

Welcome

Office for State, Tribal, Local and Territorial Support
presents . . .

CDC Vital Signs

**Medication Adherence: Helping People Take Their
Medicine**

September 20, 2016

2:00–3:00 pm (ET)



Centers for Disease Control and Prevention
Office for State, Tribal, Local and Territorial Support

Agenda

2:00 pm	Welcome & Introduction	Steven Reynolds, MPH Deputy Director, Office for State, Tribal, Local and Territorial Support, CDC
2:04 pm	Overview	Matthew Ritchey, PT, DPT, OCS, MPH Senior Scientist, Epidemiology and Surveillance Branch, Division for Heart Disease and Stroke Prevention, National Center for Chronic Disease Prevention and Health Promotion, CDC
2:10 pm	Presentations	Lawrence Garber, MD Medical Director for Informatics, Reliant Medical Group Jessica Moore, FNP Associate Team Medical Director, Petaluma and Rohnert Park Health Centers
2:30 pm	Q&A and Discussion	Steven Reynolds, MPH
2:55 pm	Wrap-up	
3:00 pm	End of Call	



CDC Vital signs™

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to support STLT efforts and build momentum around the monthly release of CDC *Vital Signs*



VITAL SIGNS

BLOOD PRESSURE CONTROL: HELPING PATIENTS TAKE THEIR MEDICINE

Matthew Ritchey, PT, DPT, OCS, MPH

Senior Scientist, Division for Heart Disease and Stroke Prevention

Town Hall Presentation
September 20, 2016

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention

National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention



Adherence

- ❑ **World Health Organization's definition¹:**
 - “Extent to which a person's behavior—taking medication, following a diet, and/or executing lifestyle changes—corresponds with agreed recommendations from a healthcare provider.”
- ❑ **Medication nonadherence²**
 - Approximately 20% to 30% of medication prescriptions are never filled
 - Patients do not continue treatment as prescribed in about 50% of cases

1. World Health Organization. *Adherence to Long Term Therapies: Evidence for Action*. Geneva: World Health Organization; 2003.

2. Ho PM, Bryson CL, Rumsfeld JS. Medication adherence: its importance in cardiovascular outcomes. *Circulation*. 2009 Jun 16;119(23):3028-35.



Public Health Importance of Medication Nonadherence

- **Annually in the United States, accounts for¹:**
 - 125,000 deaths
 - 11% of hospitalizations
 - \$100 to \$300 billion in additional spending

1. Bosworth HB, Granger BB, Mendys P, et. al. Medication adherence: a call for action. Am Heart J. 2011;162:412-24.



Public Health Importance of Blood Pressure (BP) Medication Nonadherence

- ❑ **One in 3 US adults (~75 million) has high BP¹**
 - Including ~70% of adults aged ≥ 65
- ❑ **Almost half of adults with high blood pressure don't have their condition under control¹**
 - Increased risk for developing heart disease, stroke, and kidney disease
- ❑ **Adherence to BP medication is associated with 45% greater odds of BP control²**
- ❑ **Nonadherence to BP medication is associated with increased risk for²:**
 - Adverse cardiovascular disease outcomes
 - Excessive health care costs

1. Gillespie CD, Hurvitz KA. Prevalence of hypertension and controlled hypertension—United States, 2007–2010. MMWR Suppl 2013;62(No. SS-3).

2. Ho PM, Bryson CL, Rumsfeld JS. Medication adherence: its importance in cardiovascular outcomes. Circulation. 2009 Jun 16;119(23):3028-35.



Purpose of Study

- ❑ **Describe BP medication nonadherence among Medicare Part D beneficiaries by:**
 - BP medication class
 - Beneficiaries' state and county of residence
 - Beneficiaries' type of prescription drug plan
 - Beneficiaries' treatment and demographic characteristics
- ❑ **Help identify and inform targeted interventions among the groups and regions most at risk**

Population Studied

Medicare Part D Beneficiaries

- ❑ **Medicare Part D**
 - Subsidizes the costs of prescription drugs and prescription drug insurance premiums for Medicare beneficiaries
 - Has increased the affordability and accessibility of prescription medications among U.S. adults aged ≥ 65 years and the disabled¹
- ❑ **Administrative data and prescription drug event data for 18.5 million Medicare Part D beneficiaries aged 65 and older in 2014**
- ❑ **Health insurance coverage types**
 - Original Medicare (i.e. Fee-for-service Medicare) (55%)
 - Medicare Advantage (45%)

1. Lau DT, Briesacher BA, Touchette DR, Stubbings J, Ng JH. Medicare Part D and quality of prescription medication use in older adults. *Drugs Aging* 2011;28:797–807.



Nonadherence Measure Used

Proportion of days covered (PDC)

- ❑ Represents the percentage of days a beneficiary had access to the prescribed medication from the date of his or her first BP medication fill through the end of 2014 or the beneficiary's death in 2014
 - PDC for each BP medication class
 - Average of all PDCs if a beneficiary is using multiple classes
 - PDC <80% considered nonadherent
- ❑ **Endorsed by:**
 - National Quality Forum
 - Pharmacy Quality Alliance
- ❑ **Used by CMS in the Medicare Star Ratings program***

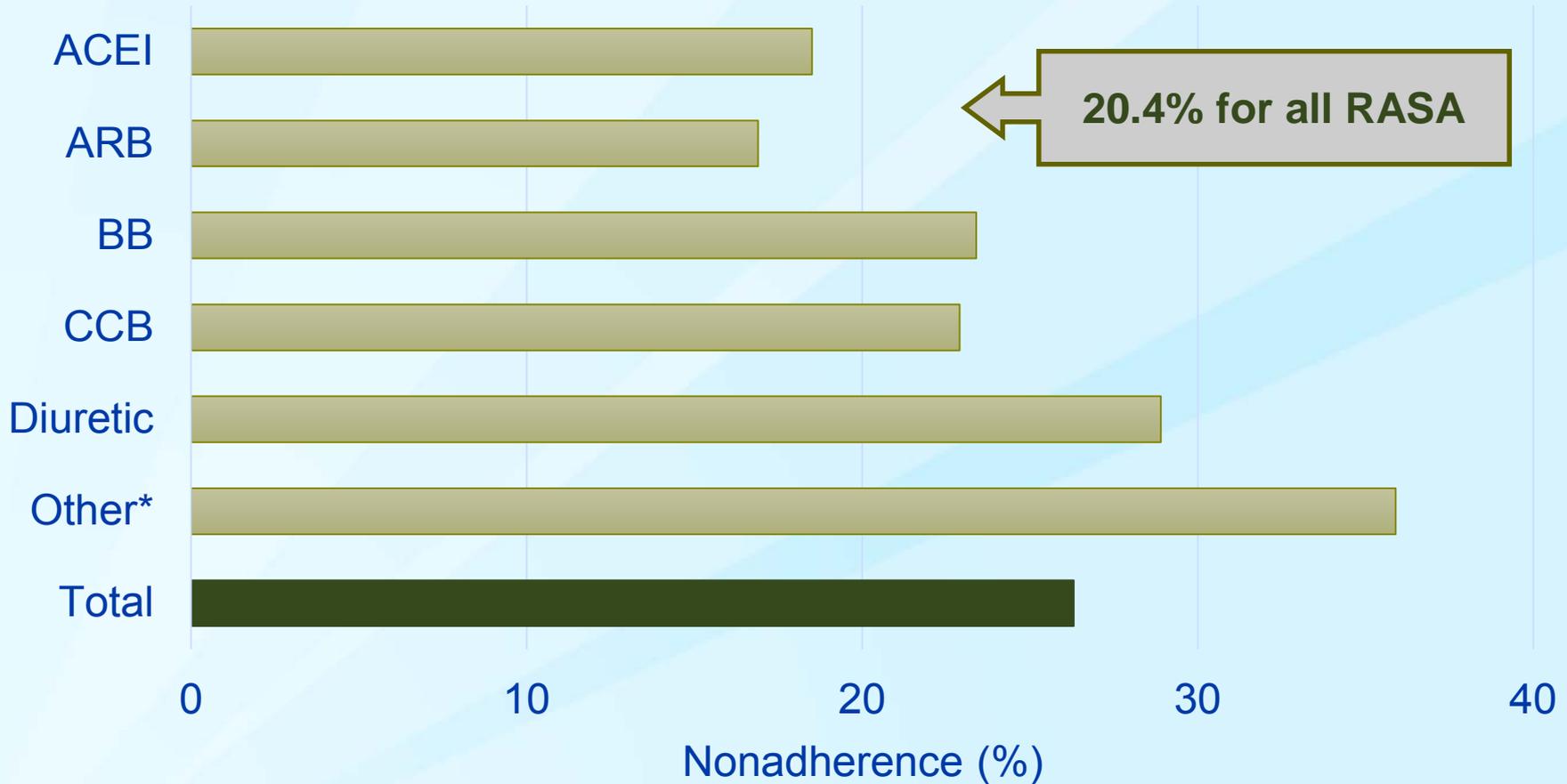
*Includes a medication adherence measure for renin-angiotensin system antagonists medication based on the Pharmacy Quality Alliance measure specifications (<https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovGenIn/PerformanceData.html>).



Main Findings

- ❑ In 2014, the 215.9 million BP medication fills accounted for almost \$5.9 billion in total spending, of which \$2.1 billion (35.6%) was borne by beneficiaries
- ❑ 26.3% (4.9 million) of Medicare Part D beneficiaries using BP medication were nonadherent to their regimen
- ❑ Minimal to no difference in nonadherence between:
 - Genders
 - Beneficiaries with Medicare Advantage versus Original Medicare coverage
- ❑ Slight increase in nonadherence with increases in age:
 - 65–74: 25.4%; 75–84: 27.0%; and ≥85 years: 29.0%
- ❑ Nonadherence differed considerably by multiple factors

Variation in BP Medication Nonadherence by Medication Class

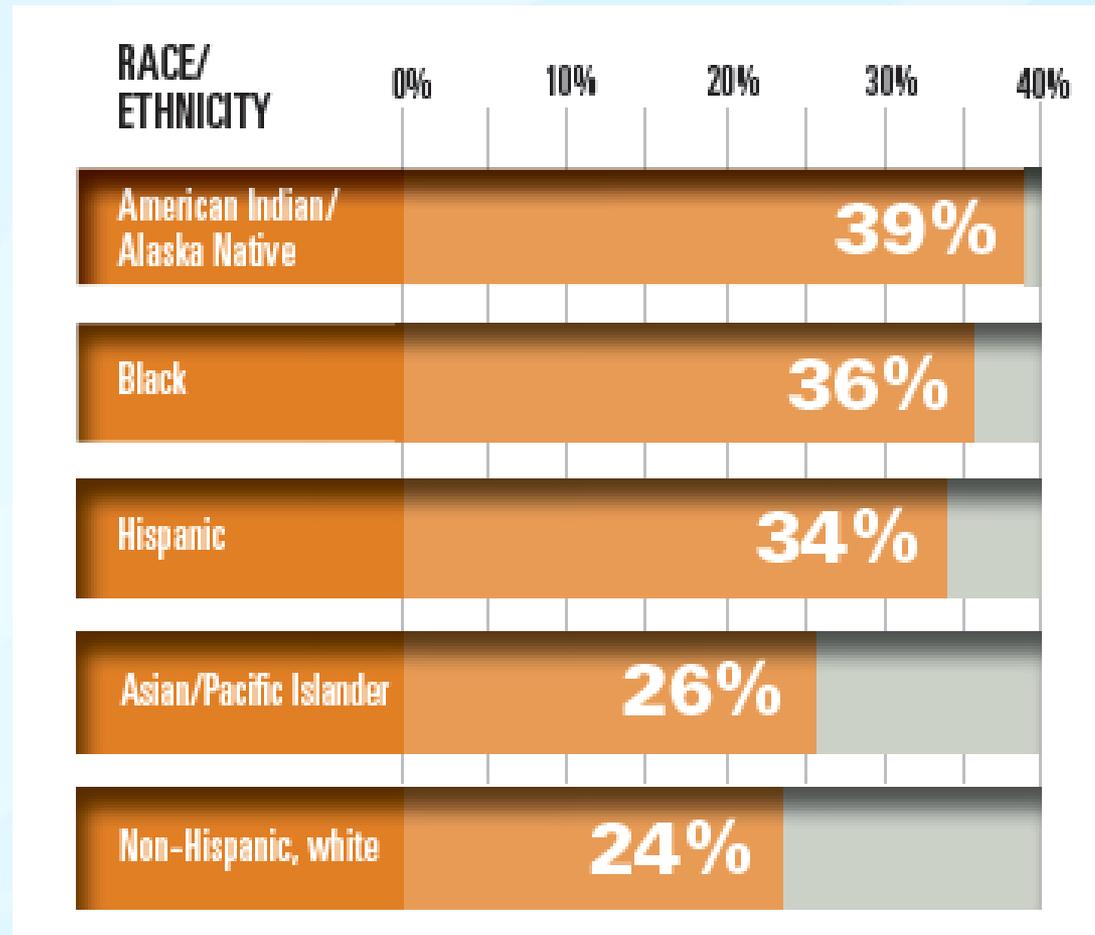


ACEI = angiotensin converting enzyme inhibitor; AHM = antihypertensive medication; ARB = angiotensin II receptor blocker; BB = beta blocker; CCB = calcium channel blocker; RASA = renin-angiotensin system antagonist

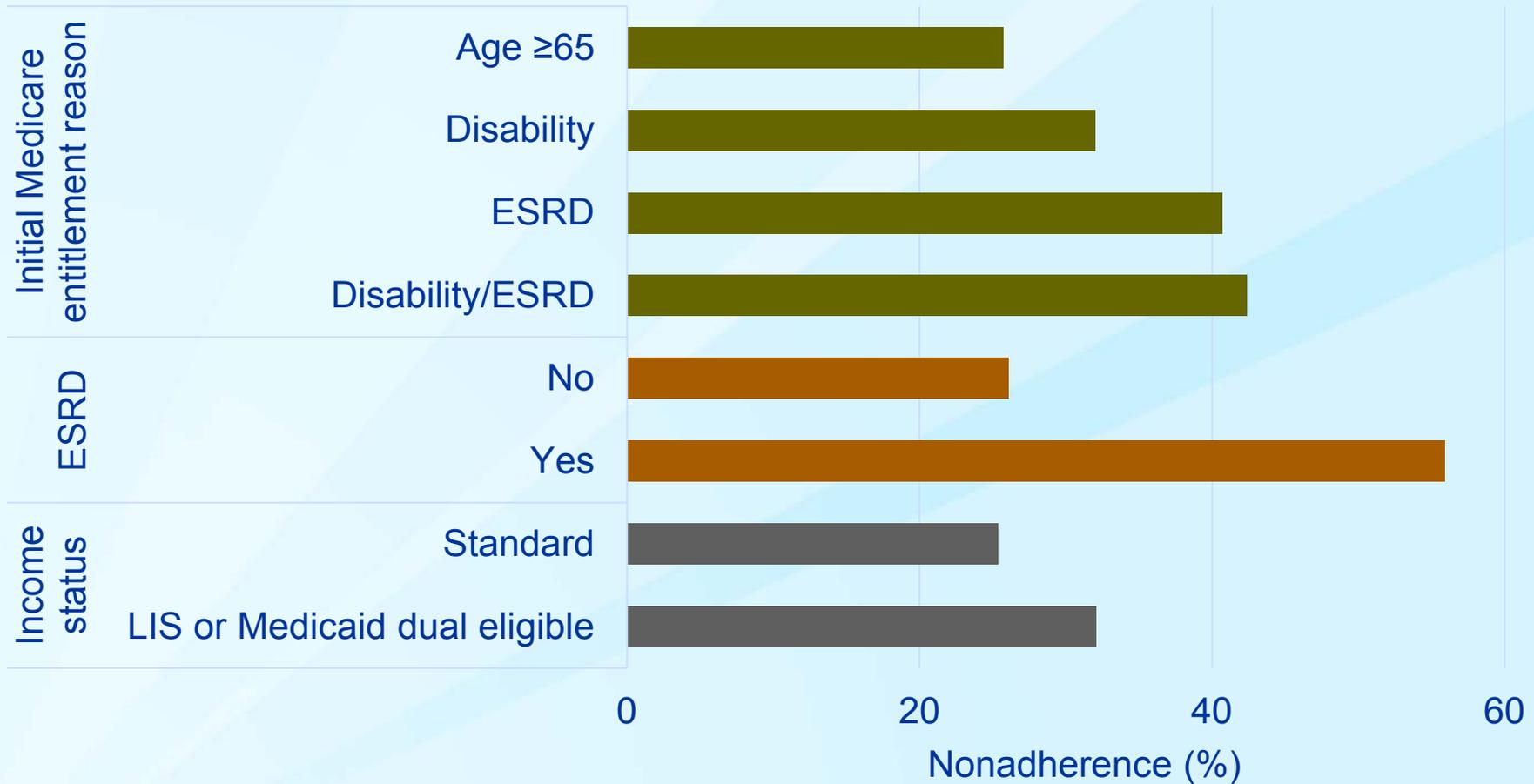
*Includes selective aldosterone receptor inhibitors, peripheral vasodilators, alpha blockers, and centrally acting agents.



Variation in BP Medication Nonadherence by Race/Ethnicity



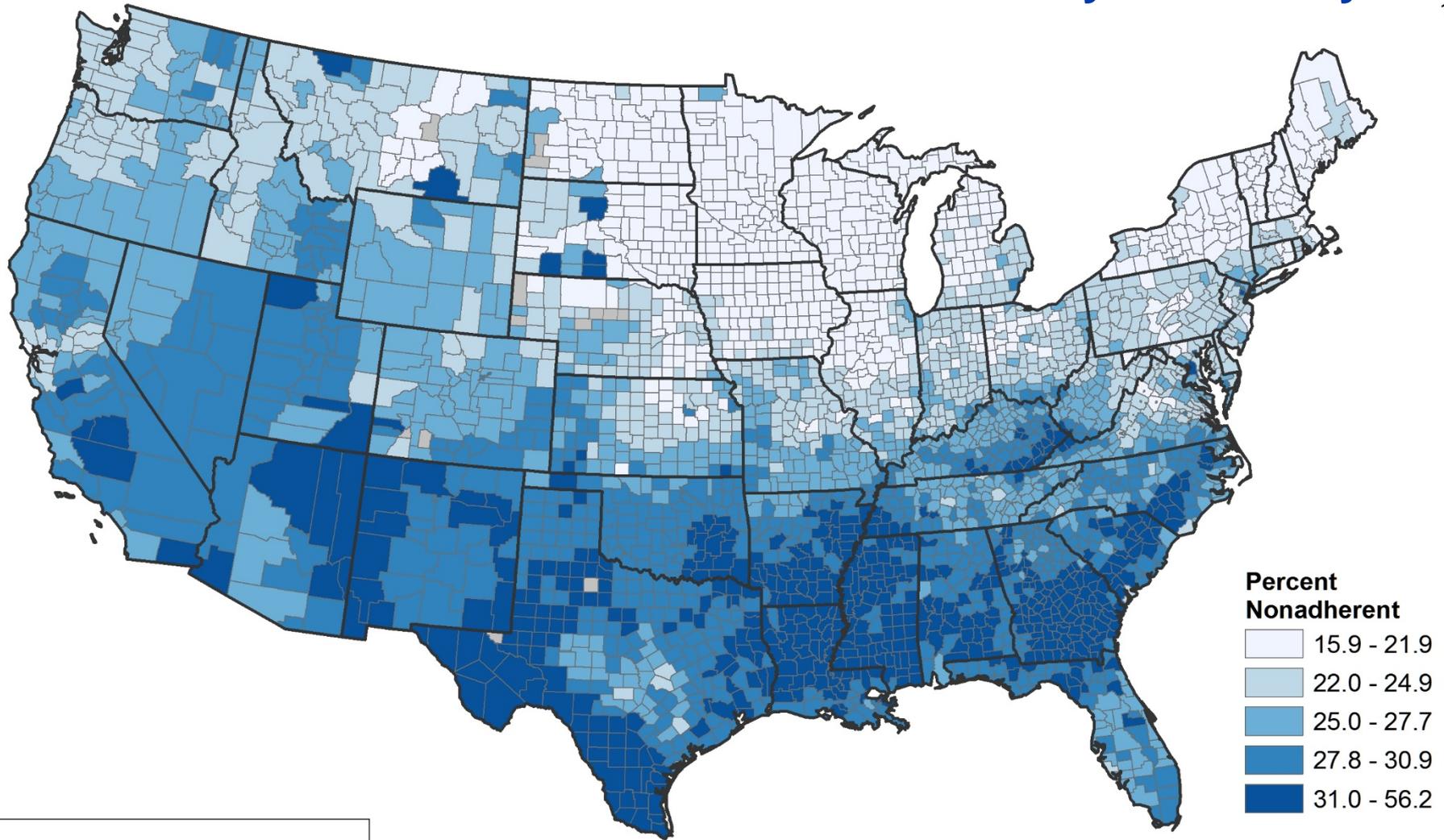
Variation in BP Medication Nonadherence by Socioeconomic and Health Status



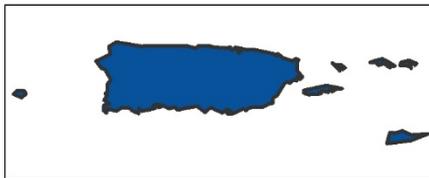
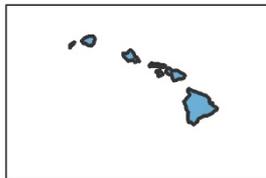
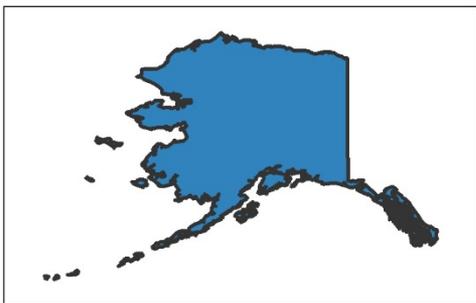
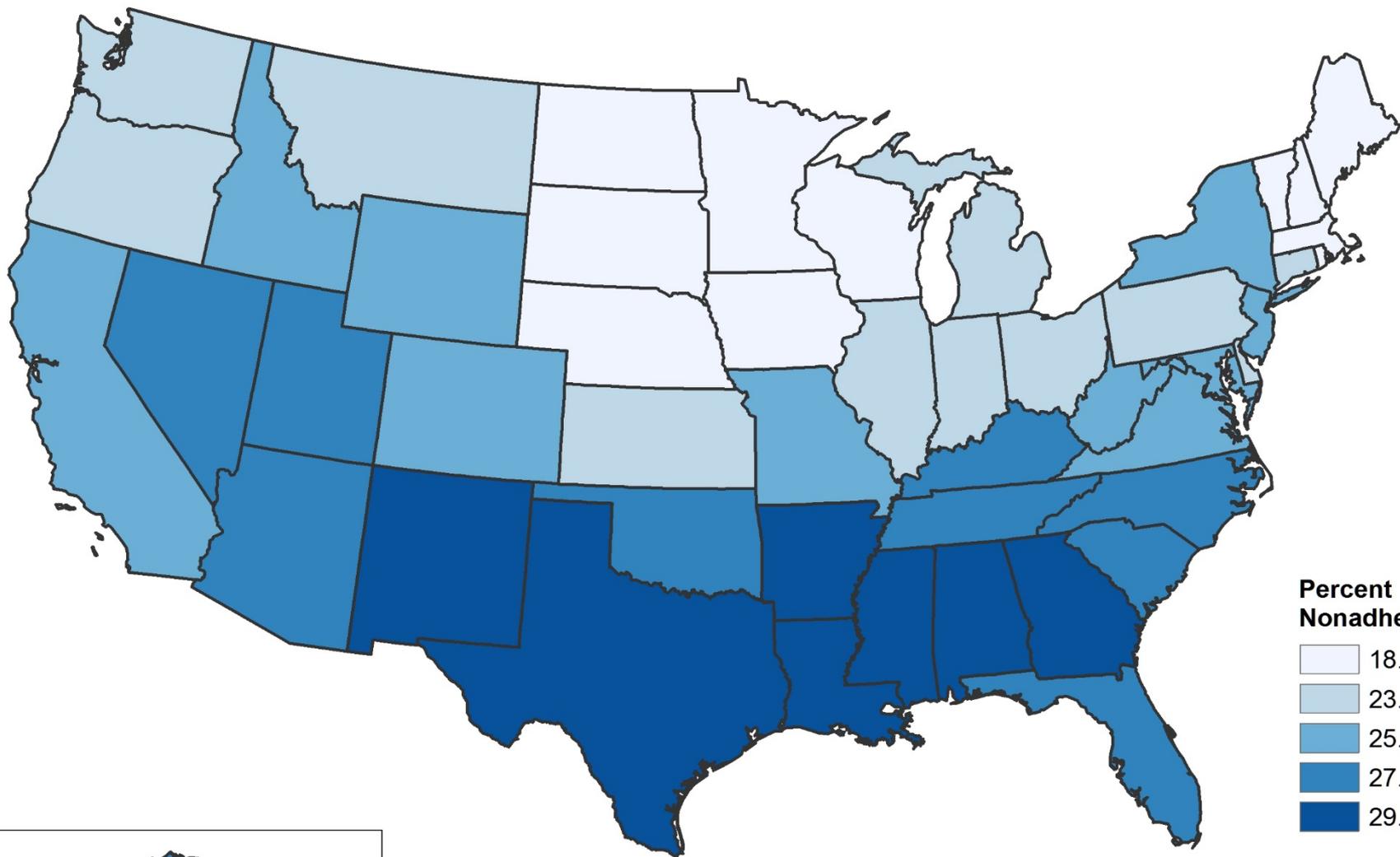
ESRD: End-stage renal disease; LIS: Low-income subsidy



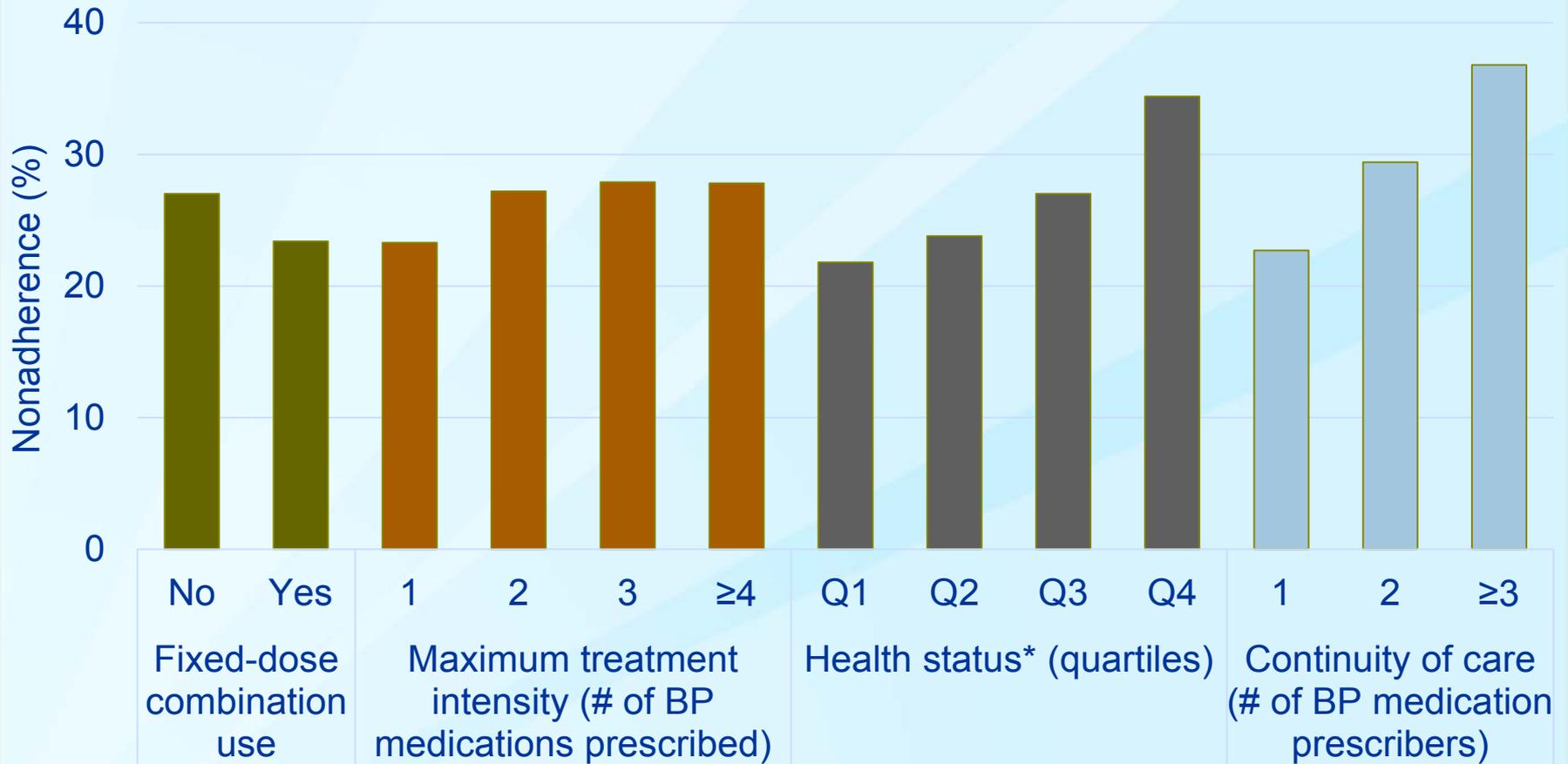
Variation in BP Medication Nonadherence by US County



Variation in BP Medication Nonadherence by US State



Variation in BP Medication Nonadherence by Beneficiaries' Treatment Characteristics



*Based on the number of unique prescriptions filled, by generic medication name, in 2014. Larger quartiles equals more unique medications and likely worse overall health.



How Healthcare Systems Can Help People Take Their Blood Pressure Medicine



Doctors, nurses,
and other healthcare
professionals



Pharmacists



Insurers



Community Health
Workers

How Healthcare Systems Can Help People Take Their Blood Pressure Medicine

Doctors, nurses, and other healthcare professionals:

- ✓ Check blood pressure and assess if patient is taking medicine as directed.
- ✓ Prescribe simple regimens (e.g. 90-day fills and combination medicines) and generic medicines.
- ✓ Counsel how and why to take medicine as directed using language patients and their caregivers understand.
- ✓ Encourage the use of home Food and Drug Administration-approved blood pressure monitors and tools to track and share blood pressure readings.
- ✓ Use blood pressure treatment protocols and embed them in electronic health records to help patients control their blood pressure.

<http://go.usa.gov/xDscQ>

Pharmacists:

- ✓ Check blood pressure at prescription pickup and ask whether patients are taking their medicine as directed.
- ✓ Counsel patients at each pharmacy visit on how and why to take medicine. Enroll patients in reminder programs to renew prescriptions on time.

Insurers:

- ✓ Incentivize simplified treatments (e.g. 90-day refills, combination medicines).
- ✓ Use administrative claims data to identify those not taking medicine as prescribed and support coordinated care among healthcare team.
- ✓ Remove or lower co-pays for chronic disease medicines.

Community Health Workers:

- ✓ Discuss blood pressure, medicine, and reasons patient may not be taking them.
- ✓ Communicate with the rest of the healthcare team.
- ✓ Provide culturally appropriate education.
- ✓ Suggest patients take medicine while doing other routine activities (e.g. brushing teeth) and use weekly pill boxes and reminder apps to help them remember to take medicine.
- ✓ Connect patients with community resources to help improve and manage their blood pressure.

What Public Health Can Do to Help Improve Adherence*

- ❑ Monitor medication nonadherence
- ❑ Detect and investigate reasons for medication nonadherence
- ❑ Conduct research related to improving medication adherence
- ❑ Develop and implement health strategies that reduce nonadherence
- ❑ Support the implementation of non-adherence prevention strategies
- ❑ Promote safe and effective medication taking behaviors
- ❑ Foster a safe, healthy, and effective medication use process
- ❑ Provide leadership and training in medication adherence initiatives

*For additional information, please see: <http://millionhearts.hhs.gov/tools-protocols/medication-adherence.html>



Thank you!

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For more information please contact Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333

Telephone, 1-800-CDC-INFO (232-4636)/TTY:
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Web: www.cdc.gov

Promoting Hypertensive Medication Adherence

Larry Garber, MD

Medical Director for Informatics

Reliant Medical Group

September 20th, 2016

Reliant Medical Group

- 500+ provider multi-specialty group practice
- 30 specialties, including Behavioral Medicine
- 25 sites in central Massachusetts
- 300,000 patients with over 1 Million visits/year
- Not affiliated with any hospitals
- Not-for-profit, >50% Pay-for-Performance
- A 2015 Million Hearts Hypertension (HTN) Control Champion

How to Promote Medication Adherence

- Ensure that patient understands benefits
- Choose lower cost medications
- Choose medications with fewer side effects
- Show the effect of the medications in lowering blood pressure (BP)
- Monitor medication adherence

Ensure Patient Understands Benefits

- Education on the harms of uncontrolled HTN and benefits of HTN control
 - Educational material available within Electronic Health Record (EHR) and adjustable computer monitors designed to be visible to the patient
 - Educational materials automatically print on the After-Visit Summary if diagnosis of HTN
 - Education materials on Reliant's trusted website
- Demonstrate that alternatives have failed
 - Graph of BP trends within EHR prior to medications

Choose Lower Cost Medications

- Use step-therapy protocols
 - Developed by multidisciplinary team
 - Standardized across entire organization
- Controlled access to pharmaceutical marketing
- Show patient's payer-specific formulary in EHR
- Generic substitution mandated in state
- Pill-splitting (versus inconvenience of splitting)
- Assistance in paying for medications
 - RxAssist.org website hyperlink within EHR
 - Consult Reliant's Social Workers

Choose Meds With Fewer Side Effects

- Use step-therapy protocols
- Be creative
 - Swollen feet → use a Diuretic
 - ACE-Inhibitor + Diuretic = Normal potassium
- Monitor side effects
 - At visits
 - At renewals using standard template
 - After hospital discharge – automated warnings
- Reliant Pharmacist consultations
 - Complex medication regimens or problems
 - After hospital discharge

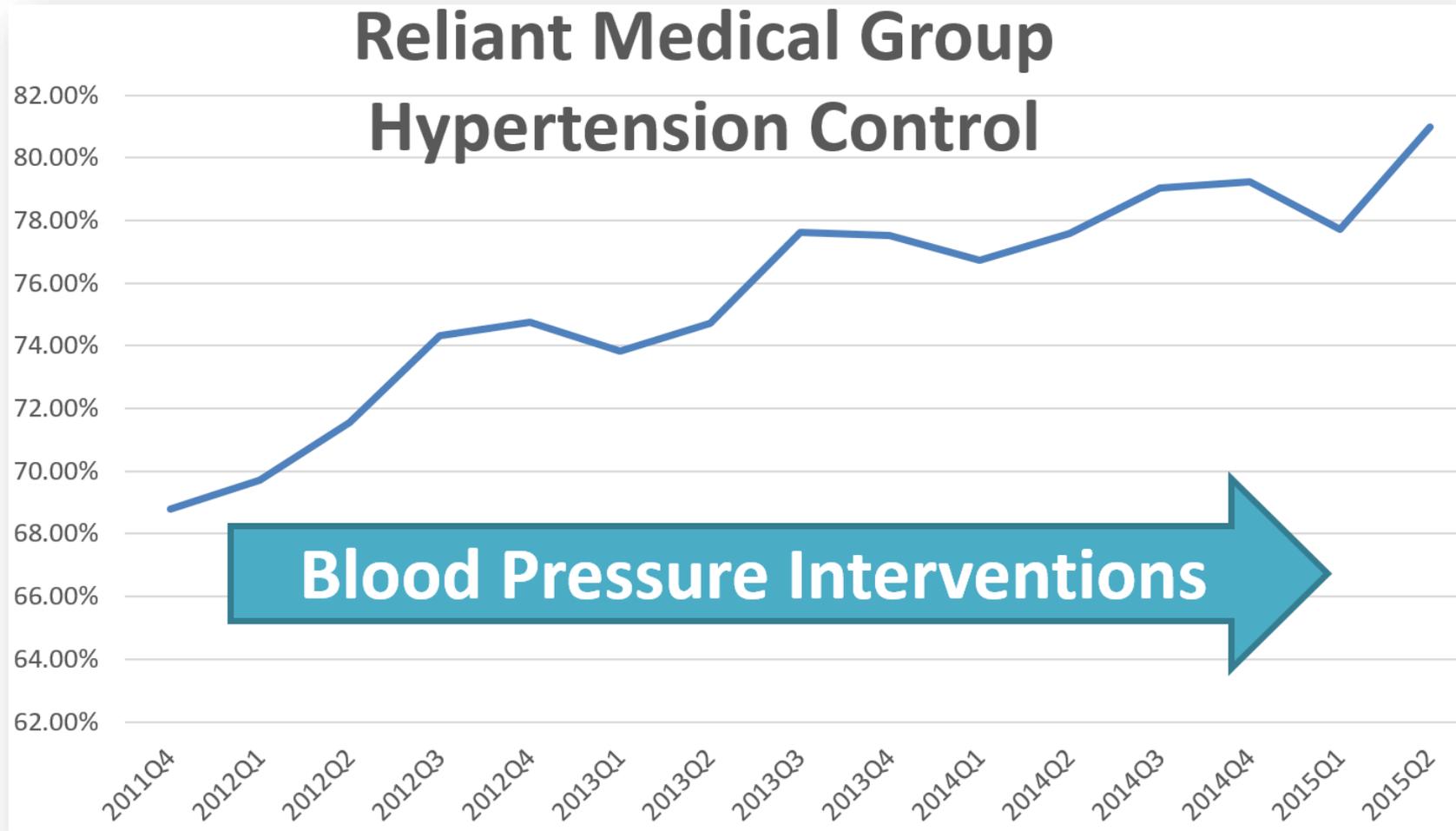
Show Effect of Meds in Lowering BP

- Encourage recording BPs at home (including giving out free monitors)
- Free BP clinics at Reliant
- Automatically upload BP readings into EHR via Microsoft HealthVault®
- Show graphs of trends in EHR
- Patients can view graphs of trends at home

Monitor Medication Adherence

- Surescripts® medication history
- Payer medication claims
 - Loaded into EHR nightly
 - Shows days supply picked up and dates
- Review during visits
 - Knowing that clinician can be watching adherence is at least as important as seeing the results
- Automate compliance monitoring? Difficult to do well...

Hypertension Intervention Outcomes



Summary

You can promote medication adherence if you:

- Ensure that patient understands benefits
- Choose lower cost medications
- Choose medications with fewer side effects
- Show the effect of the medications in lowering blood pressure (BP)
- Monitor medication adherence

These interventions can improve BP control!

Lawrence.Garber@ReliantMedicalGroup.org

Petaluma
HealthCenter



Blood Pressure Control:

User Solutions for Promoting Medication Adherence

Jessicca Moore, MSN, FNP
Associate Clinical Director

Understanding the Problem:

Many patients with hypertension and uncontrolled blood pressure are not taking their medication as directed.

Patient's Voice

- Advisory Council
- Informal Interviews

Staff/Provider Voice

- Workgroup
- Team Meetings

Barriers Identified

Systems

- Pharmacy
- Refills
- No Standard Protocol for Treatment
- No Standard Protocol for Medication Intensification
- No Consistent System to Address Adherence

People

- Misunderstanding Diagnosis
- Misunderstanding Treatment Plan
- Fear of Side Effects

System Solutions

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- Standard workflow with templates to support asking about adherence

The screenshot shows a software interface with a navigation bar at the top containing 'HPI', 'RO', 'Examination', 'Procedures', and 'Orderset'. Below this, a dropdown menu is set to 'Cardiovascular' and the section is titled 'MEDICATION ADHERANCE'. A large empty text box is provided for notes. Below the text box is a list of radio button options for medication adherence:

<input type="checkbox"/>	<input type="radio"/>	not taking medications
<input type="checkbox"/>	<input type="radio"/>	not missing any doses
<input type="checkbox"/>	<input type="radio"/>	misses 1-3 doses/week
<input type="checkbox"/>	<input type="radio"/>	misses > 3 doses /week
<input type="checkbox"/>	<input type="radio"/>	not taking one or more of prescribed medications
<input checked="" type="checkbox"/>	<input type="radio"/>	_____

Template + Training

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We had the template, but staff needed training on how to best engage with patients to get meaningful and accurate information?

“Many people with high blood pressure sometimes forget to take their medication. How often do you forget or skip your medications?”

“Tell me how you take your medications.”

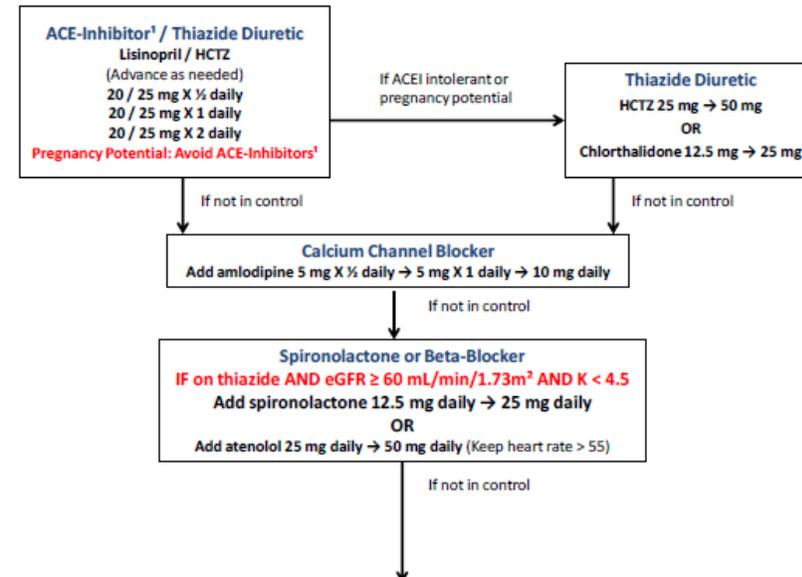
Standardization

- Standard HTN protocols for providers and RNs to follow
- Standardized patient education

Adult Hypertension

BLOOD PRESSURE (BP) GOAL
 $\leq 139 / 89$ mm Hg – All Adult Hypertension

NNT CVA² = 63
 NNT MI² = 86
 NNT CVA or MI² = 36



- Consider medication non-adherence.
- Consider interfering agents (e.g., NSAIDs, excess alcohol).
- Consider white coat effect. Consider BP checks by medical assistant (e.g., two checks with 2 readings each, 1 week apart).
- Consider discontinuing lisinopril/HCTZ and changing to chlorthalidone 25 mg plus lisinopril 40 mg daily. Consider additional agents (hydralazine, terazosin, reserpine, minoxidil).
- Consider stopping atenolol and adding diltiazem to amlodipine, keeping heart rate > 55.
- Avoid using clonidine, verapamil, or diltiazem together with a beta blocker. These heart-rate slowing drug combinations may cause symptomatic bradycardia over time.
- Consider secondary etiologies.
- Consider consultation with a hypertension specialist.

Refill Solutions: “Hassle Free”

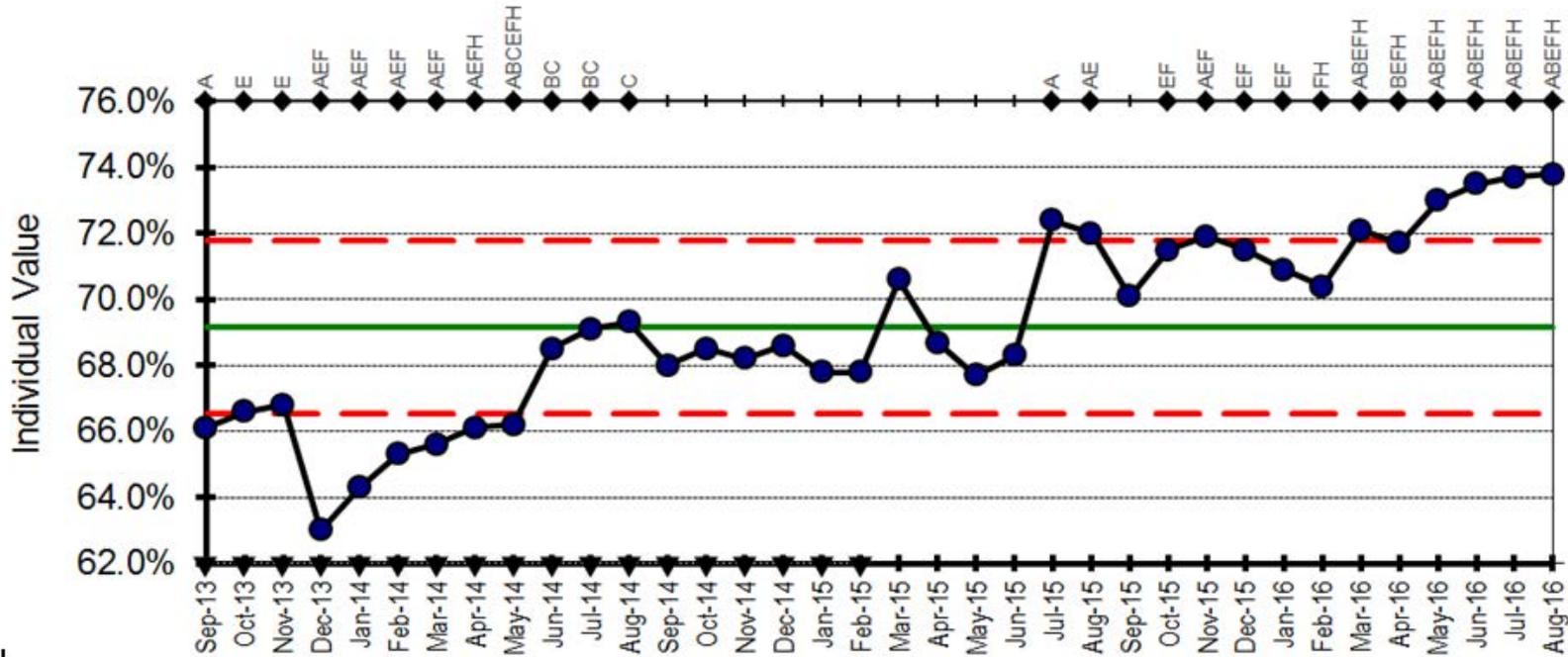
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- Standard 90 day supply for chronic medications with 3 refills
- Add text to sig. “Lisinopril-HCTZ 10/25 one tablet daily **for blood pressure**”
- Stop using refills as the gate-keeper
- Say “yes” AND follow regular recall calendar
- In house pharmacy for more seamless communication

Results 2013-2016



Hypertension Control



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CONTACT INFORMATION

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CDC *Vital Signs* Electronic Media Resources

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Syndicate *Vital Signs* on your website

<http://tools.cdc.gov/syndication/search.aspx?searchURL=www.cdc.gov%2fvitalsigns>

Vital Signs interactive buttons and banners

<http://www.cdc.gov/socialmedia/tools/buttons/vitalsigns/index.html>

Prevention Status Reports

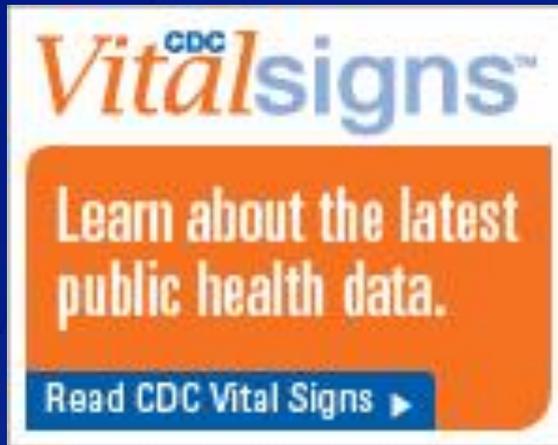
- The Prevention Status Reports (PSRs) highlight—for all 50 states and the District of Columbia—the status of public health policies and practices designed to address 10 important public health problems and concerns.



www.cdc.gov/psr/

Provide feedback on this teleconference:

OSTLTSFeedback@cdc.gov



Please mark your calendars for the next
Vital Signs Town Hall Teleconference

October 25, 2016

2:00–3:00 pm (ET)

For more information, please contact Centers for Disease Control and Prevention.

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