ABCs of Diabetes

Ann Bullock, MD

Division of Diabetes Treatment and Prevention

Indian Health Service

Remember when the guidelines all agreed that these diabetes targets should apply to *everyone*?

- A1C <7%
- BP <130/80 mmHg
- LDL <100mg/dL

And performance measures followed suit.

Targets like these are easier for data collection

But they didn't work well for many of our patients

"First, do no harm"

Guideline are evolving and don't always agree…

2007

- A1C <7%
- BP <130/80 mmHg
- LDL <100mg/dL

2014

- A1C target should be ***individualized*** (<7%, <8%, 7.5-8.5%, etc.)
- BP <140/90 (or <80)
- Lipids:
  - Moderate- and High-Intensity Statin Therapy

    ---or---
  - LDL <100mg/dL

GPRA 2014: Diabetes

- Good Glycemic Control (GPRAMA)
- Blood Pressure Control
- LDL Assessment
- Nephropathy Assessment
- Diabetic Retinopathy

Good Glycemic Control

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]

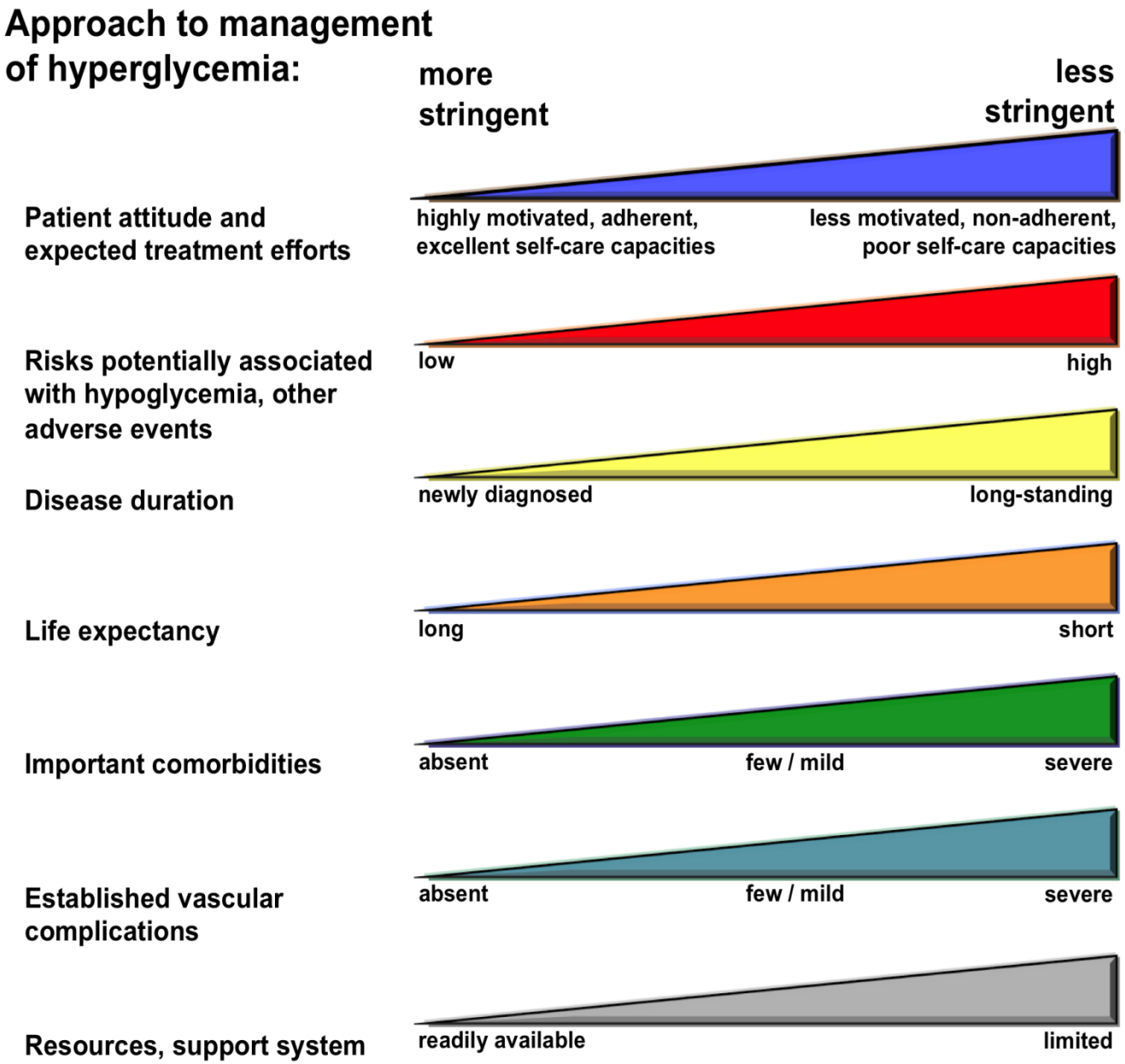
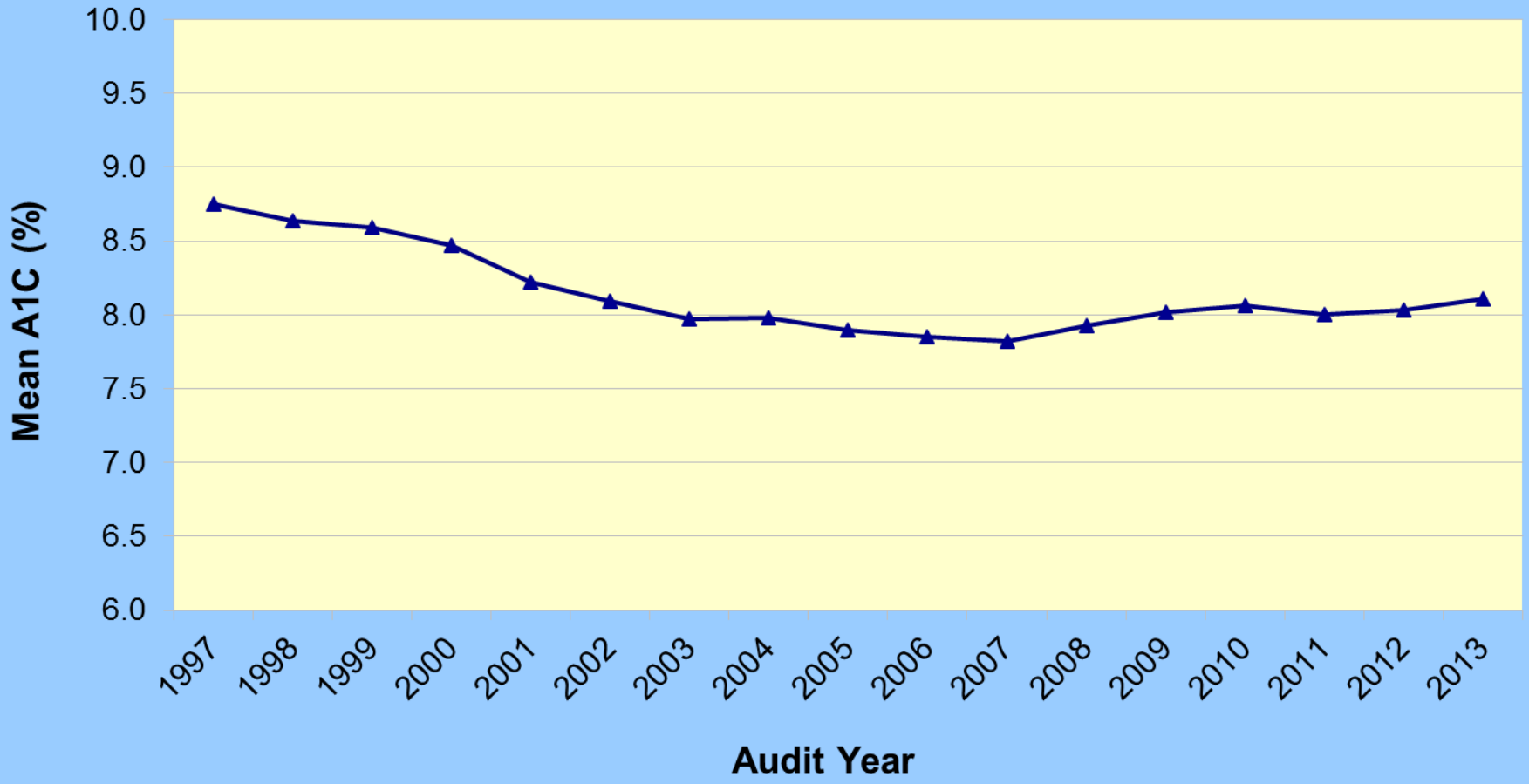


Figure 1

Diabetes Care, Diabetologia. 19 April 2012 [Epub ahead of print]
(Adapted with permission from: Ismail-Beigi F, et al. *Ann Intern Med* 2011;154:554)

Good Glycemic Control

- GPRAMA measure
- Based on ADA guideline evolution, changed from "Ideal Glycemic Control" A1C <7.0%
- Proportion of patients with diagnosed diabetes who have good glycemic control A1C <8.0%
- Baseline year: FY 2013
- FY 2014 target: 48.3%
  - Concern that we may not be on track to meet this



Source: IHS Diabetes Care and Outcomes Audit

Blood Pressure Control

BP Targets in Diabetes: 2014

- Numerous studies have shown that risk for CVD, CKD starts at SBP of 140 mmHg (not 130 mmHg)
- ADA 2014
  - "People with diabetes and hypertension should be treated to a systolic blood pressure goal of <140 mmHg."
    - "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."
  - "Patients with diabetes should be treated to a DBP <80 mm Hg."

Diabetes Care 2014;37(S1), pg. S36

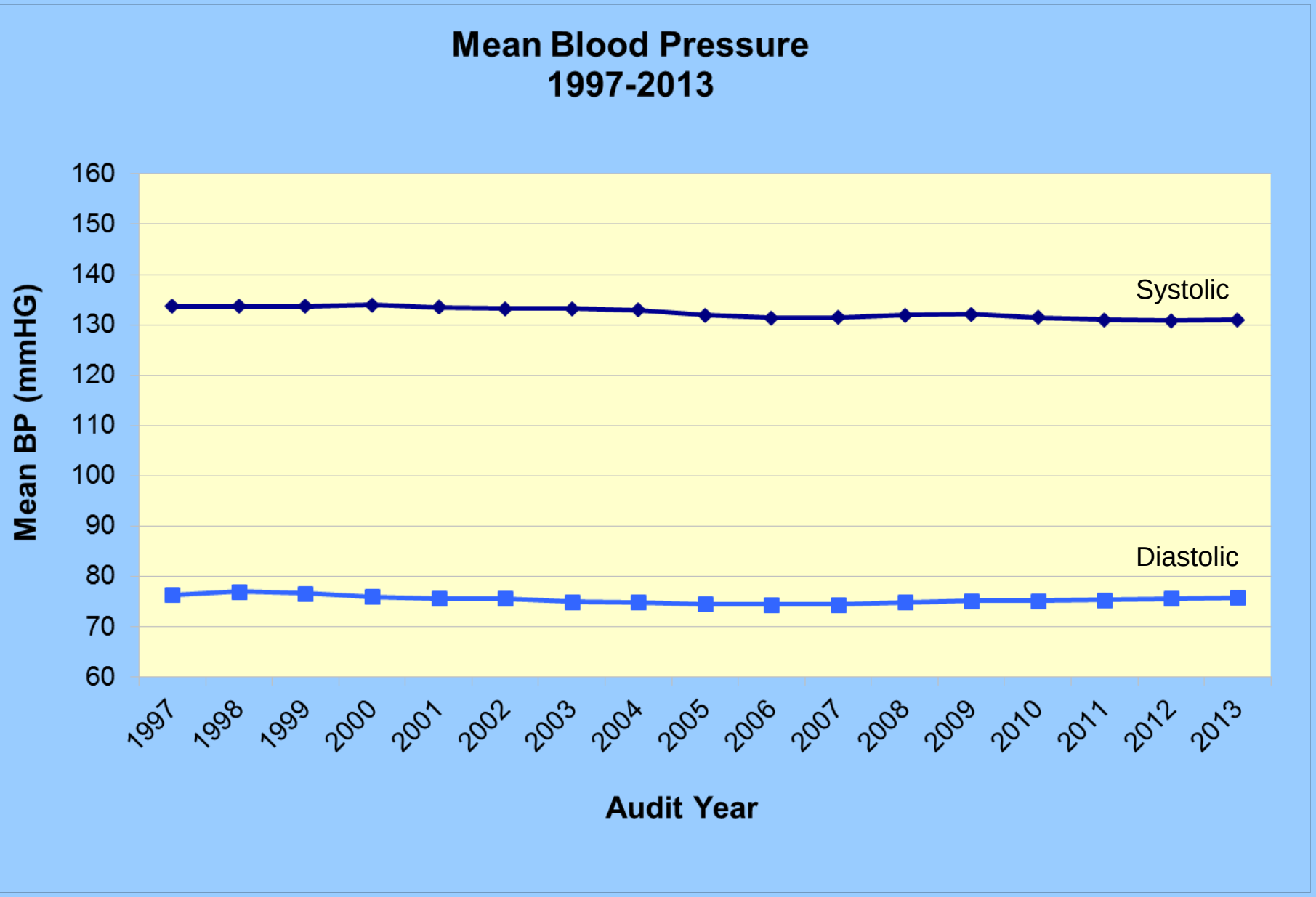
JNC 8 Panel

- 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
  - Beta blockers no longer recommended for initial treatment of hypertension

Blood Pressure Control

- Was <130/80
- Changed to <140/90
- Baseline year: FY 2013
- Target for FY 2014: 64.6%



Source: IHS Diabetes Care and Outcomes Audit

LDL Assessment

Why is this still a process measure?

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

New Cholesterol Guidelines

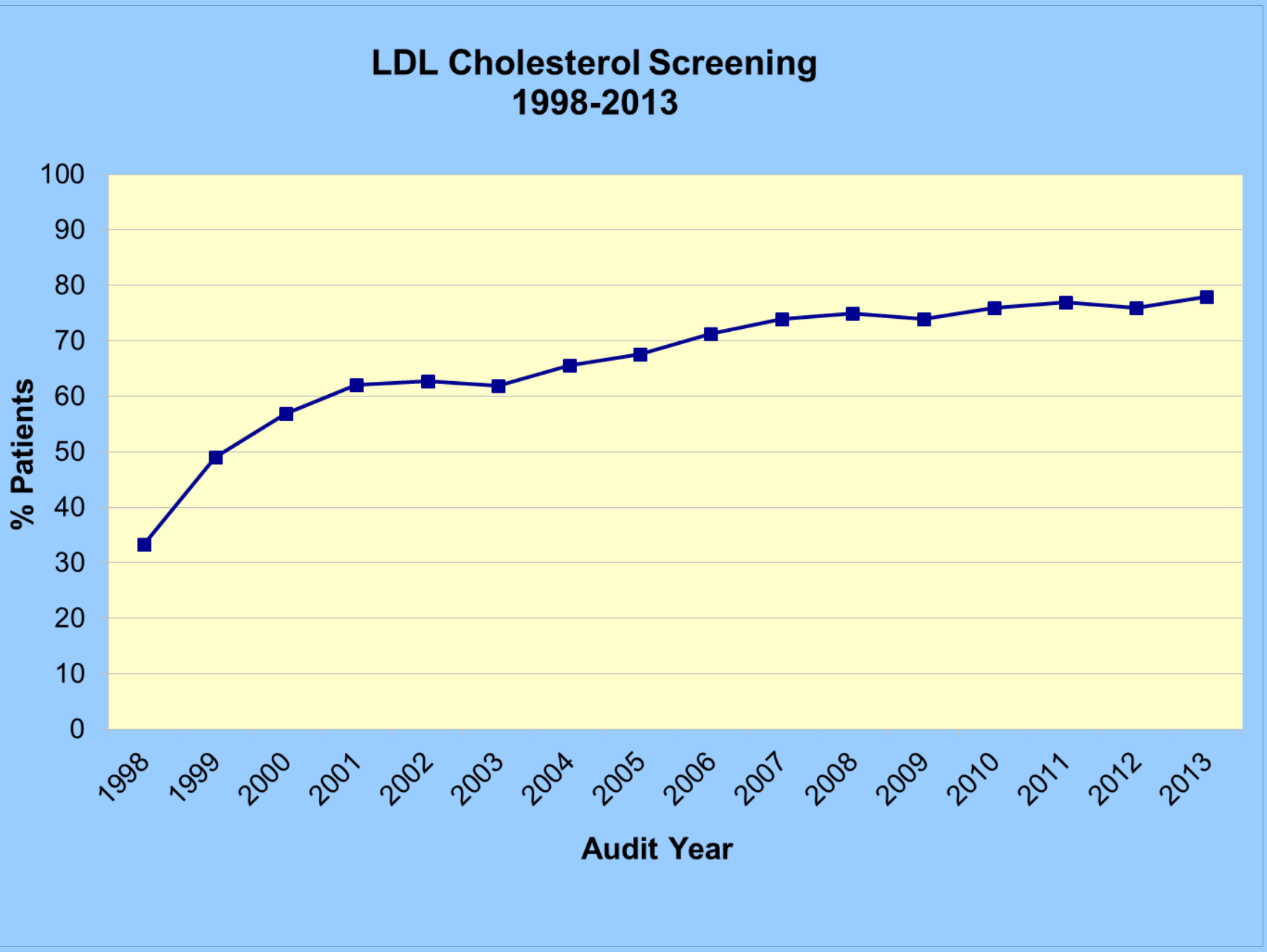
- Statin dosing:
  - **High-intensity**: atorvastatin 40-80 mg, rosuvastatin 20-40 mg
  - **Moderate-intensity**: atorvastatin 10-20 mg, rosuvastatin 5-10 mg, simvastatin 20-40 mg, pravastatin 40-80 mg
- What do we do with the patients who can't tolerate statins: at high/moderate dose, low dose, or at 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

ADA 2014

- LDL goal:
  - <100 mg/dL in patients with no overt CVD
  - <70 mg/dL with a high dose statin an option if overt CVD
  - If maximum tolerated statin therapy does not achieve these targets, can use alternative goal of 30-40% LDL reduction
- Statin should be prescribed regardless of LDL level in diabetic patients with overt CVD or who are >40 yrs old with ≥ 1 other CVD risk factor
- Insufficient evidence that combination therapy with non-statin drugs provides CVD risk benefit over statin alone

LDL Assessment

- No recent changes in GPRA measure
  - Performance measures are being rethought nationally: e.g. statin use? maybe and/or LDL<100?
- FY 2014 Target: 73.9%



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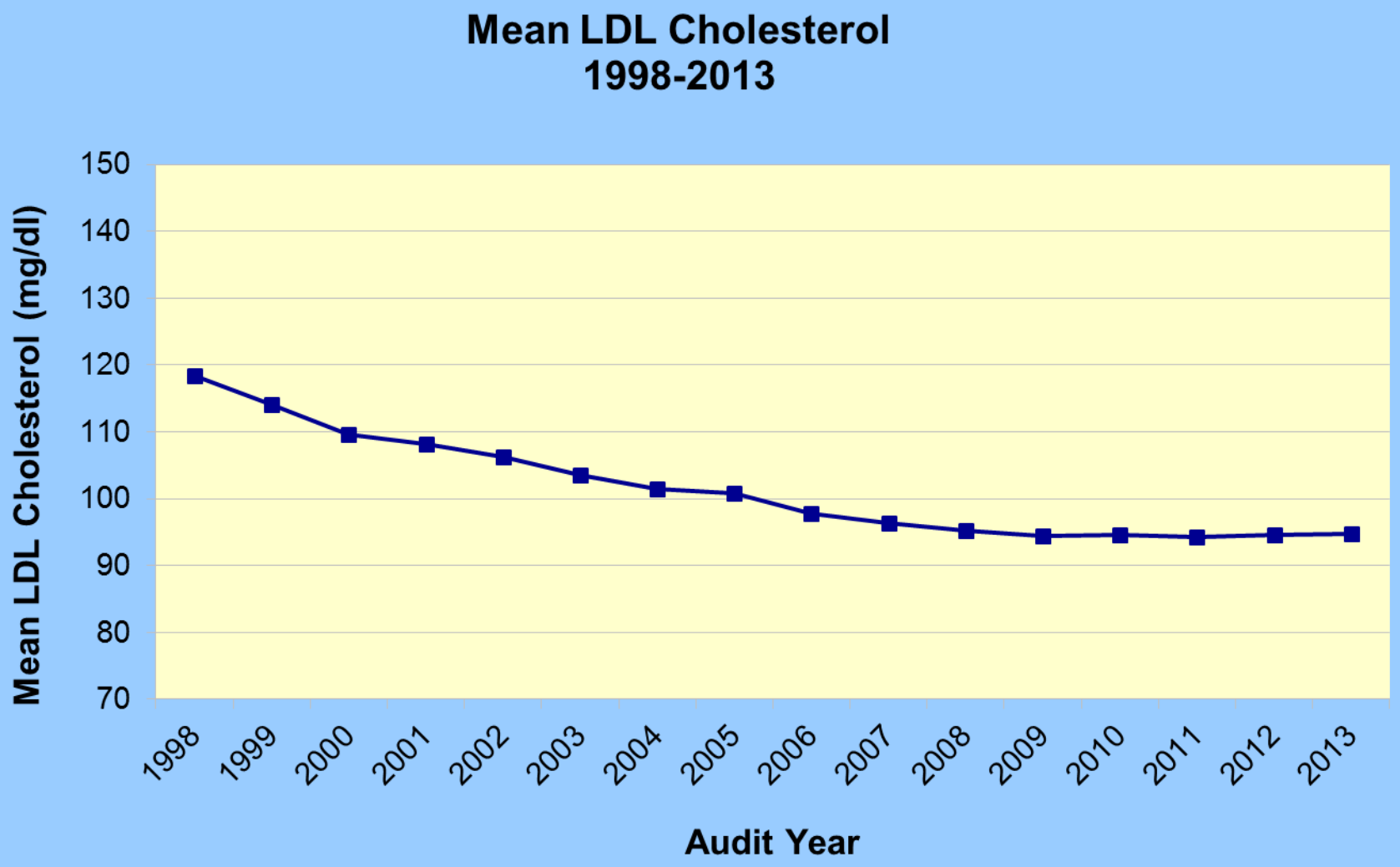


Source: IHS Diabetes Care and Outcomes Audit

Nephropathy Assessment

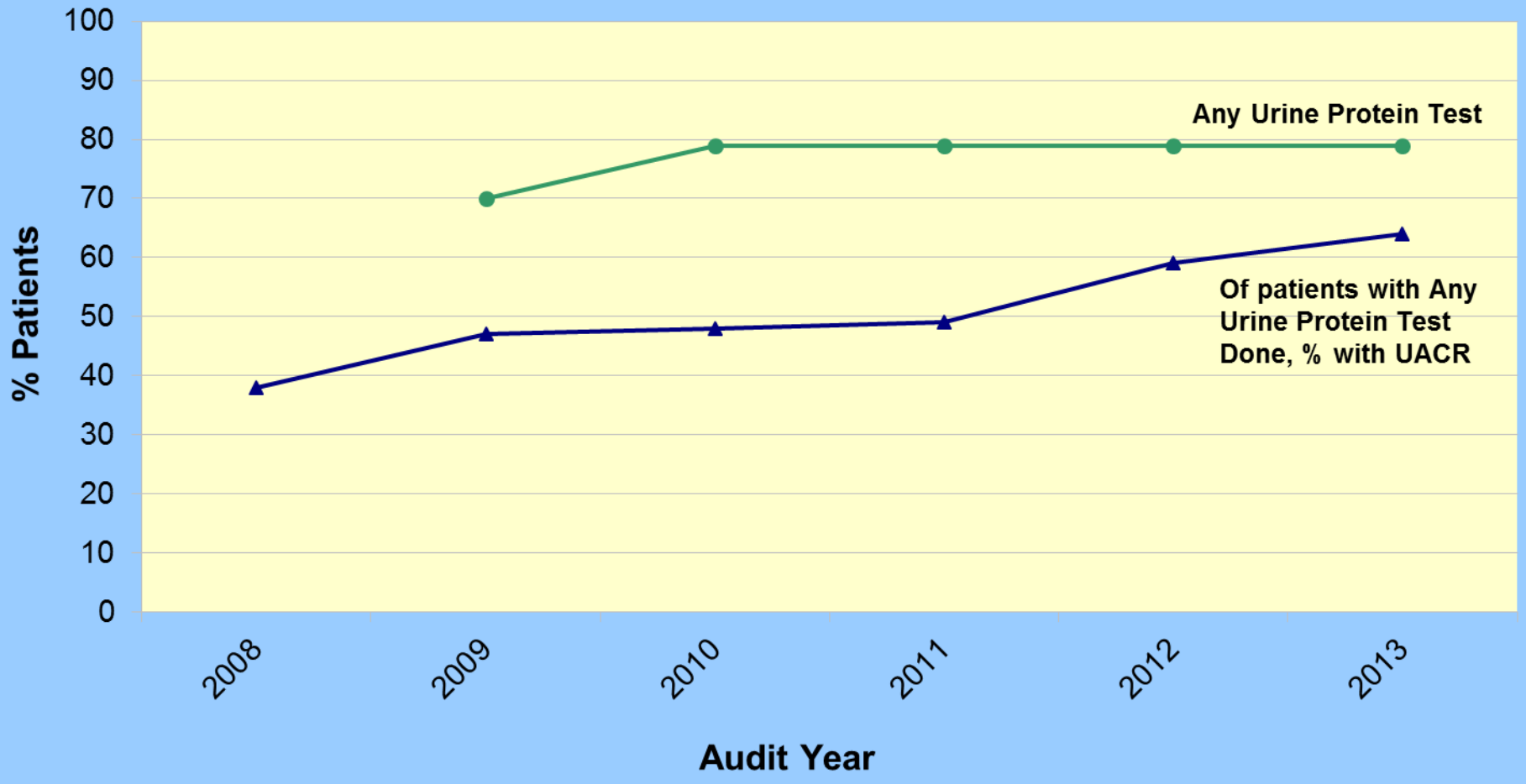
Why is only the Urine Albumin-to-Creatinine Ratio (UACR) test accepted?

- Albumin is primary protein excreted in DM pts
- Most accurate, reproducible test
  - Quantitative test
    - Vs. semi-quantitative "test strip" tests
  - Urine albumin assay is being standardized
    - Not possible to standardize urine proteins
  - Allows for early detection and meaningful monitoring of CKD
- Done on spot specimen any time of day
  - No need for timed specimens (e.g. 24 hr, 4 hr, overnight, first morning specimens, etc)
- Accounts for urine concentration using ratio to creatinine
  - Excrete about 1 gm of creatinine in urine each 24 hrs

Nephropathy Assessment

- Both required:
  - GFR
  - Recent change—only urine protein test accepted: Urine Albumin-to-Creatinine Ratio (UACR)
- FY 2014 Target: 69.0%

Urine Protein Testing and UACR 2008-2013

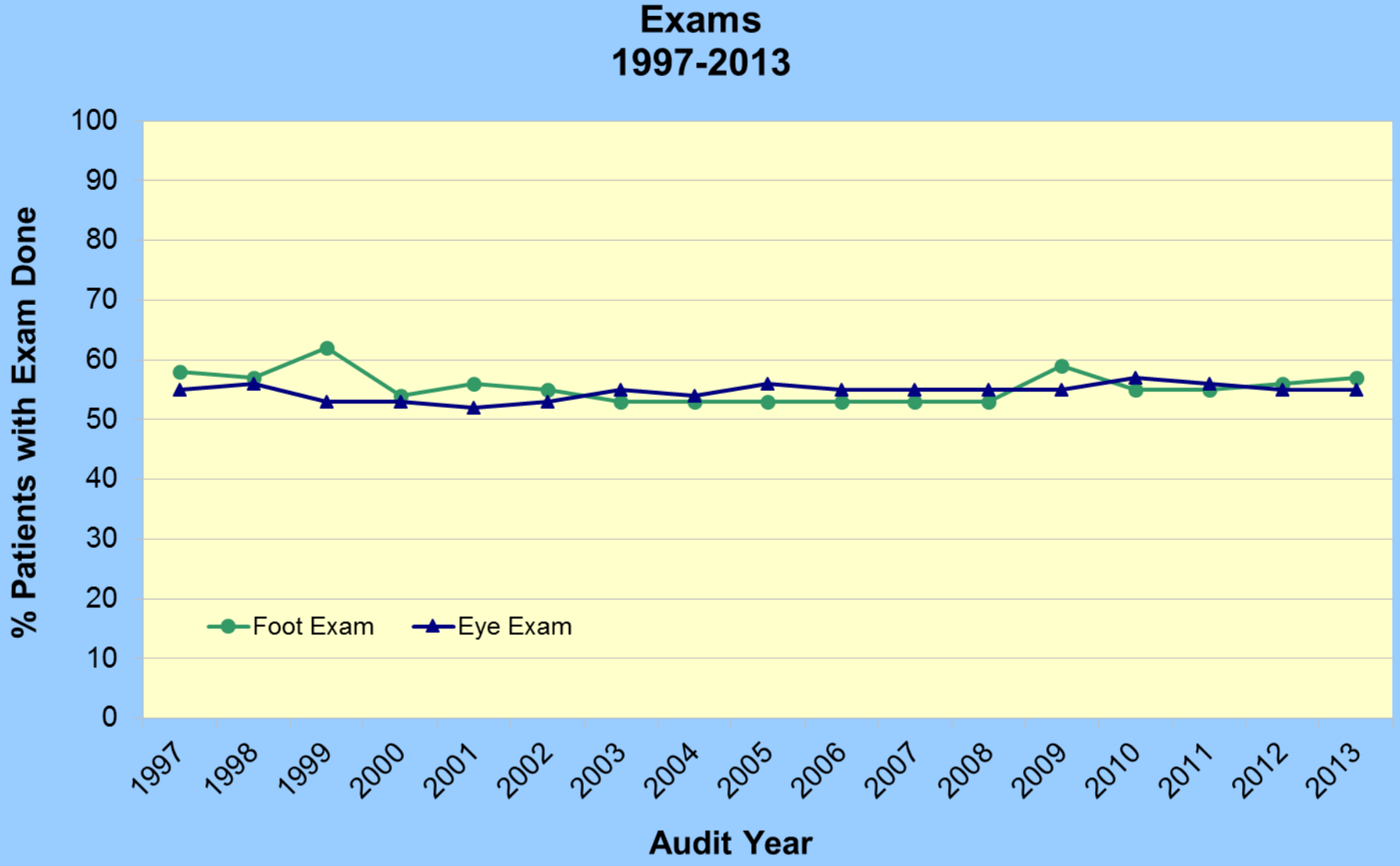


Source: IHS Diabetes Care and Outcomes Audit

Retinopathy Exam

Retinopathy Exam

- Recent change in national guidelines
  - Interval til next exam should be determined by eye care professional
    - For most patients, that will be 1 year
    - For a few it will be 2 years, for others it will be < 1 year
- No recent changes in GPRA measure
- Accepts:
  - Dilated retinal exam by ophthalmologist/optometrist
  - Retinal imaging
- FY 2014 Target: 58.6%



Source: IHS Diabetes Care and Outcomes Audit

Given all this, how to select performance measures?

- Performance measures should reflect current guidelines, cover most patients and minimize overtreatment/harm
  - **A1C Target: Individualize 6-8.5+% vs GPRA <8%**
  - **BP Target: <140/80-90 vs GPRA <140/90**
  - **LDL Target: statin use or LDL <100 vs GPRA "LDL assessed"**
- **Performance measures are *not* clinical practice guidelines**
  - Need to do what's right for each patient
    - Some patients would benefit from lower A1C targets
    - And both A1C and BP GPRA targets are too stringent for our older patients and those with multiple comorbidities

JAMA editorial on clinical guidelines and performance measures

- "The New Cholesterol and Blood Pressure Guidelines: Perspective on the Path Forward"

  Krumholz HM, JAMA, published online March 29, 2014

Thank You!

Questions, comments?

IHS Divison of Diabetes website:

www.diabetes.ihs.gov

ann.bullock@ihs.gov