - CVD pts seen for CVD in the last 3 ...
Validation - Pts with no CVD visit & BP > 140/90
Visit Summary Form - for CVD pts Saturday - Monday appts (Run ...
Visit Summary Form - for CVD pts Tuesday - Friday appts (Run d...

Subject: Important Message from ARcare

Body:

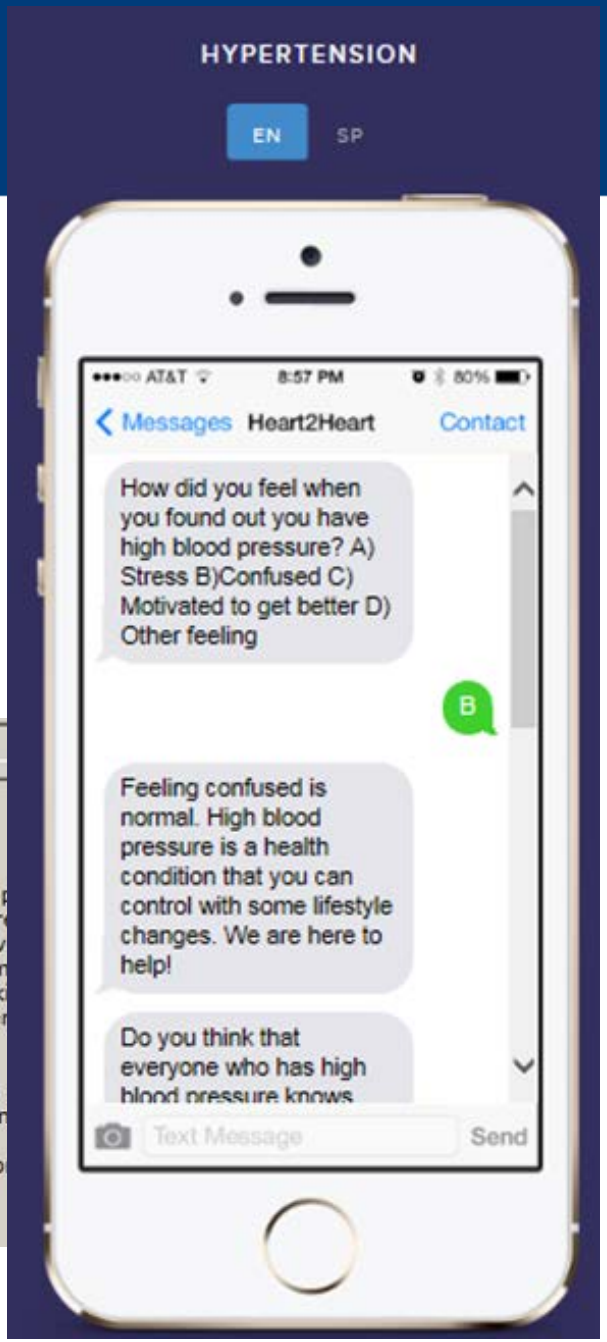
<DATE>

Hi <PATIENT_FNAME>,

<PATIENT_PROV_NAME> would like to bring you this helpful message regarding high blood p
also called hypertension. According to recent estimates, one in four adults has high blood pr
because there are no symptoms, nearly one-third of these people don't even know they hav
way to tell if your blood pressure is controlled is to have your blood pressure checked. Norm
pressure is below 135/85. Treatment for high blood pressure will almost always include mak
changes. These changes include eating healthy foods and maintaining a healthy weight, exer
regularly, managing stress and taking medications if prescribed by your doctor.

Since regular blood pressure checks are very important for good health, we want to remind
your blood pressure daily. Since you have not had a maintenance visit within the last 3 mon
like to invite you to make an appoint at <PATIENT_PROV_LOC_NAME> by calling
<PATIENT_PROV_PHONE> to have your blood pressure checked and other important lab wo

Thank you very much



Million Hearts Hiding in Plain Sight Project

Health Center Survey Data – Part 2

Challenges

Patient Barriers

- Motivating patients to come back to health education and primary care appointments
- Medication adherence
- Educating and engaging patients to be accountable for their own health and self-manage

Care Team Barriers

- Staff need frequent retraining
- Implementing across many sites at once and training all staff
- Buy-in of providers in changing their workflows
- Getting leadership to approve HTN protocol in a timely manner

Advice to Other Health Centers

- Take it one provider, care team, or site at a time; perfect process using a PDSA and then spread
- Must have a provider champion
- Incorporate an onsite pharmacist into the care team
- Share data regularly, but always validate data before sending to sites/care teams
- Ensure all care team members, including operations and pharmacy are part of weekly QI meetings
- Deliberate patient engagement efforts are essential

Year 3

Better BP Control though Acceleration of Self-Measured Blood Pressure (SMBP)

Why SMBP (the Evidence)?

Current evidence indicates SMBP with clinical support can lead to:

- ↓ Systolic BP (SBP): **3.4 to 8.9 mm Hg**
- ↓ Diastolic BP (DBP): **1.9 to 4.4 mm Hg**
- **Consistent and meaningful improvements** in blood pressure sustained at 12 months when compared with usual care

1. He J, Whelton PK. Elevated systolic blood pressure and risk of cardiovascular and renal disease: overview of evidence from observational epidemiologic studies and randomized controlled trials. Am Heart J. 1999;138:211–219
2. Law M, Wald N, Morris J. Lowering blood pressure to prevent myocardial infarction and stroke: a new preventive strategy. *Health Technol Assess.* 2003;7(31):1-94

Why SMBP (the Evidence)?

Cost-effective:

- Economic evidence indicates that SMBP interventions are cost-effective when they are used *with additional support or within team-based care.*[2]

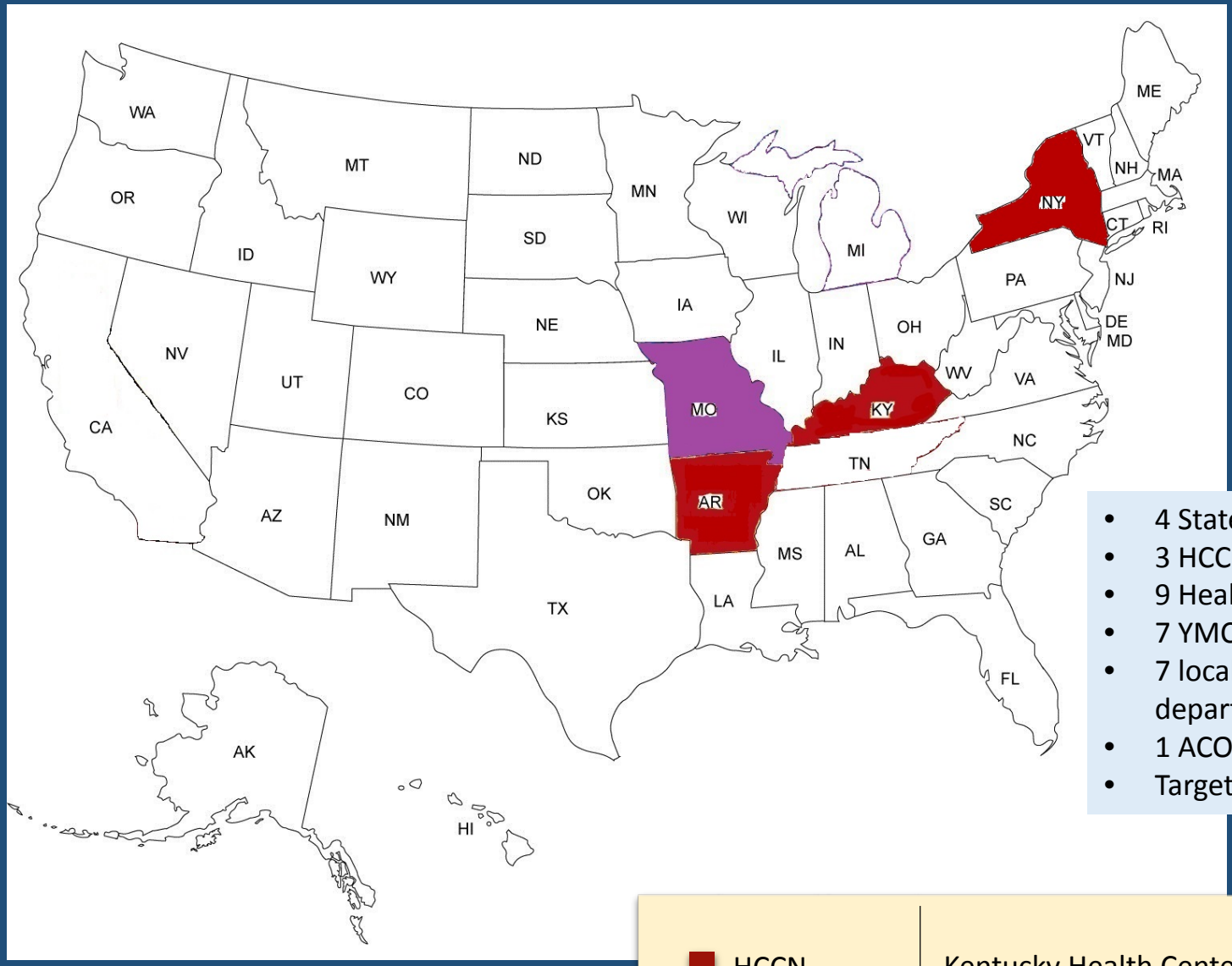
- Recent research found that reimbursement of SMBP would generate overall net savings and up to a *4:1 ROI in the first year and up to 20:1 ROI after 10 years*[3]

SMBP Gaps

System Level Gaps in Knowledge & Implementation:

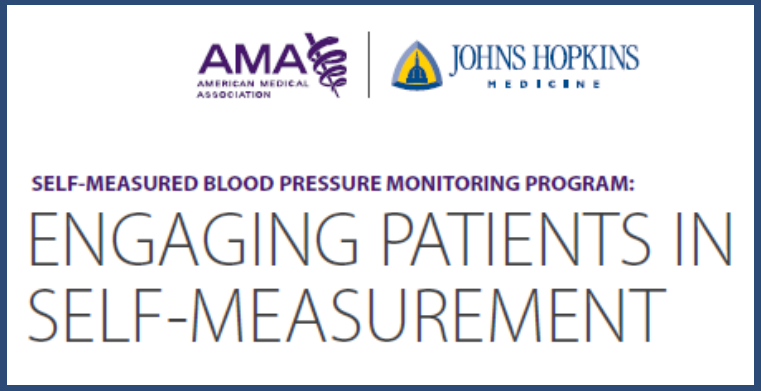
- **Effectiveness of community interventions**
- If they can be successfully used, **how can community interventions be seamlessly incorporated into clinical care** (e.g., patient referrals and information feedback to clinicians)?
- **HIT workflows around SMBP data** (e.g., getting patient readings into EHR systems and into an actionable format for clinicians; sending clinician interpretation and advice back to patients).
- **Optimal role of public health**

SMBP Project Partners



- 4 States
- 3 HCCNs
- 9 Health Centers
- 7 YMCAs
- 7 local public health departments
- 1 ACO
- Target: Adults ages 18-85

HCCN	Kentucky Health Center Network (KY/AR/TN)
PCA/HCCN	Missouri Quality Improvement Network (MO)
	HealthEfficient (NY)



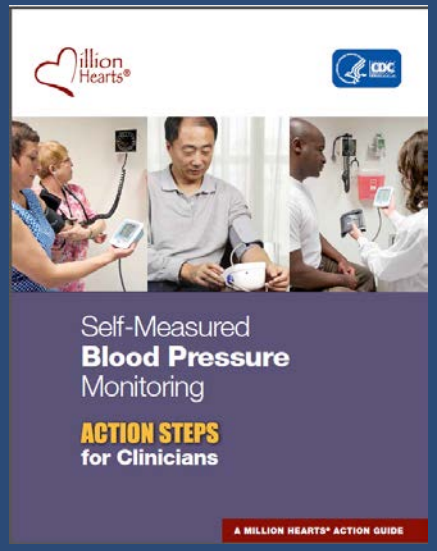
https://www.ama-assn.org/sites/default/files/media-browser/public/about-ama/iho-bp- engaging-patients-in-self-measurment_0.pdf

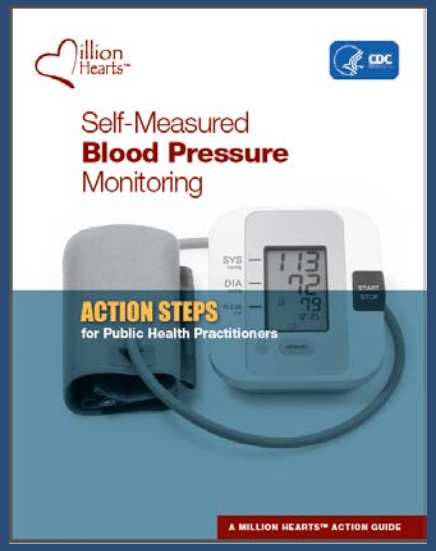
Year 3

Work Together to Develop an Integrated Care Model for SMBP:

- Analyze current care processes/ community workflows and information flows
- Identify potential enhancements/ linkage points
- Test and implement change ideas

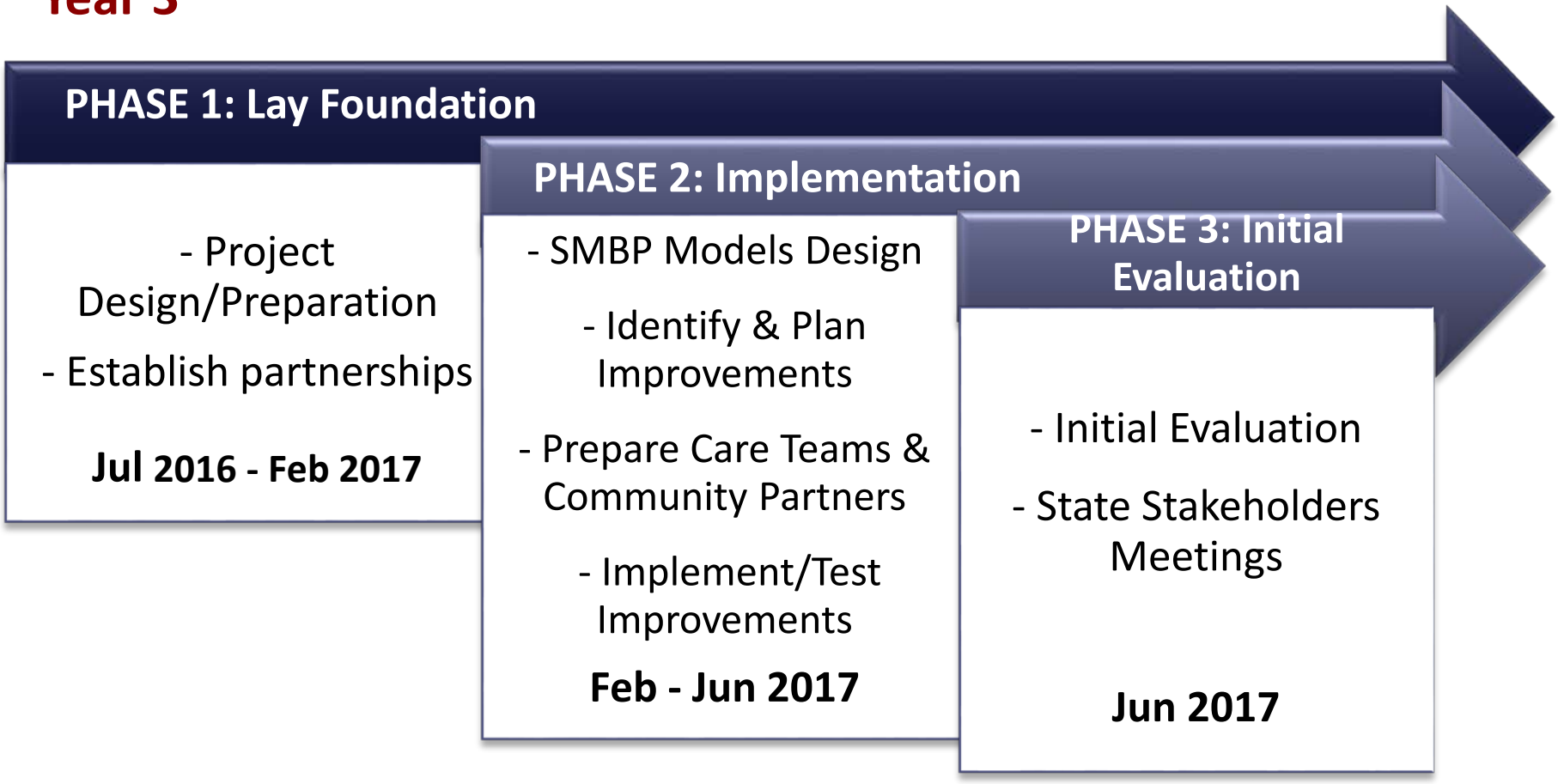
https://millionhearts.hhs.gov/files/MH_SMBP_Clinicians.pdf
https://millionhearts.hhs.gov/files/MH_SMBP.pdf





Project Phases

Year 3



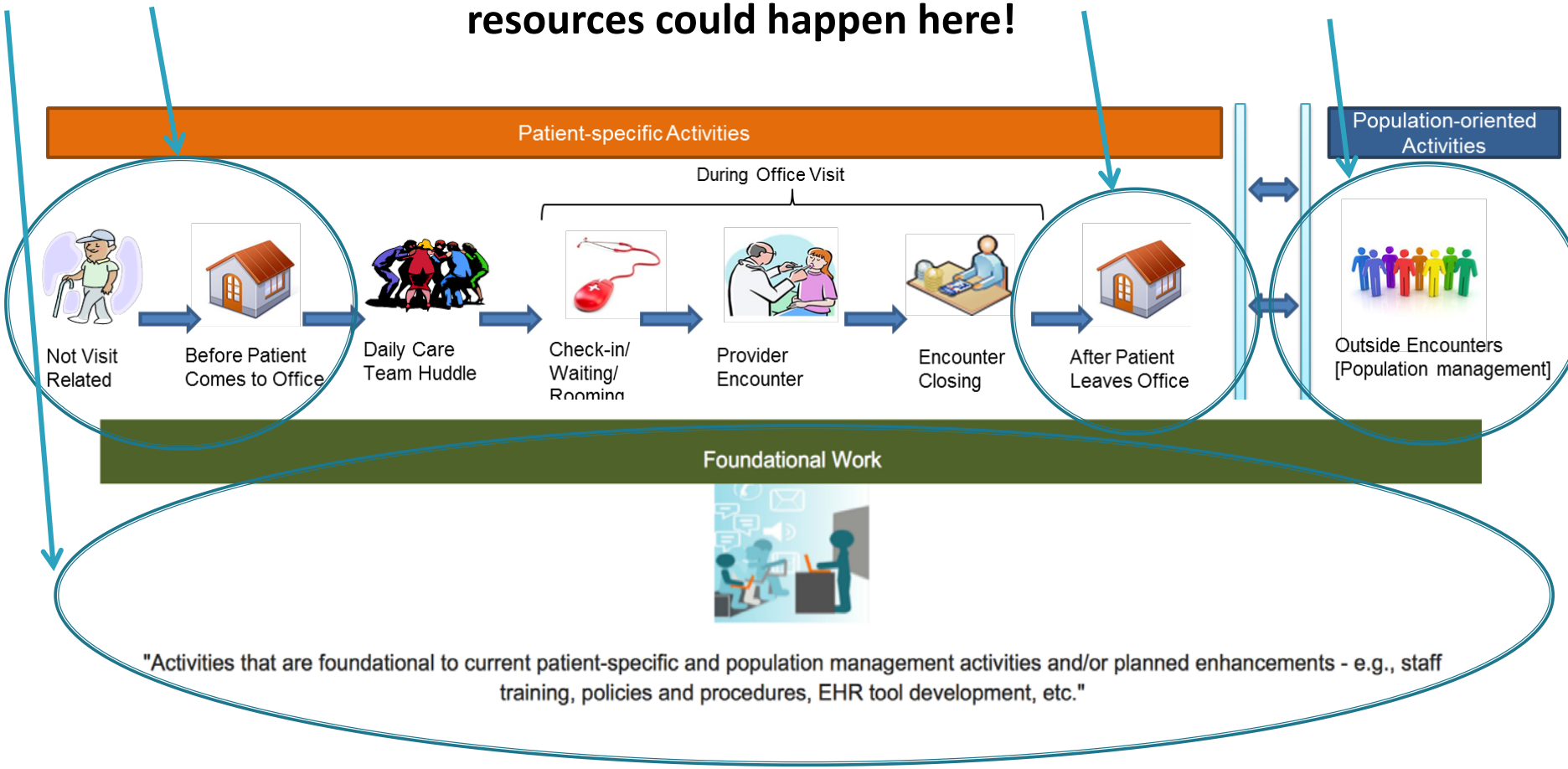
Year 4: Planned July 2017 – June 2018 – Continued implementation and evaluation

Systems Transformation around SMBP

Goal: Increase use of SMBP among those with hypertension through coordinated action of clinical providers and community supports.

Enhancements for a Collaborative Model around SMBP

Opportunities for integrating and optimizing the community and public health resources could happen here!



Source: TMIT Consulting, LLC

What does it Take?

- ✓ A clinician to prescribe SMBP
- ✓ A validated home BP monitor
- ✓ A care team member to calibrate patients' home monitors and train patients in SMBP techniques

- ✓ A patient to take their own BP and document the BP measurement
- ✓ A method of getting BP measurements from the patient to the clinician
- ✓ A clinician to interpret SMBP readings and provide titration advice and counseling based on SMBP readings
- ✓ **A trusted community organization and public health to provide SMBP support and bidirectional feedback**

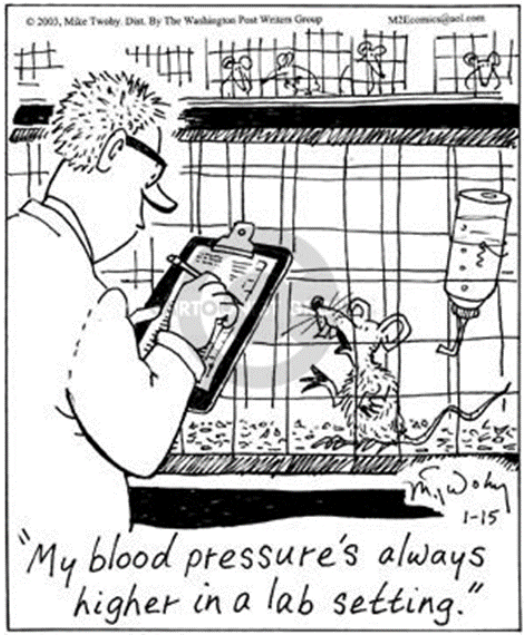
Measuring Success

Measure Type	Measure Description
Short-Term Outcome	Care team recommendation of SMBP to HTN patients
	Care team referral of HTN patients to community/other cross-sector SMBP programs
Intermediate Outcome	Use of SMBP among HTN patients
	Use of community SMBP programs among HTN patients (YMCA Clinical Referral Measure)
Long-term Outcome	Blood Pressure Control (NQF 0018)

"Use of SMBP" = 12 measurements over a continuous 3 day period with 2 daily measurements in the morning and 2 daily measurements in the evening; *averaged* (Source: AMA)

Million Hearts®

Resources



Million Hearts® Resources

- **Action Guides** → http://millionhearts.hhs.gov/tools-protocols/action-guides.html
  - Hypertension Control: Change Package for Clinicians
  - Identifying and Treating Patients Who Use Tobacco: Action Steps for Clinicians
  - Self-Measured Blood Pressure Monitoring: Action Steps for Clinicians
  - Self-Measured Blood Pressure Monitoring: Action Steps for Public Health
  - Medication Adherence: Action Steps for Public Health Practitioners
  - Medication Adherence: Action Steps for Health Benefit Managers
  - Cardiovascular Health: Action Steps for Employers
- **Protocols** → http://millionhearts.hhs.gov/tools-protocols/protocols.html
  - Hypertension Treatment Protocols
  - Tobacco Cessation Protocols
  - Cholesterol Management Protocols
- **Clinical Quality Measures** → http://millionhearts.hhs.gov/data-reports/cqm.html
  - Download the Million Hearts® measures
  - Million Hearts® Clinical Quality Measures Dashboard
  - Download the Data (HRSA UDS, NCQA HEDIS Commercial, NCQA HEDIS Medicaid, CMS PQRS Registry, CMS PQRS GPRO, CMS PQRS ACO)
- **Tools** → http://millionhearts.hhs.gov/tools-protocols/tools.html
  - Heart Age Calculator
  - Hypertension Prevalence Estimator Tool
  - ASCVD Risk Estimator

Next Steps…

- **Project Articles:** We're continuing progress and are aiming to submit initial manuscripts by summer
- **Continue NACHC Million Hearts Year 3** – Accelerating SMBP to Improve BP Control
- **National Million Hearts 2.0 (through 2020)**
- **Future Collaboration/Learning Opportunities**

Thank You

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