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Updates on Diabetes and SDPI

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Changing Guidelines for A1C, Blood Pressure, LDL Cholesterol, and Aspirin

Guidelines have changed a lot in the last few years

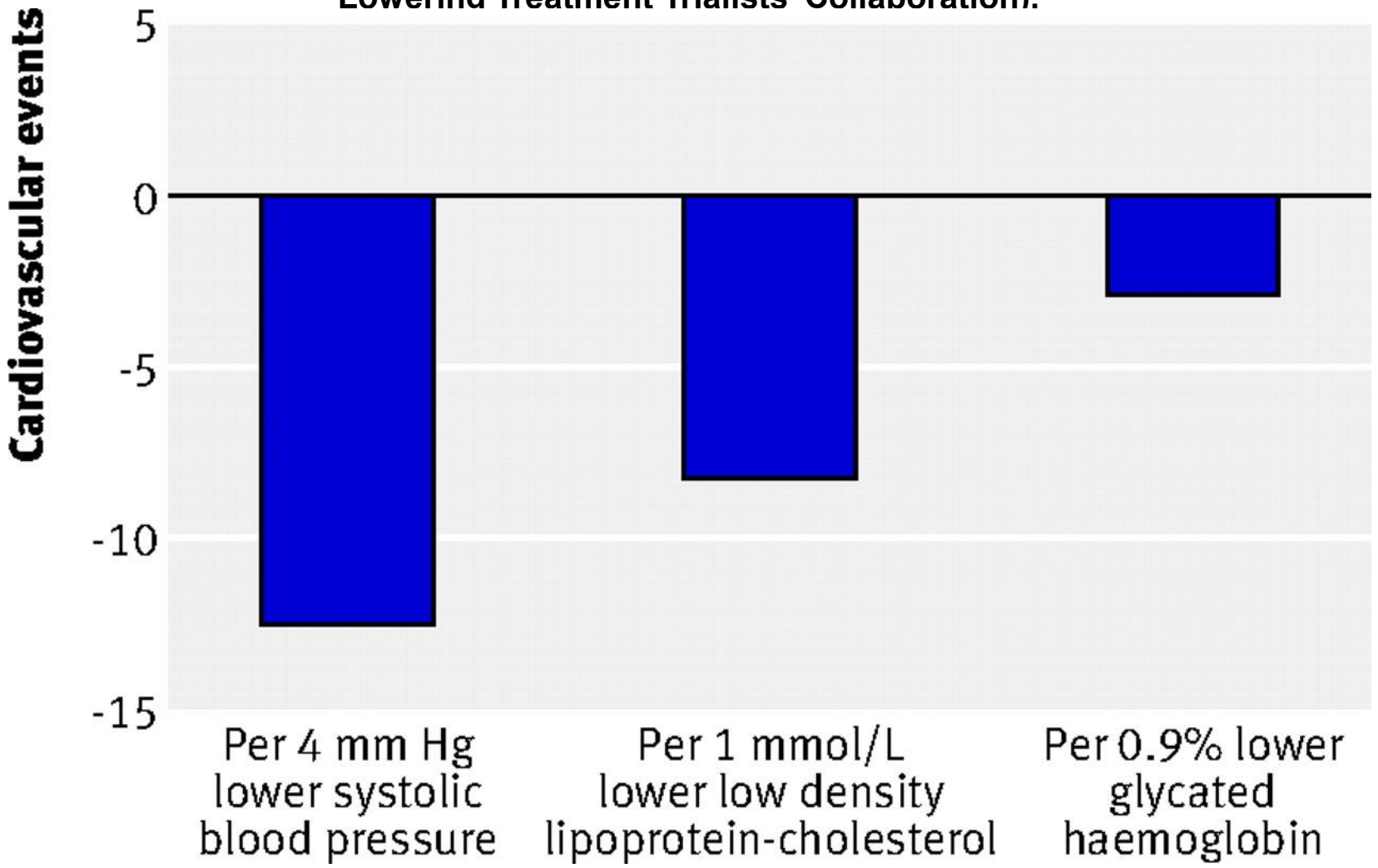
2007

- A1C <7%
- BP <130/80 mmHg
- LDL <100mg/dL
- Aspirin in pts >40 yrs old

2015

- A1C target should be ***individualized*** (<7%, <8%)
- BP <140/90
- Lipid Management:
  - Moderate- and High-Intensity Statin Therapy
- Antiplatelet agents
  - Yes in CVD
  - For rest, depends on CVD risk

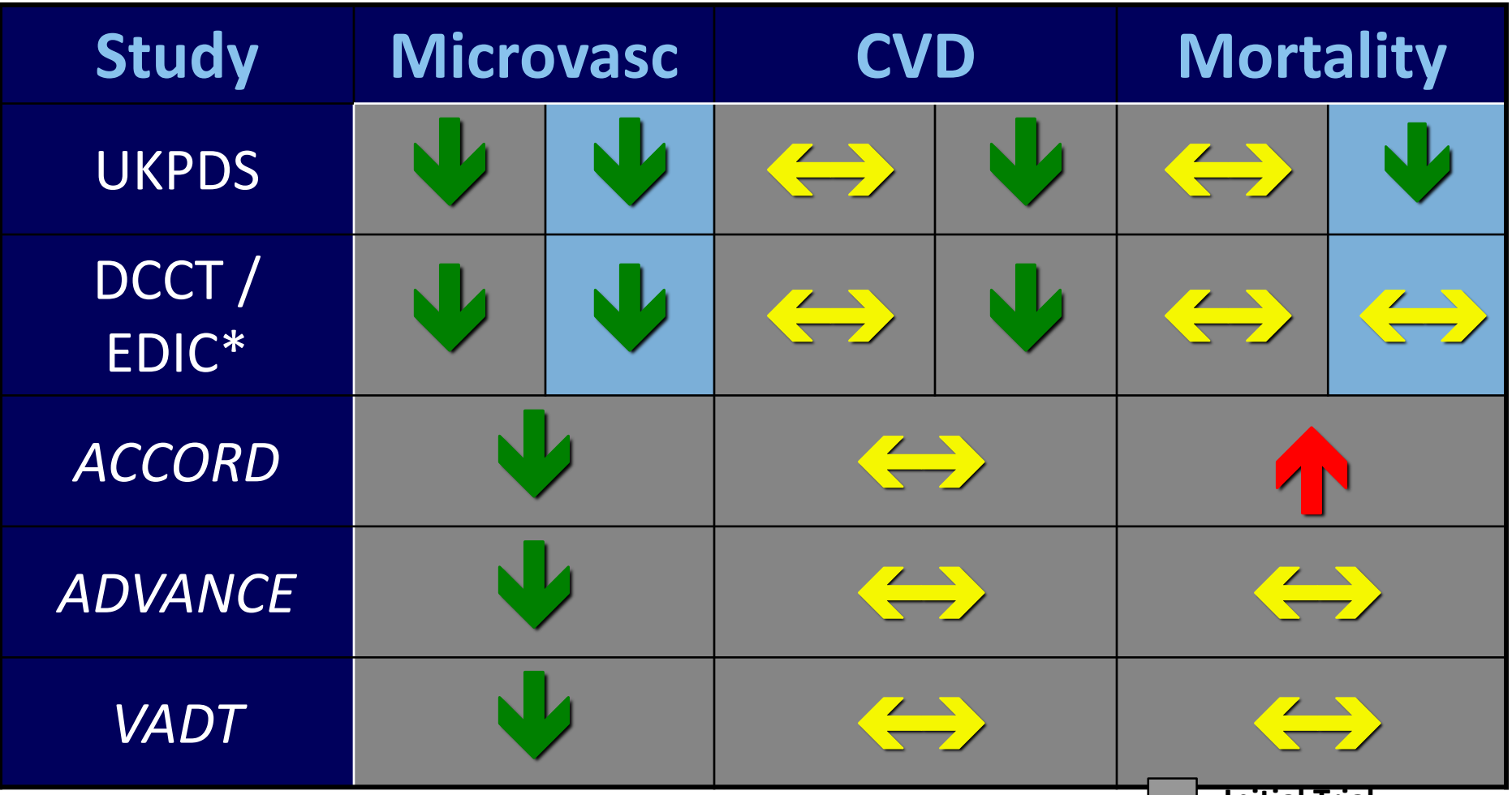
Absolute number of events prevented by different interventions per 1000 patient years of treatment (data taken from Cholesterol Treatment Trialists' Collaboration and Blood Pressure Lowering Treatment Trialists' Collaboration).



Preiss D , Ray K K BMJ 2011;343:bmj.d4243

A1C Targets

Impact of Intensive Therapy for Diabetes: Summary of Major Clinical Trials



Kendall DM, Bergenstal RM. © International Diabetes Center 2009

UK Prospective Diabetes Study (UKPDS) Group. *Lancet* 1998;352:854.
Holman RR et al. *N Engl J Med*. 2008;359:1577. DCCT Research Group. N Engl J Med 1993;329;977.
Nathan DM et al. *N Engl J Med*. 2005;353:2643. Gerstein HC et al. *N Engl J Med.* 2008;358:2545.
Patel A et al. N Engl J Med 2008;358:2560. Duckworth W et al. N Engl J Med 2009;360:129. (erratum: Moritz T. *N Engl J Med* 2009;361:1024)

Initial Trial

Long Term Follow-up

* in T1DM

Management of Hyperglycemia in Type 2 Diabetes: A Patient-Centered Approach

Position Statement of the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD)

American Diabetes Association.

EASD

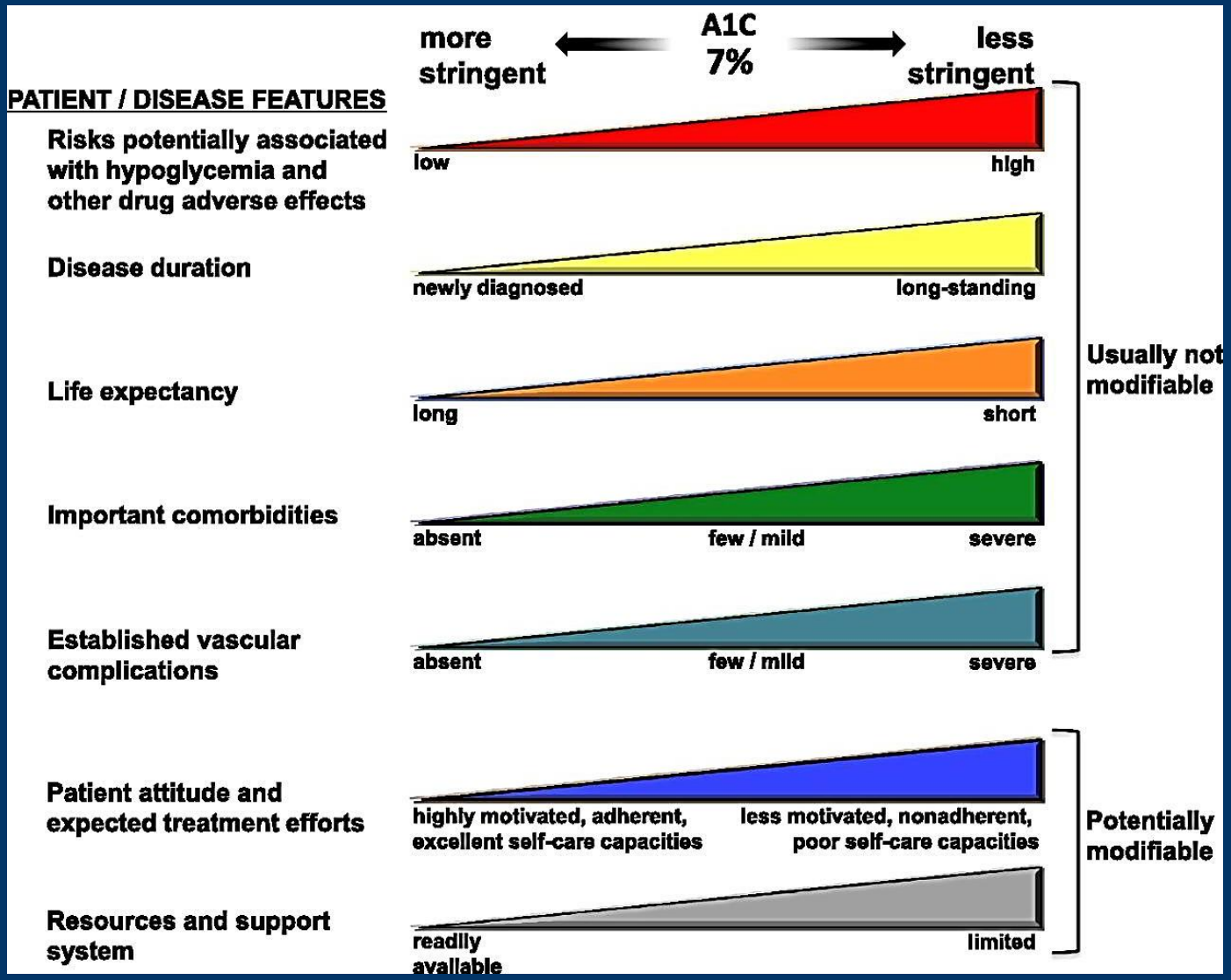
3. ANTI-HYPERGLYCEMIC THERAPY

- **Glycemic targets**
  - **HbA1c < 7.0%** (mean PG ~150-160 mg/dl [8.3-8.9 mmol/l])
  - Pre-prandial PG <130 mg/dl (7.2 mmol/l)
  - Post-prandial PG <180 mg/dl (10.0 mmol/l)
  - **Individualization** is key:
    - ➢ Tighter targets (6.0 - 6.5%) - younger, healthier
    - ➢ Looser targets (7.5 - 8.0%$^{+}$) - older, comorbidities, hypoglycemia prone, etc.
  - Avoidance of hypoglycemia

PG = plasma glucose

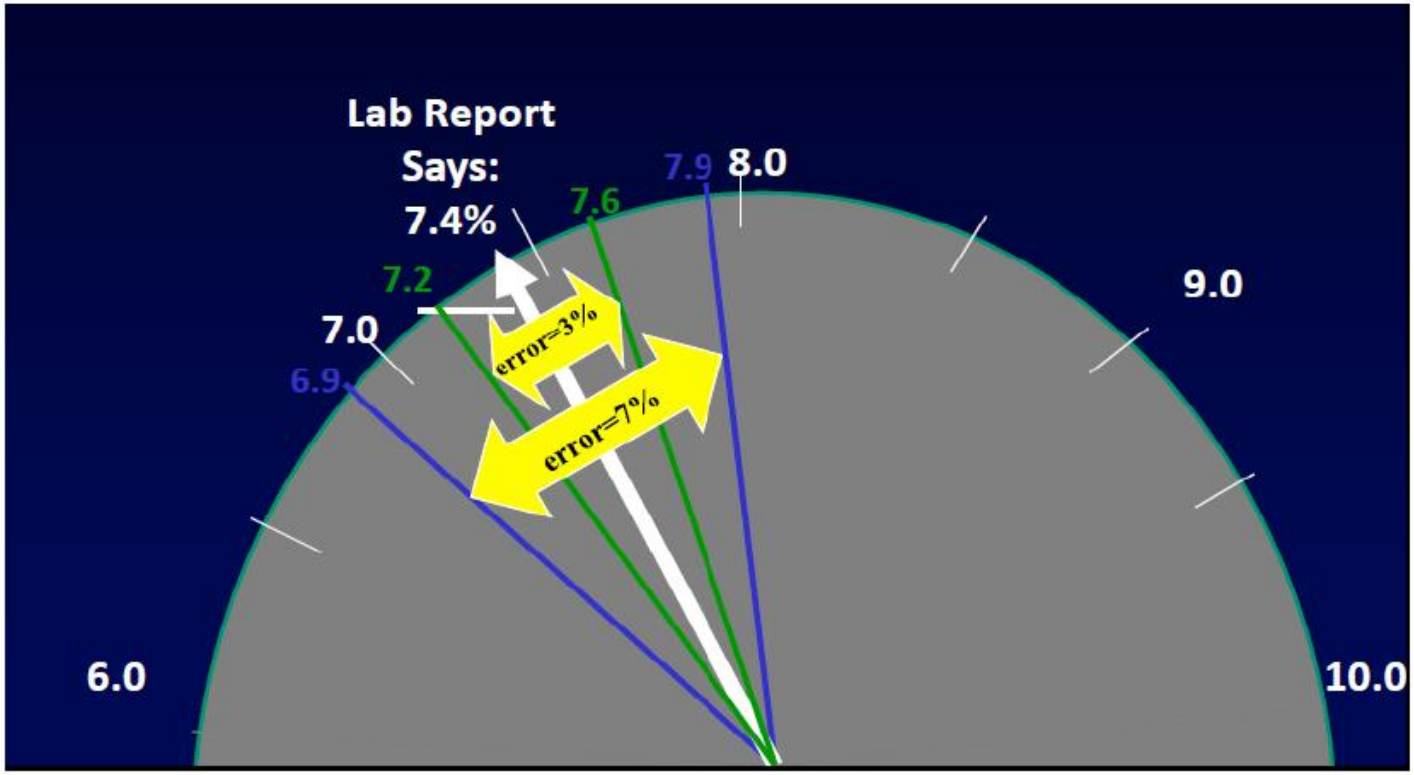
Diabetes Care, Diabetologia. 19 April 2012 [Epub ahead of print]

Approach to the Management of Hyperglycemia



ADA. 6. Glycemic Targets. Diabetes Care 2015;38(suppl 1):S37. Figure 6.1; adapted with permission from Inzucchi SE, et al. Diabetes Care, 2015;38:140-149

A1c Variability "Speedometer"



A1C Targets

- ***Individualize*** glucose targets—really!
  - Younger, healthier patients: aim for <7% (or *lower*)
    - Excellent glucose control achieved and maintained early in the course of diabetes has long-term benefits, including for CVD
  - Longer duration of diabetes, more co-morbidities and lots of meds already: liberalize glucose targets (ranges)
    - Think carefully about whether to add another medication (and which one) to lower glucose
    - Hypoglycemia causes "considerable morbidity and even mortality"

Diabetes Care 2013;36:1384-1395

- Focus more efforts on patients with A1Cs >9.0%
- Future EHRs: help with selecting, documenting target for each patient—VA already has a prototype

Blood Pressure

Blood Pressure: JNC 8 Panel

- 2014 Evidence-Based Guideline for the Management of High Blood Pressure in Adults
  - Report From the Panel Members Appointed to the Eighth Joint National Committee (JNC 8) *JAMA* 2014;311(5):507-520
- Very rigorous guideline development process
- Target for people with diabetes +/- CKD:

  <140/90
- Recommended medications:
  - Thiazide diuretic, ACEI/ARB, Calcium Channel Blocker
  - If CKD: start with ACEI or ARB
  - Big change: Beta blockers no longer recommended for first-line treatment of hypertension (different issue from CVD)

Recommendations: Hypertension/Blood Pressure Control

Goals

- People with diabetes and hypertension should be treated to a systolic blood pressure goal of <140 mmHg **A**
- Lower systolic targets, such as <130 mmHg, may be appropriate for certain individuals, such as younger patients, if it can be achieved without undue treatment burden **C**
- Patients with diabetes should be treated to a diastolic blood pressure <90 mmHg **A**
- Lower diastolic targets, such as <80 mmHg, may be appropriate for certain individuals, such as younger patients, if it can be achieved without undue treatment burden **B**

ADA. 8. Cardiovascular Disease and Risk Management. Diabetes Care 2015;38(suppl 1):S49

Common Sources of BP Measurement Errors

- Incorrect cuff size
  - Use correct size for mid upper arm
  - Have all sizes of adult cuffs available where BPs measured
    - Small adult, Adult, Large adult, Adult thigh (for very large upper arms)
- Terminal digit bias
  - Significant tendency toward recording zeros
- Inadequate staff training and equipment maintenance
- Talking or listening to patient/colleague while taking BP
- BP cuff placed over clothing
- Smoking or caffeinated beverages within 30 min of BP
- Patient's back and/or arm unsupported
- Feet crossed or dangling

"Blood Pressure Measurement Toolkit: Improving Accuracy, Enhancing Care"

- Excellent booklet by the Wisconsin Heart Disease and Stroke Prevention Program, Wisconsin Dept. of Health Services
- Trains clinicians on proper BP measurement and even provides a PDSA framework for improving clinic processes

https://www.dhs.wisconsin.gov/publications/p0/p00623.pdf

BP Targets

- **<140/90:** target for (most) diabetes patients
  - Good BP control definitely reduces CVD, CKD risks
  - Balance need for good BP control with risk of problems
    - Hypotension, fatigue, polypharmacy issues are common
    - Use caution in patients who have symptoms at <140/90 and/or with meds needed to achieve it
      - Higher risk: Older, comorbidities, longer duration of DM, on lots of meds, autonomic neuropathy
      - Antihypertensive meds associated with falls/injuries in elderly *JAMA Intern Med* 2014;doi:10.1001/jamainternmed.2013.14764

Lipid Management

2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults

J Am Coll Cardiol

E-pub: November 12, 2013

ACC/AHA Cholesterol Guidelines

- ATP IV panel's work in conjunction with ACC/AHA
- Guideline highlights (it's all about statins!)
  - No longer recommended to treat to LDL targets
  - Treat w/moderate or high-intensity statin therapy:
    - Clinical CVD: high-intensity if <75 y/o, moderate if older
    - LDL ≥190mg/dL: high-intensity
    - DM pts 40-75 y/o with LDL 70-189 mg/dL but no known CVD: moderate—high-intensity if 10-yr CVD risk ≥7.5%
    - Other pts with 10-yr CVD risk ≥7.5%: moderate or high

ACC/AHA Cholesterol Guidelines

- Statin dosing:
  - **High-intensity**: atorvastatin 40-80 mg, rosuvastatin 20-40 mg
  - **Moderate-intensity**: atorvastatin 10-20 mg, rosuvastatin 5-10 mg, simvastatin 20-40 mg, pravastatin 40-80 mg
- What do we do with the patients who can't tolerate statins: at high/moderate dose, low dose, or at all?
  - Try different statin (esp. if sx with simvastatin), start at low dose/titrate up slowly
  - Use of non-statin lipid agents only if high risk patient can't tolerate sufficient statin dose +/- therapeutic response

Recommendations for Statin Treatment in People with Diabetes (4)

Age	Risk factors	Recommended statin dose*	Monitoring with lipid panel
<40 years	None	None	Annually or as needed to monitor for adherence
	CVD risk factor(s)**	Moderate or high	
	Overt CVD***	High	
40–75 years	None	Moderate	As needed to monitor adherence
	CVD risk factors	High	
	Overt CVD	High	
>75 years	None	Moderate	As needed to monitor adherence
	CVD risk factors	Moderate or high	
	Overt CVD	High	

* In addition to lifestyle therapy.

** CVD risk factors include LDL cholesterol ≥100 mg/dL (2.6 mmol/L), high blood pressure, smoking, and overweight and obesity.

*** Overt CVD includes those with previous cardiovascular events or acute coronary syndromes.

ADA. 8. Cardiovascular Disease and Risk Management. Diabetes Care 2015;38(suppl 1):S52, Table 8.1

Recommendations: Dyslipidemia/Lipid Management (6)

Treatment recommendations and goals

- Combination therapy has been shown not to provide additional cardiovascular benefit above statin therapy alone and is not generally recommended **A**
- Statin therapy is contraindicated in pregnancy **B**

ADA. 8. Cardiovascular Disease and Risk Management. Diabetes Care 2015;38(suppl 1):S52

Antiplatelet Therapy

Recommendations: Antiplatelet Agents (1)

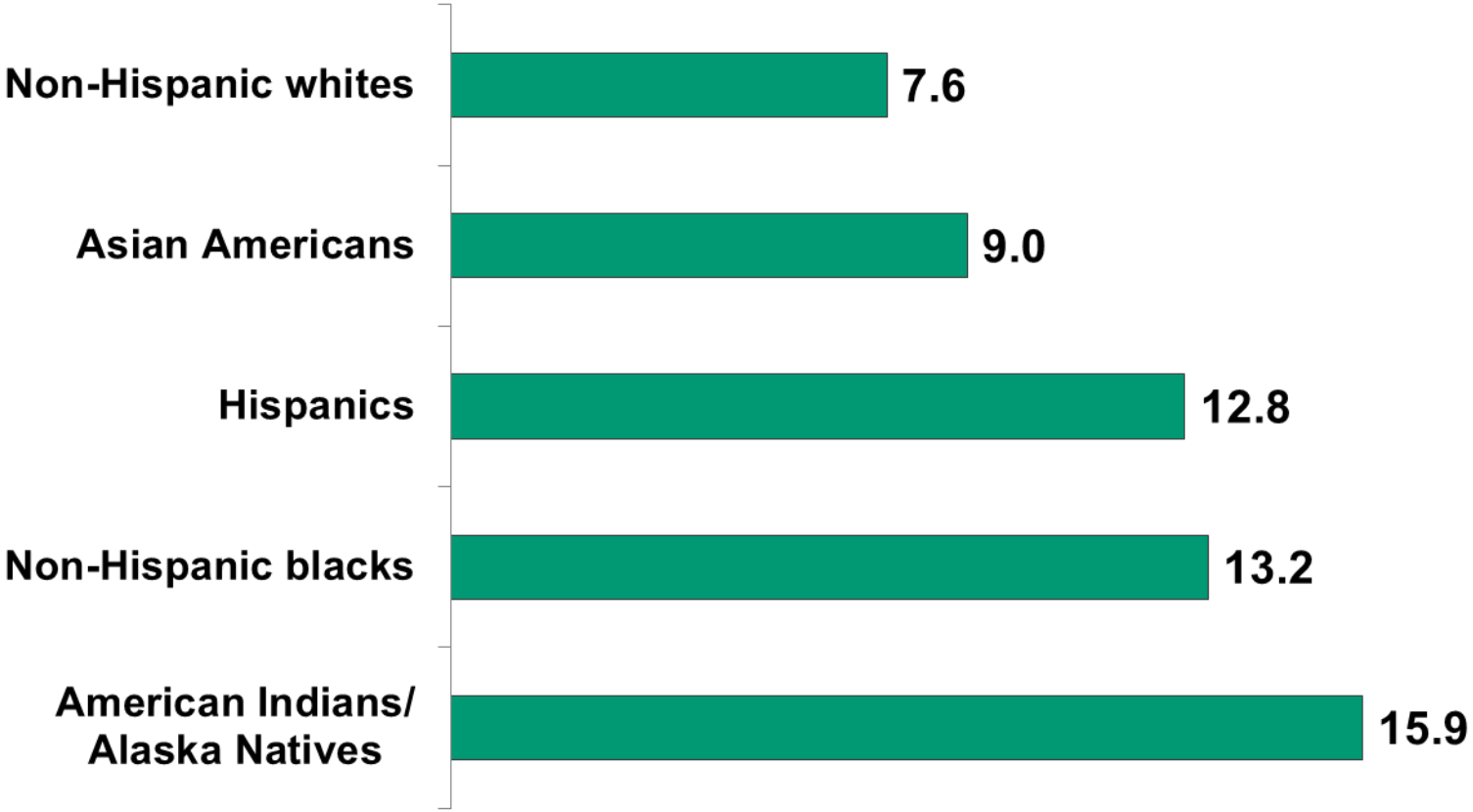
- Use aspirin therapy (75–162 mg/day)
  - Secondary prevention strategy in those with diabetes with a history of CVD **A**
- Consider aspirin therapy (75–162 mg/day) **C**
  - As a primary prevention strategy in those with type 1 or type 2 diabetes at increased cardiovascular risk (10-year risk >10%)
  - Includes most men >50 years of age or women >60 years of age who have at least one additional major risk factor
    - Family history of CVD
    - Hypertension
    - Smoking
    - Dyslipidemia
    - Albuminuria

ADA. 8. Cardiovascular Disease and Risk Management. Diabetes Care 2015;38(suppl 1):S54

Diabetes Prevalence in AI/AN People* FY 2006-2013

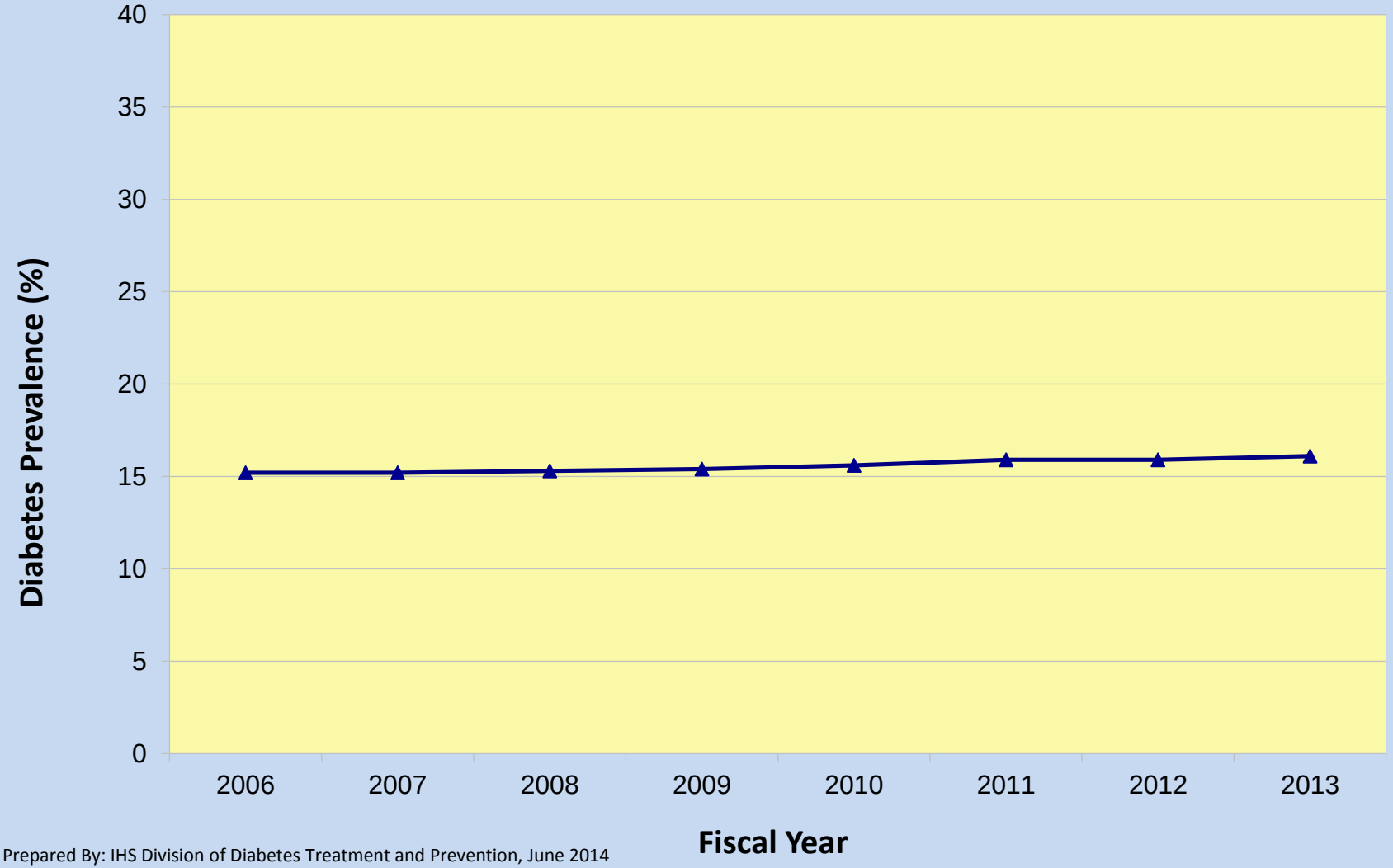
*Among people who seek care from sites that submit data to the IHS National Data Warehouse

Age-adjusted* percentage of people aged 20 years or older with diagnosed diabetes, by race/ethnicity, United States, 2010–2012



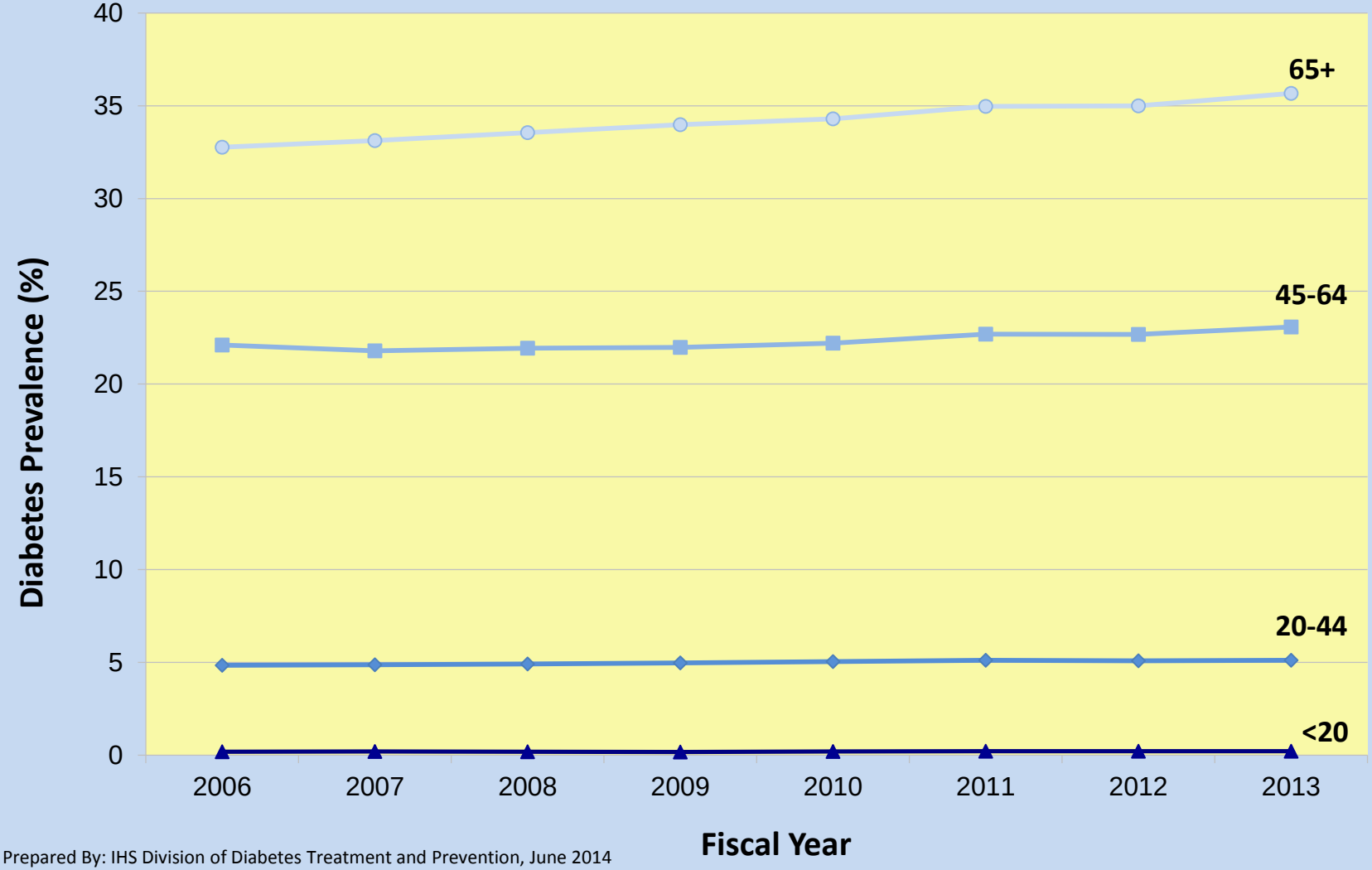
*Based on the 2000 U.S. standard population.
Source: 2010–2012 National Health Interview Survey and
2012 Indian Health Service's National Patient Information Reporting System.

Diabetes Prevalence in American Indians and Alaska Natives: 2006-2013
Adults (20+) - Age Adjusted to the US Population



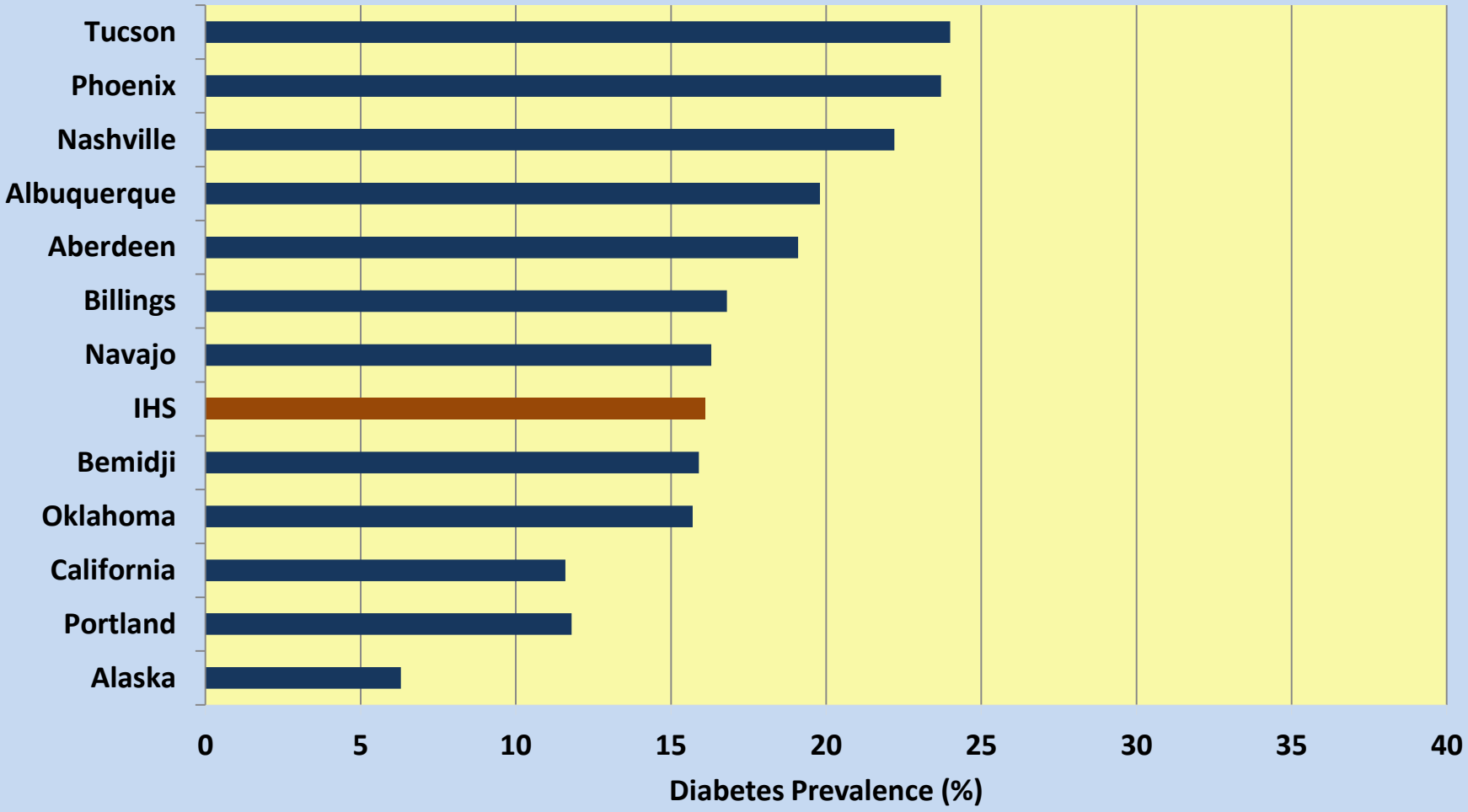
Prepared By: IHS Division of Diabetes Treatment and Prevention, June 2014
Data Source: IHS National Data Warehouse General Data Mart

Diabetes Prevalence in American Indians and Alaska Natives by Age Group: 2006-2013



Prepared By: IHS Division of Diabetes Treatment and Prevention, June 2014
Data Source: IHS National Data Warehouse General Data Mart

Diabetes Prevalence in American Indians and Alaska Natives
By Area for FY 2013
Adults (20+) - Age Adjusted to the US Population



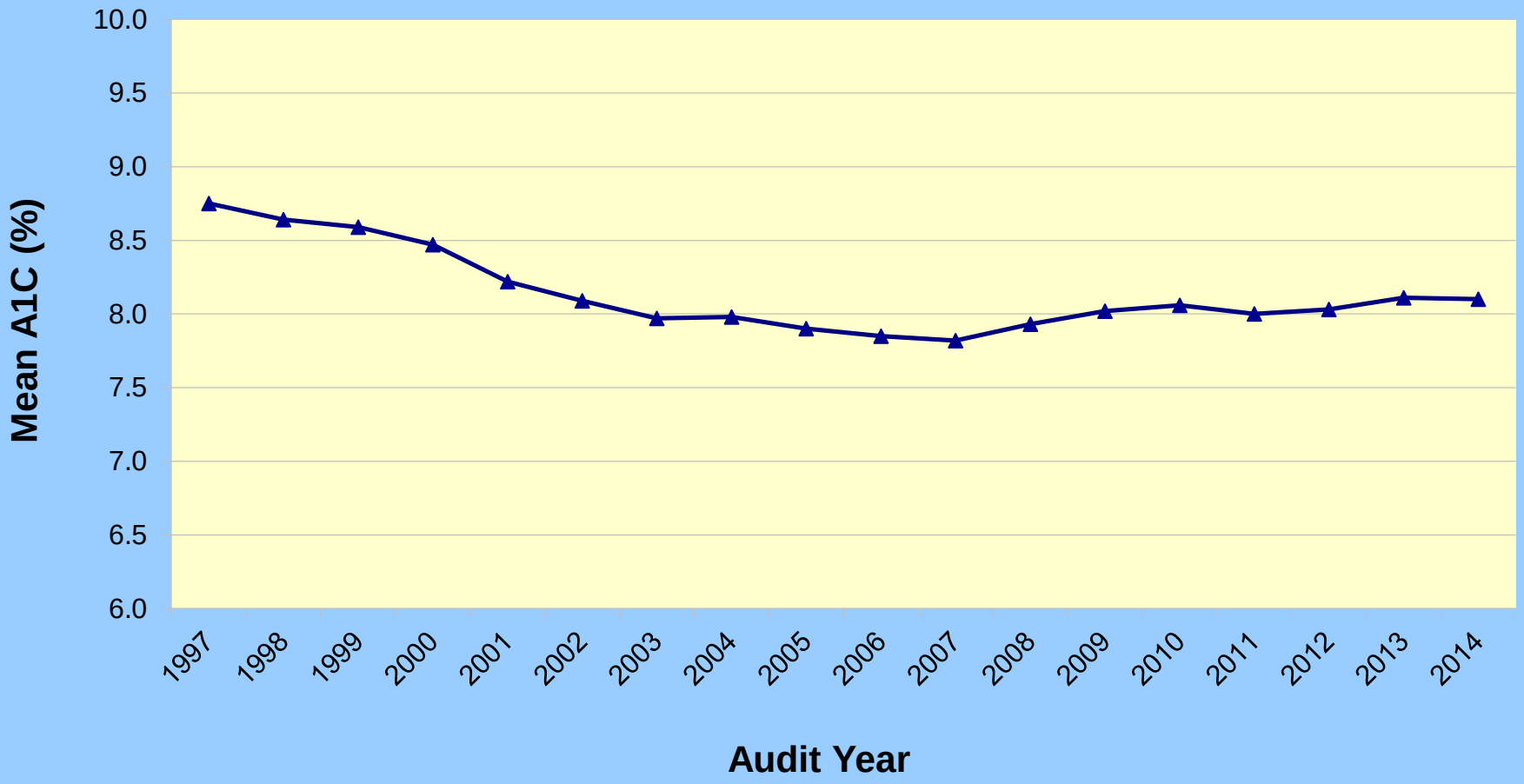
Prepared By: IHS Division of Diabetes Treatment and Prevention, June 2014
Data Source: IHS National Data Warehouse General Data Mart

Diabetes Care and Outcomes Audit 2014

331 I/T/U Facilities

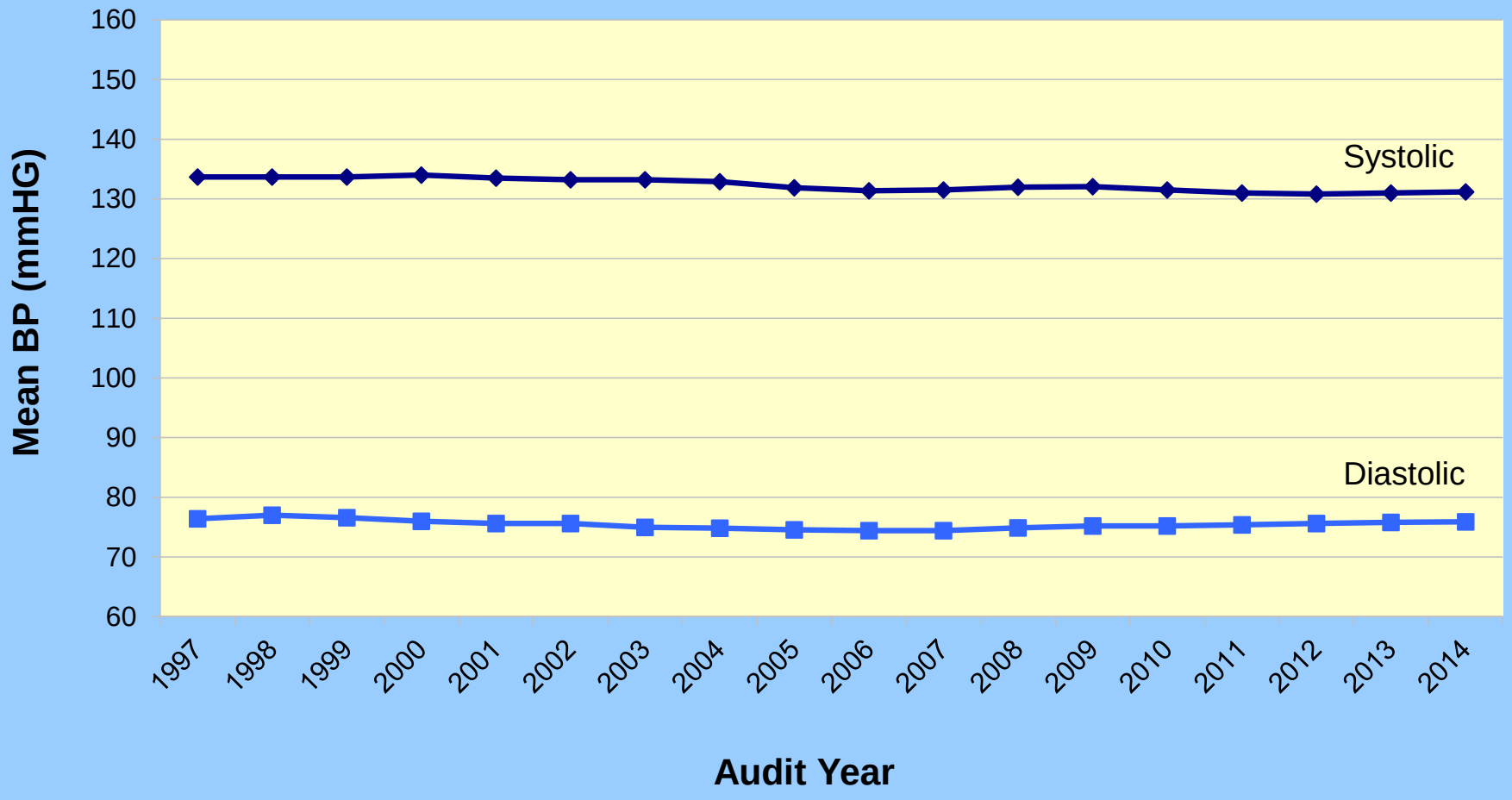
115,724 Charts

Mean A1C
1997-2014



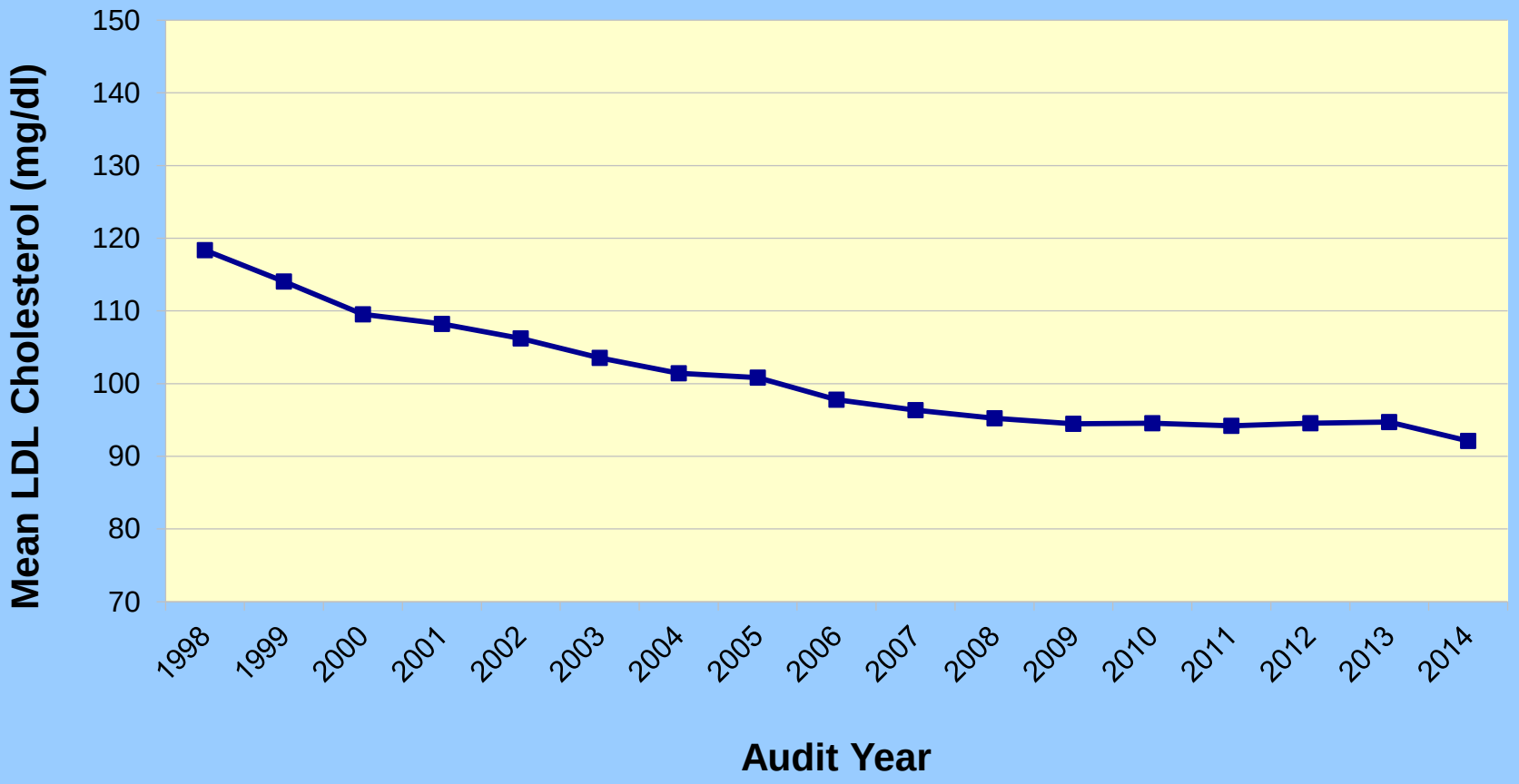
Source: IHS Diabetes Care and Outcomes Audit

Mean Blood Pressure
1997-2014



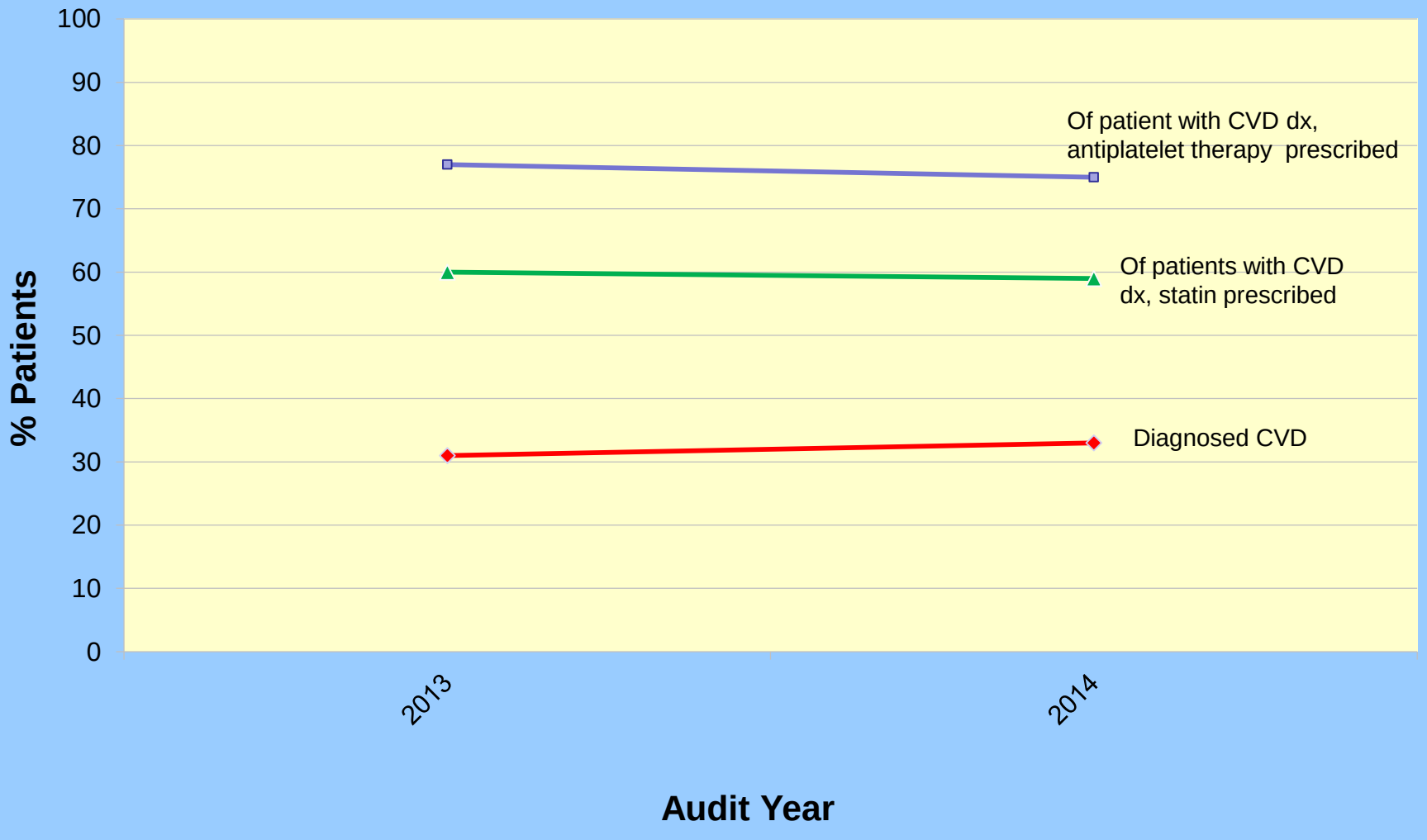
Source: IHS Diabetes Care and Outcomes Audit

Mean LDL Cholesterol
1998-2014



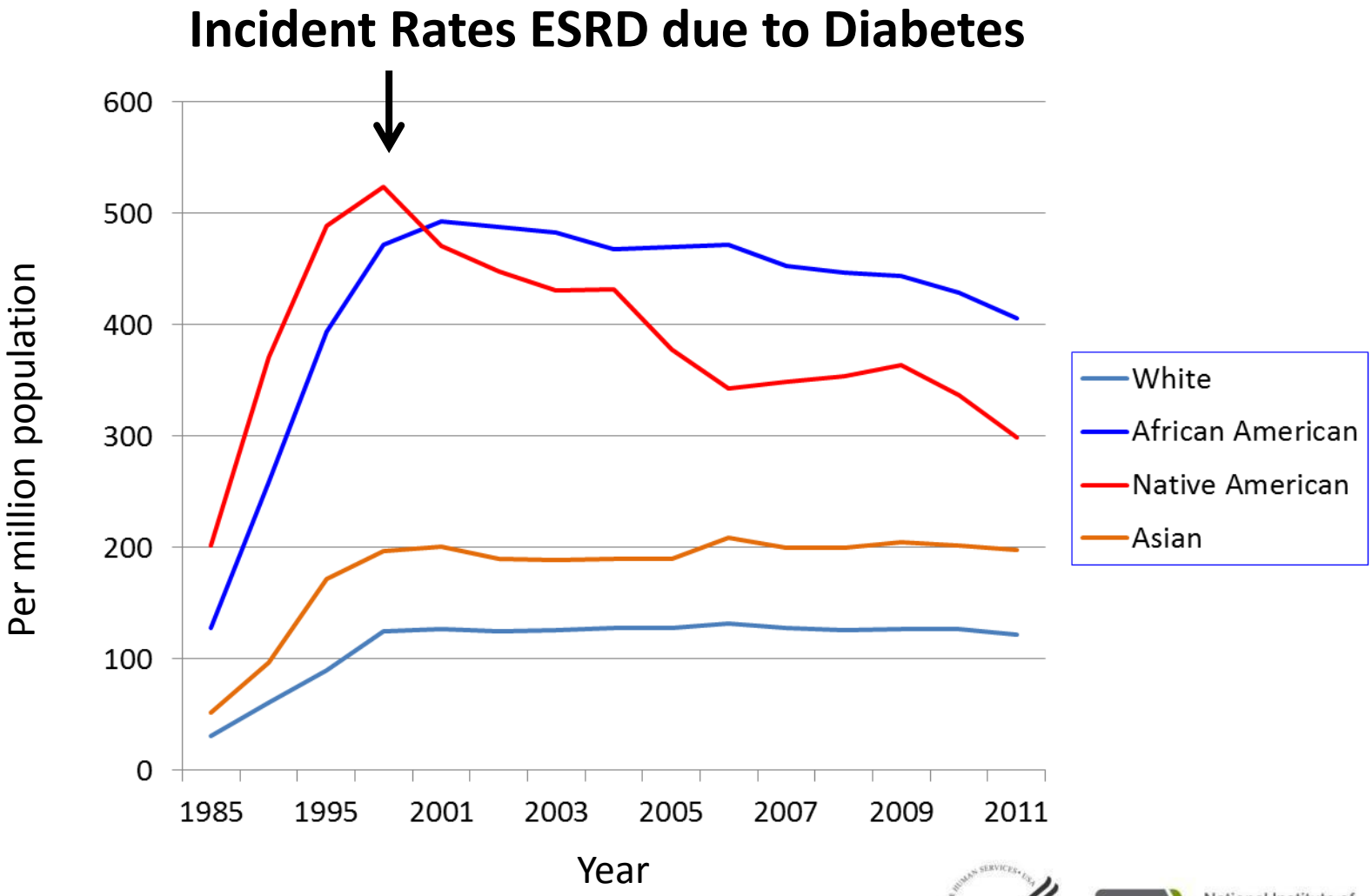
Source: IHS Diabetes Care and Outcomes Audit

Diagnosed CVD
2013-2014



Source: IHS Diabetes Care and Outcomes Audit

Implementation of Research Results Can Impact Public Health



National Institute of Diabetes and Digestive and Kidney Diseases

Source: USRDS ADR, 2013; NEJM 329: 1456, 1993

Update on SDPI FY 2016

Review of SDPI FY 2015

- Reauthorization
  - Protecting Access to Medicare Act of 2014 (P.L. 113-93)
    - Signed by President Obama on April 1, 2014
    - Included SDPI: one year through FY 2015 at current $150m
- Federal grants can be up to a maximum of 5 years, unless special permission received
  - "Class Deviation Waiver" for FY 2015 to be a 6th year received from HHS on May 1, 2014

Update on FY 2016

- Congress passed and the President signed legislation which includes a 2-year authorization of SDPI at current $150m per year
  - Thank you to everyone who helped make this happen!
- National Tribal Consultation concluded April 20
- TLDC will meet May 14 to review Consultation input and make final recommendations to the IHS Director
- IHS Director will then make final decisions on the SDPI FY 2016 funding distribution and formula
- DDTP/DGM will issue new FOA

SDPI FY 2016 Issues

- "Dear Tribal Leader" Letter (DTLL) dated 3/19/15 opened national Tribal Consultation
- 5 Main Questions:

1. Should there be any changes in the national funding distribution and, if so, in what way?
    - Community-Directed grant program $108.9m
    - DP/HH Initiatives $27.4m
    - Set-asides:
        - Urban Indian Health Programs $7.5m
        - Data Infrastructure Improvement $5.2m
        - CDC Native Diabetes Wellness Program* $1.0m

SDPI FY 2016 Issues (cont'd)

2. SDPI Funding Formula and Data
   - User Population=30%
   - Tribal Size Adjustment (TSA)=12.5%
   - Disease Burden=57.5%
   - – Should there be changes to the formula?
   - – Should more recent data be used in the formula?
3. Structure and activities of the SDPI Grant Program
   - – Should there be changes in the SDPI Community-Directed grant program?
   - – Should there be changes in the SDPI DP/HH Initiatives grant program?

SDPI FY 2016 Issues (cont'd)

4. Should Tribes not currently participating in SDPI be allowed to apply for FY 2016 funding?

--If so, from what component of the SDPI funding distribution should these funds be taken?

5. One-Year Authorization or Multiple Year Authorization

– We now know we have a 2-year authorization

SDPI FY 2016

- Will there be any changes in SDPI?
- When will the new funding opportunity announcement (FOA) be out?
  - Competitive application
    - Assistance from DDTP/DGM/CAO has to be limited to what is available to all applicants
    - Be sure to fill out application completely and submit all required components on time
- New set of Best Practices

Thank you for all you do to improve the health of AI/AN people in the California Area

www.diabetes.ihs.gov