



CALIFORNIA ASSOCIATION of
**PUBLIC HOSPITALS
AND HEALTH SYSTEMS**



CALIFORNIA HEALTH CARE
SAFETY NET INSTITUTE

PRIME REQUIRED PROJECT IMPLEMENTATION WEBINAR

**Webinar Series 2: Successful Approaches to Disease
Management and Screening**

**Controlling Blood Pressure: Successful Operational and
Clinical Practices**

Thursday, February 23, 2017; 12:00-1:00pm

Recording Link:

<https://safetynetinstitute.webex.com/safetynetinstitute/lsr.php?RCID=1a122f1104c24ee78b07967ef25c26f8>

Agenda

Time	Topic	Lead(s)
12:00-12:05	Opening PHS background on metric	Giovanna Giuliani Executive Director, SNI
12:05-12:55	Controlling Blood Pressure: Successful Operational and Clinical Practices Q&A	Joseph Young, MD Clinical Hypertension Lead, Kaiser Permanente Northern California
12:55-1:00	Resources Closing	Giovanna Giuliani Executive Director, SNI

Housekeeping



Please mute locally



At any time, feel free to chat your question & we will read out



Webinar will be recorded



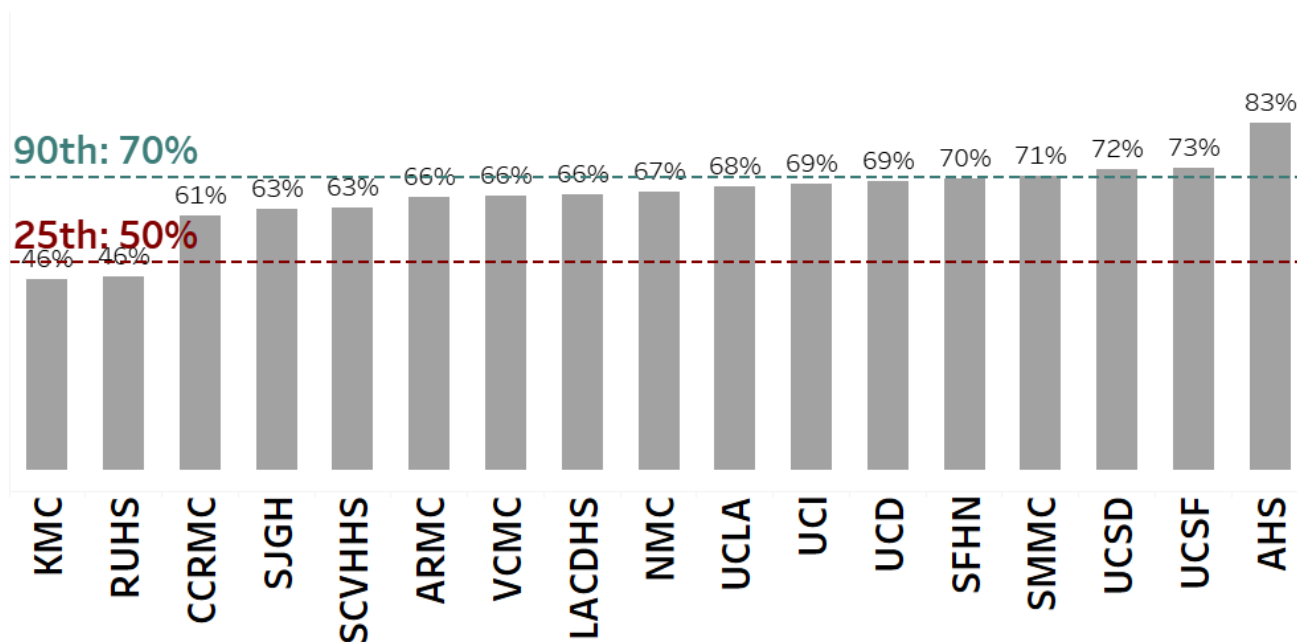
Deck & tools will be saved on [SNI Link](#)

DY11 PHS Performance

Controlling Blood Pressure

Metric 1.2.5

Controlling High Blood Pressure **P4P**





Kaiser Permanente Northern California

Presentation to **California Health Care Safety Net Institute**

23 February 2017

Joseph D. Young, MD
Hypertension Clinical Lead, Kaiser Permanente Northern California

Speaker's Financial Disclosure

- I have no financial relationship with any medically related enterprise other than Kaiser Permanente
- I am not an investigator for a pharmaceutical sponsored trial
- I am not on a pharmacy sponsored speakers bureau

JAMA. 2013;310(7):699-705.

Research

Original Investigation

Improved Blood Pressure Control Associated With a Large-Scale Hypertension Program

Marc G. Jaffe, MD; Grace A. Lee, MD; Joseph D. Young, MD; Stephen Sidney, MD, MPH; Alan S. Go, MD

IMPORTANCE Hypertension control for large populations remains a major challenge.

OBJECTIVE To describe a large-scale hypertension program in Northern California and to compare rates of hypertension control in that program with statewide and national estimates.

DESIGN, SETTING, AND PATIENTS The Kaiser Permanente Northern California (KPNC) hypertension program included a multifaceted approach to blood pressure control. Patients identified as having hypertension within an integrated health care delivery system in Northern California from 2001-2009 were included. The comparison group comprised insured patients in California between 2006-2009 who were included in the Healthcare Effectiveness Data and Information Set (HEDIS) commercial measurement by California health insurance plans participating in the National Committee for Quality Assurance (NCQA) quality measure reporting process. A secondary comparison group was included to obtain the reported national mean NCQA HEDIS commercial rates of hypertension control between 2001-2009 from health plans that participated in the NCQA HEDIS quality measure reporting process.

MAIN OUTCOMES AND MEASURES Hypertension control as defined by NCQA HEDIS.

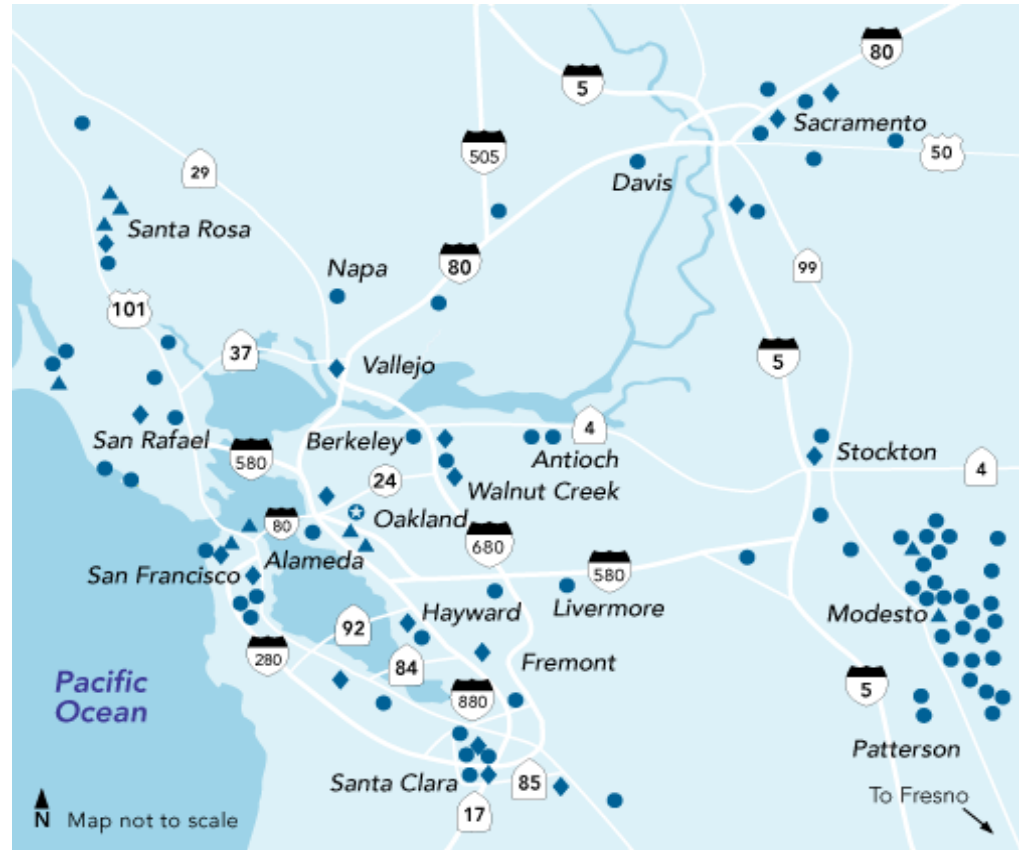
← Editorial page 695

+ Author Video Interview at jama.com

+ Supplemental content at jama.com

Kaiser Permanente Northern California

- More than 3.7 million members
- Comprehensive inpatient & outpatient services
- 21 hospitals and 45 medical facilities
- More than 8,000 Physicians



Health System-Wide Hypertension Registry

- Hypertension Registry developed in 2000
- Elements used for identification
 - Outpatient diagnostic codes
 - Pharmaceutical utilization data
 - Hospitalization records
- Chart review audits of random samples of identified members were conducted

Hypertension Registry Patient Characteristics

Table 2. Patient Characteristics of the Kaiser Permanente Northern California (KPNC) Hypertension Registry, 2001-2009

Year	%								
	2001	2002	2003	2004	2005	2006	2007	2008	2009
KPNC, No.									
Total adult population	2 278 043	2 345 910	2 325 616	2 339 898	2 384 895	2 421 141	2 423 368	2 416 095	2 371 761
Hypertension registry	349 937	415 687	432 611	509 783	543 650	572 100	600 523	610 724	652 763
Percentage of total KPNC adult membership	15.4	17.7	18.6	21.8	22.8	23.6	24.8	25.3	27.5
Age, mean (SD), y	63.0 (13.6)	63.0 (13.8)	62.9 (13.8)	63.0 (13.9)	63.0 (13.9)	62.9 (14.0)	63.0 (14.1)	63.3 (14.2)	63.0 (14.4)
Age category, y									
18-44	10.4	10.6	10.7	10.7	10.7	10.9	10.9	10.5	11.0
45-65	44.7	44.8	45.0	45.5	45.9	46.3	46.0	45.6	45.7
66-85	44.8	44.6	44.3	43.8	43.4	42.8	43.1	44.0	43.3
Women	52.1	52.2	52.3	52.4	52.3	52.2	52.2	52.3	52.7
Race/ethnicity									
White	NA	NA	NA	NA	NA	NA	NA	58.8	58.4
Black or African American	NA	NA	NA	NA	NA	NA	NA	10.6	10.8
Hispanic or Latino	NA	NA	NA	NA	NA	NA	NA	13.3	13.2
Asian or Pacific Islander	NA	NA	NA	NA	NA	NA	NA	16.1	16.5
Multiracial	NA	NA	NA	NA	NA	NA	NA	0.8	0.8
American Indian or Alaskan Native	NA	NA	NA	NA	NA	NA	NA	0.3	0.3
Diabetes mellitus	25.6	25.9	26.2	28.0	27.8	27.8	28.0	29.1	28.5

Abbreviations: KPNC, Kaiser Permanente Northern California; NA, not available.

Evolution of the Drug Treatment Algorithm

A Program for Improved Blood Pressure Control

Original Investigation Research

Table 1. Summary of Evidence-Based Clinical Practice Guideline for Initial Therapy and Treatment Intensification for the Kaiser Permanente Northern California Hypertension Program, by Year

Step	2001	2003	2005	2007	2009
1	Thiazide diuretic or β -blocker	Thiazide diuretic	Thiazide diuretic or thiazide diuretic + ACE inhibitor	Thiazide diuretic or thiazide diuretic + ACE inhibitor	Thiazide diuretic or thiazide diuretic + ACE inhibitor
2	Thiazide diuretic + β -blocker	Thiazide diuretic + ACE inhibitor or thiazide diuretic + β -blocker	Thiazide diuretic + ACE inhibitor	Thiazide diuretic + ACE inhibitor	Thiazide diuretic + ACE inhibitor
3	Thiazide diuretic + β -blocker + ACE inhibitor	Thiazide diuretic + β -blocker + ACE inhibitor	Thiazide diuretic + β -blocker + ACE inhibitor	Thiazide diuretic + β -blocker + ACE inhibitor	Thiazide diuretic + ACE inhibitor + DCCB
4	Thiazide diuretic + β -blocker + ACE inhibitor + DCCB	Thiazide diuretic + β -blocker + ACE inhibitor + DCCB	Thiazide diuretic + β -blocker + ACE inhibitor + DCCB	Thiazide diuretic + β -blocker + ACE inhibitor + DCCB	Thiazide diuretic + ACE inhibitor + DCCB + β -blocker or spironolactone

Abbreviations: ACE, angiotensin-converting enzyme; DCCB, dihydropyridine calcium channel blocker.

http://millionhearts.hhs.gov/resources/protocols.html

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McAfee

Million Hearts - Tools - Evidence-based Treatment Pro...

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Resources

Evidence-based Treatment Protocols for Improving Blood Pressure Control*

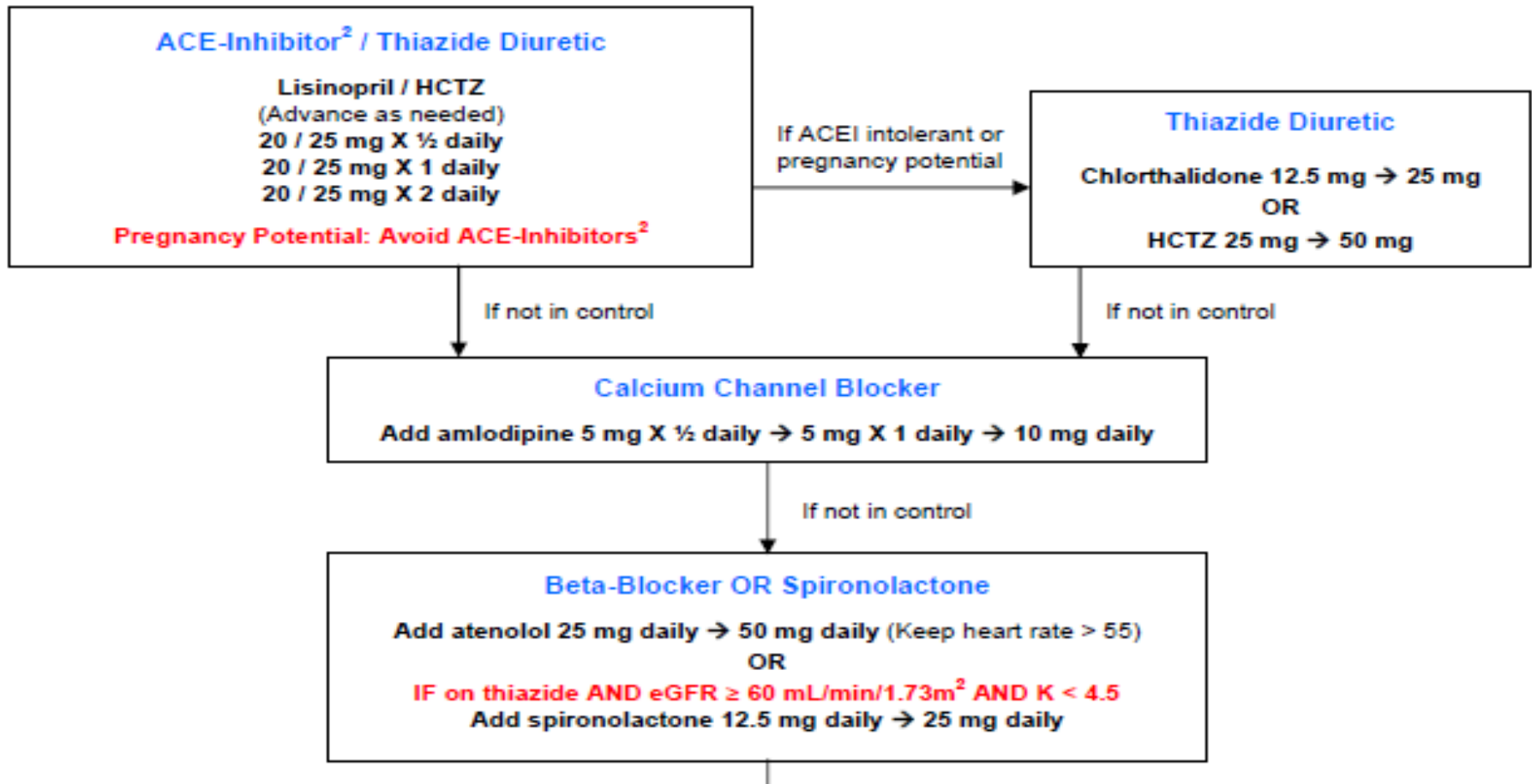
Million Hearts® encourages widespread adoption and use of standardized treatment protocols for improving blood pressure control. Simple, evidence-based treatment protocols can have a powerful impact in improving control by clarifying titration intervals and treatment options, by expanding the types of staff that can assist in timely follow-up with patients, and when embedded in electronic health records, by serving as clinical decision support at the point of care so no opportunities are missed to achieve control. A variety of evidence-based hypertension treatment protocols are available for practices and health care systems to select from, including the following protocols, or a custom protocol can be developed using the template.

**The hypertension protocols featured are examples of a wide variety of available evidence-based hypertension treatment protocols that practices and health care systems may consider for adoption and use. Linking to non-federal sites does not constitute an endorsement by the Department of Health and Human Services, the Centers for Disease Control and Prevention, or any of their employees of the sponsors or the information or products presented on the sites. Links to non-federal sites containing hypertension protocols serve only as a source of guidance. Health care professionals should always consider the individual clinical circumstances of each person seeking hypertension control. Links to the hypertension protocols are not intended to be a substitute for professional medical advice; individuals should seek advice from their health care professionals.*

Template to Create a Hypertension Treatment Protocol

KP HTN Treatment Algorithm

3 Meds to Max Dose in 6 Steps



NCQA-HEDIS Hypertension Control Specifications

NCQA-HEDIS Sample

- Random sample based on NCQA-HEDIS specifications
- Sample size is small - ranges between 305 and 411 each year

Internal Hypertension Control Reports

- Developed for Purpose of Quality Improvement
- All KPNC members eligible for the NCQA HEDIS hypertension control metric. As not limited to a random sample, much larger n.

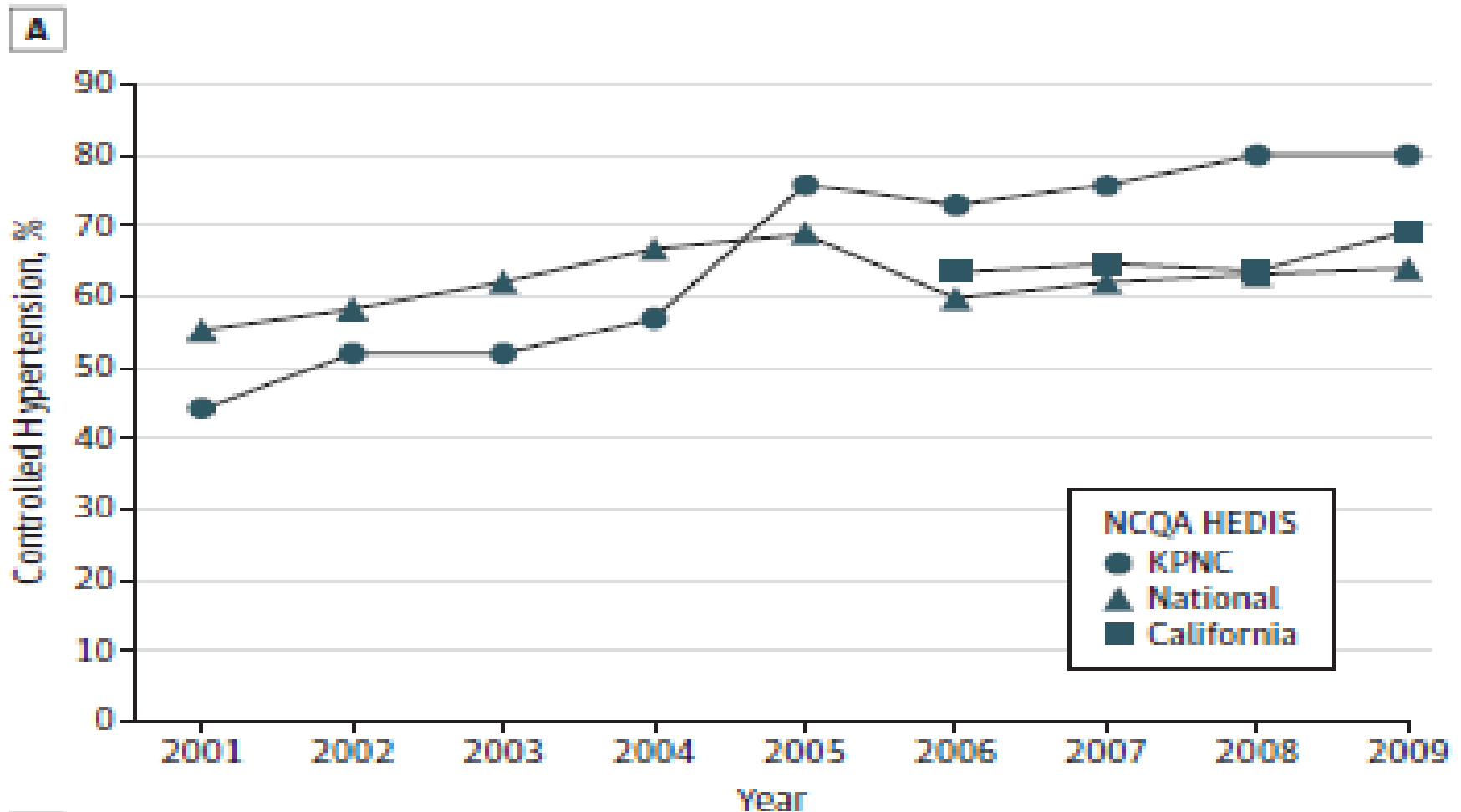
Sample sizes 2001 to 2009

- NCQA
 - n = 305 to 411
- Internal Control Metric
 - n = 234,852 in 2001 → 353,256 in 2009.
- Hypertension Registry
 - 349,937 (15.4% of adult KPNC membership) in 2001 → 652,763 (27.5% of adult KPNC membership) in 2009

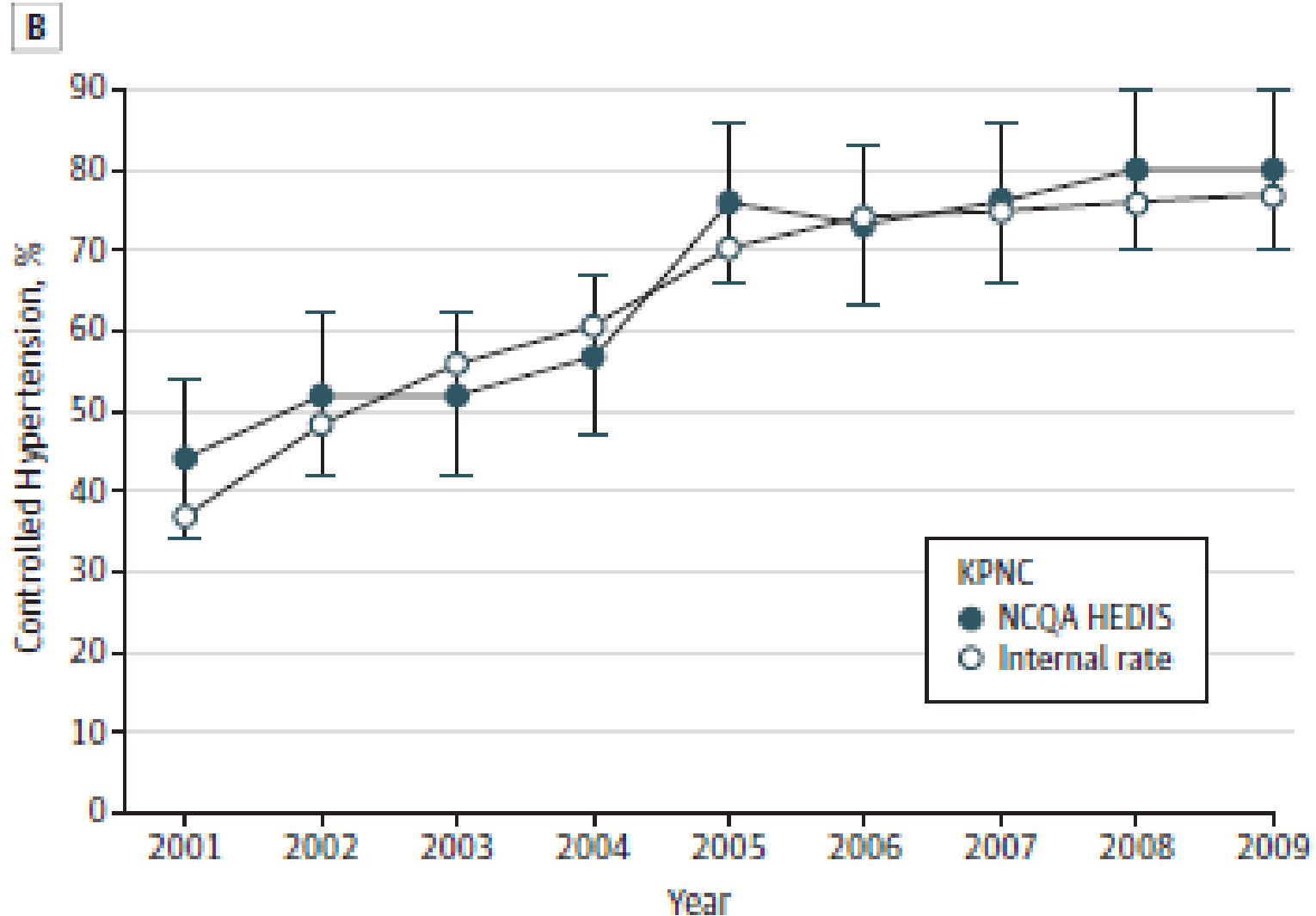
Culture of Quality Improvement and Accountability

- Annual Quality Goal Targets
- Un-blinded Medical Center Performance Reports
- Central Hypertension Management Team identified Best Practices
- Medical Center Cardiovascular Risk Reduction Teams to Support Physicians
- Best Practices Disseminated through Regional Peer Meetings
- Clinic-level feedback to facilitate operational and system-level change.

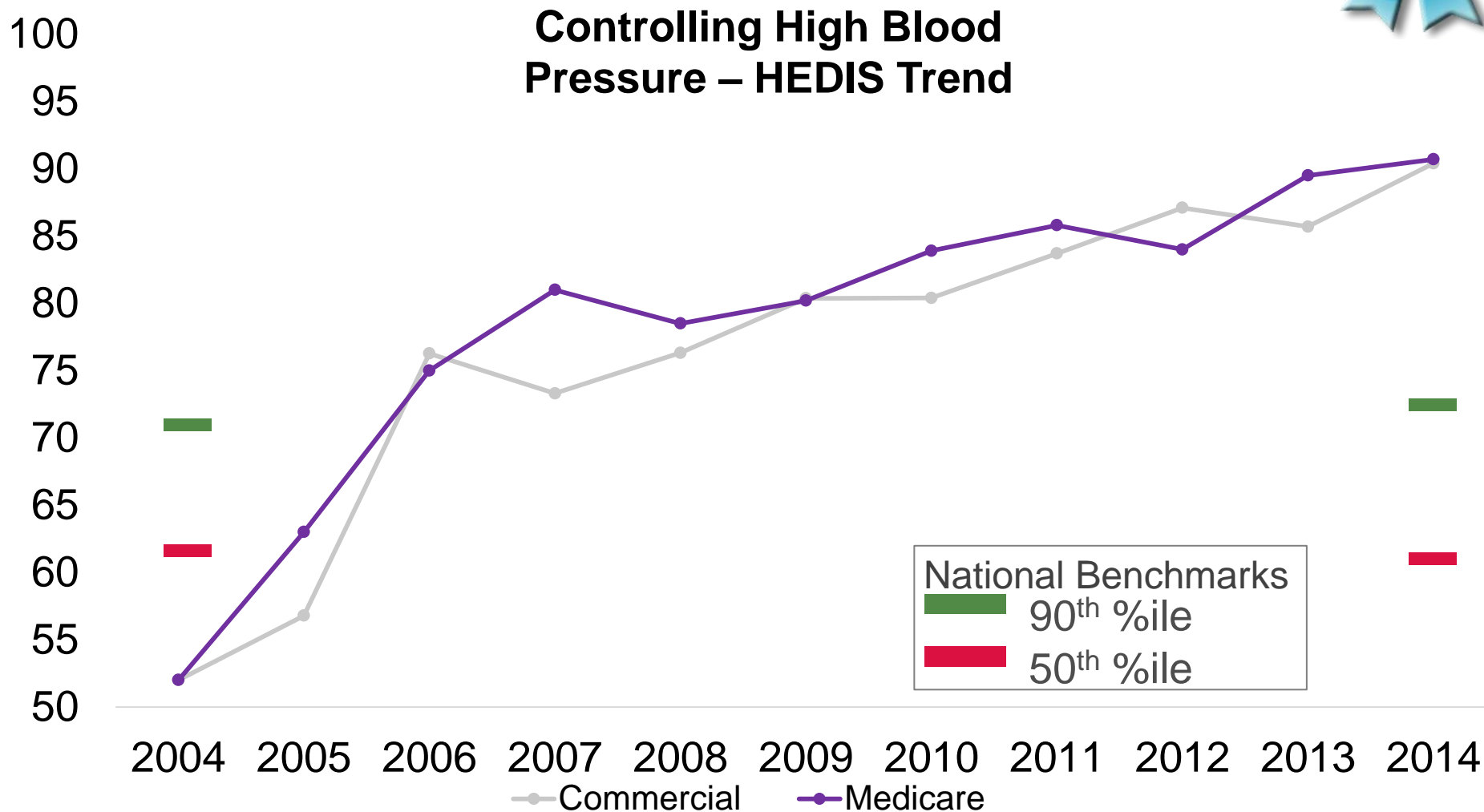
KPNC NCQA HEDIS Control Rate vs. National and California Rates



KPNC NCQA HEDIS Control Rate vs. Internal Control Rate

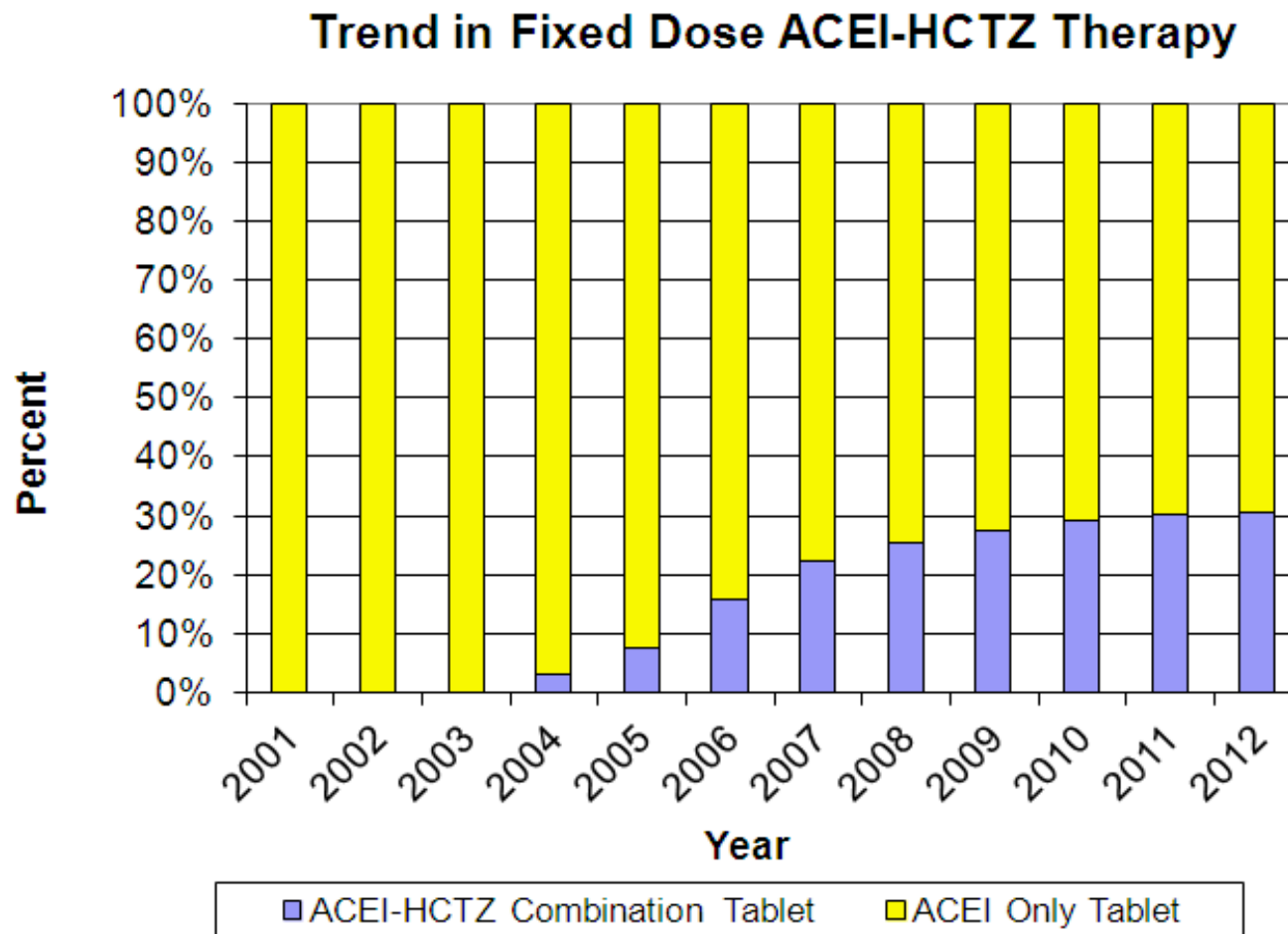


Leading the Nation in HTN Control



30% of ACEI Rx's dispensed as Fixed Dose Combination Therapy

% Of All ACEI Rx's



Medical Assistant BP Measurement Checks

Because Doctor Office Visits are neither cost-effective nor convenient for BP measurement

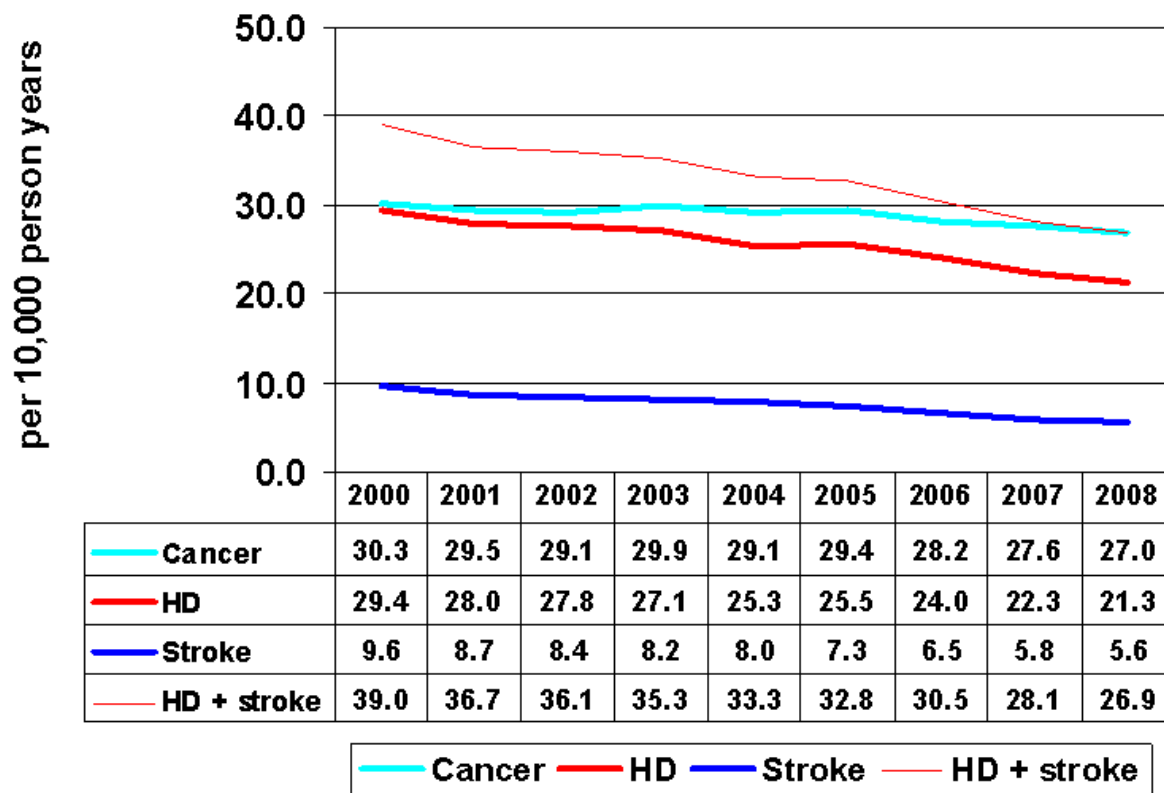
- EHR enables asynchronous communication
- MA Measurement reduces white-coat effect
- Enhanced compliance because of
 - No co-pay
 - Member convenience - delays are rare
- Enables “repatriation” to Primary Care when BP measurement is elevated outside of Primary Care.

Key Elements of a Comprehensive Large-Scale Hypertension Control Program

- Hypertension Registry, Comprehensive
 - Performance Metrics, Transparent and Widely Visible
- Clinic-level feedback to facilitate operational and system-level change.
- Treatment Algorithm
 - Evidence-Based
 - Simple, Implementable
- Single Pill Combination (SPC) pharmacotherapy
- Medical-Assistant BP Checks
 - Better leverage ancillary staff skills
 - Reduced barriers to patients

Falling CV Morbidity and Mortality - KPNC

KPNC Mortality 2000-2008



Since Year 2000:

- **30% reduction** in mortality from CVD
- **42% reduction** in mortality from stroke
- **11% reduction** in mortality from cancer

Sidney S, Jaffe M, Nguyen-Hyunha M, Kushi L, Young J, Sorel M, Selby J, Go A. Closing the Gap Between Cardiovascular and Cancer Mortality in an Integrated Health Care Delivery System, 2000-2008: The Kaiser Permanente Experience. Circulation 2011; 124: A13610

Acknowledgements

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- Joel Gibson
- Laura Skabowski
- Dawn Rezente
- Don Fordham, MPH
- Gloria Cruz
- Rhonda Woodling
- Judie Zhang
- Nellie Tadevosyan
- Joyce Arango
- Joceyln Chan, PharmD
- The 7,000 physicians and thousands of others in The Permanente Medical Group who treat 2/3 of a million people with HTN

Resources on SNI Link

- Posted on [Project 1.2 page](#)



Additional

American Medical Association Webinar – Target BP Slides (AMA)

Tools & Protocols (Million Hearts)



Project Leads on SNI Link

1.2 Contact list posted on [PRIME Member Information](#)

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PRIME Project Implementation Webinars

Colorectal Cancer Screening:
Operational Practices and Resources
(Metric 1.2.3) – Wednesday, March 1,
12:00-1:00pm ([Register Here](#))



Information on all these webinars, including presentations and recording links, will be posted on SNI link [here](#).

CLOSING

Take 2-3 minutes to let us know how we did in the post-event pop-up!

Thank you for joining us, and to our speaker!

