



# OPTIMIZING VASCULAR OUTCOMES IN T2DM

COLLABORATION FOR QUALITY CARE

## TABLE OF CONTENTS

Presentation Slides

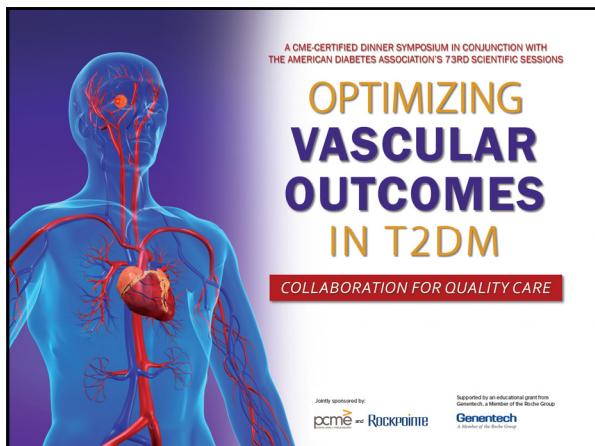
Pages 2-1

Physician Quality Initiatives Handout:  
*A Guide to Optimizing T2DM Reporting*

Pages 1 -

# Optimizing Vascular Outcomes in T2DM

## Collaboration for Quality Care – Program Slides



## OPTIMIZING VASCULAR OUTCOMES IN T2DM

COLLABORATION FOR QUALITY CARE

### FACULTY

**ROBERT R. HENRY, MD – Chair**  
Professor of Medicine  
University of California San Diego  
Chief, Section of Diabetes, Endocrinology & Metabolism  
Director, Center for Metabolic Research  
VA San Diego Healthcare System  
San Diego, CA

**JORGE PLUTZKY, MD**  
Director, Vascular Disease Prevention Program  
Brigham and Women's Hospital  
Boston, MA

**OMESH P. GUPTA, MD, MBA**  
Assistant Professor of Ophthalmology  
Jefferson Medical College  
Vitreoretinal Surgeon  
Mid-Atlantic Retina and Wills Eye Hospital  
Philadelphia, PA

## OPTIMIZING VASCULAR OUTCOMES IN T2DM

COLLABORATION FOR QUALITY CARE

### FACULTY DISCLOSURES

**ROBERT R. HENRY, MD – Advisory Board:** Amgen, AstraZeneca, Boehringer Ingelheim, Bristol-Myers Squibb, Daiichi-Sankyo, Elcelyx Therapeutics, Eli Lilly, Gilead, Intarcia Therapeutics, Johnson & Johnson/Janssen, Merck, Novo Nordisk, Roche/Genentech, Sanofi-Aventis; **Consultant:** Boehringer Ingelheim, Eli Lilly, Gilead, Intarcia Therapeutics, Isis, Novo Nordisk, Roche/Genentech, Sanofi-Aventis; **Research Support:** AstraZeneca, Bristol-Myers Squibb, Eli Lilly, Medtronic, Sanofi-Aventis

**OMESH P. GUPTA, MD, MBA – Stock holder:** Focus Macula Vitamins, MIntelleSys

**JORGE PLUTZKY, MD – Consultant:** Abbott, Amlyn Pharmaceuticals, Bristol-Myers Squibb, Daiichi-Sankyo, GlaxoSmithKline, Merck, Novo Nordisk, Novartis, Orexigen Therapeutics, Pfizer, Roche/Genentech, Takeda, Vivus

### NON-FACULTY DISCLOSURES

Non-faculty content contributors and/or reviewers reported the following relevant financial relationships that they or their spouse/partner have with commercial interests:

**CAROLE DREXEL, PhD; BLAIR ST. AMAND; JAY KATZ, CCMEP; DANA SIMPLER, MD:** Nothing to Disclose

## OPTIMIZING VASCULAR OUTCOMES IN T2DM

COLLABORATION FOR QUALITY CARE

### EDUCATIONAL OBJECTIVES

*At the conclusion of this activity, participants should be able to demonstrate the ability to:*

- Recognize the importance of multifactorial cardiovascular (CV) risk-factor modification to reduce macrovascular and microvascular risk in patients with T2DM
- Evaluate the clinical properties of new and emerging agents aimed at modifying the underlying mechanisms of diabetes to reduce CV risk
- Recognize retinal disease as a key indicator of systemic diabetic microvascular complications
- Implement strategies to optimize retinal health in patients with T2DM through annual screening, multifactorial risk-factor management, and appropriate follow-up care

## INTRODUCTION: WHAT DEFINES QUALITY DIABETES CARE?

**ROBERT R. HENRY, MD**  
Professor of Medicine  
University of California San Diego  
Chief, Section of Diabetes, Endocrinology & Metabolism  
Director, Center for Metabolic Research  
San Diego, CA

### Current Standards of Care in Diabetes

- Glycemic control
- Blood pressure control
- Lipid management
- Lifestyle modifications (exercise, smoking cessation)
- Foot care
- Screening for vascular complications (CVD, nephropathy, neuropathy, retinopathy), with treatment/referral as needed
- Assessment of comorbidities

American Diabetes Association. *Diabetes Care.* 2013;36:S11-S66.

# Optimizing Vascular Outcomes in T2DM

## Collaboration for Quality Care – Program Slides

### Why Do We Need Quality Measures?

- To understand the quality of diabetes care
  - Population-level surveillance
- To improve the quality of diabetes care
  - Feedback on performance for continuous improvement
- To assess physician competence
  - Maintenance of certification
- To reward physicians and practices that provide high-quality care
  - Financial incentives

O'Connor PJ et al. *Diabetes Care*. 2011;34:1651-1659.

### Current Quality Measures for Diabetes (I)

NQF #	PQRS #	Measure Description	Measure Developer
0059	1	Diabetes Mellitus: Hemoglobin A1c Poor Control	NCQA
0064	2	Diabetes Mellitus: Low Density Lipoprotein (LDL-C) Control	NCQA
0061	3	Diabetes Mellitus: High Blood Pressure Control	NCQA
0575	313	Diabetes Mellitus: Hemoglobin A1c Control (< 8%)	NCQA
0729	319	Diabetes Composite: Optimal Diabetes Care: <ul style="list-style-type: none"><li>• A1c &lt;8.0%, LDL &lt;100 mg/dL,</li><li>• blood pressure &lt;140/90 mmHg,</li><li>• tobacco non-user and</li><li>• for patients with a diagnosis of ischemic vascular disease daily aspirin use unless contraindicated</li></ul>	MNCM

Centers for Medicare & Medicaid Services. Quality Measures Inventory, 2013.

NCQA: National Committee for Quality Assurance; MNCM: Minnesota Community Measurement; AMA-PCPI: American Medical Association (AMA)-convened Physician Consortium for Performance Improvement® (PCPI™)

### Current Quality Measures for Diabetes (II)

NQF #	PQRS #	Measure Description	Measure Developer
0088	18	Diabetic Retinopathy: Documentation of Presence or Absence of Macular Edema and Level of Severity of Retinopathy	AMA-PCPI/NCQA
0089	19	Diabetic Retinopathy: Communication with the Physician Managing Ongoing Diabetes Care	AMA-PCPI/NCQA
0055	117	Diabetes Mellitus: Dilated Eye Exam:	NCQA

Centers for Medicare & Medicaid Services. Quality Measures Inventory, 2013.  
NCQA: National Committee for Quality Assurance; MNCM: Minnesota Community Measurement; AMA-PCPI: American Medical Association (AMA)-convened Physician Consortium for Performance Improvement® (PCPI™)

### How Do We Report Quality?

#### Sources of Performance Data

- Medical records/chart review
- Administrative data
  - Diagnostic codes
  - Billing data
  - Laboratory orders
- Electronic data capture
  - Disease registries
  - Electronic health records
- Patient-reported quality-of-care surveys

Centers for Medicare & Medicaid Services. PQRS Updates for 2013.

### Why Participate in Reporting?

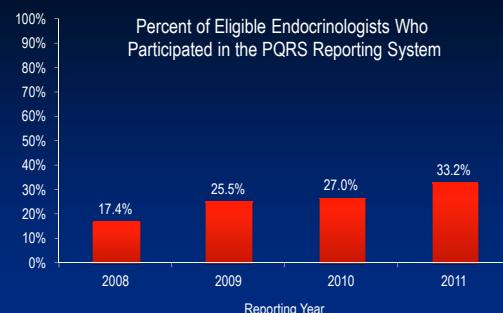
- Payment adjustments
  - Beginning in 2015, if an eligible professional or group practice does not satisfactorily submit data on PQRS quality measures, a 1.5% payment adjustment will apply<sup>1</sup>
- Correlation between participation and quality
  - In a Kaiser Permanente study of 35 clinics serving 2.5 million patients, removing a financial incentive for diabetic retinopathy screening led to a decrease in performance of 3% per year<sup>2</sup>
  - In a randomized trial of 11 primary care clinics, adoption of electronic health records systems significantly improved glycemic control and systolic blood pressure for patients with diabetes<sup>3</sup>

1. Centers for Medicare & Medicaid Services. PQRS Updates for 2013. February 2013.

2. Lester H et al. *BMJ*. 2010;340:c1998.

3. O'Connor PJ et al. *Ann Fam Med*. 2011;9:12-21.

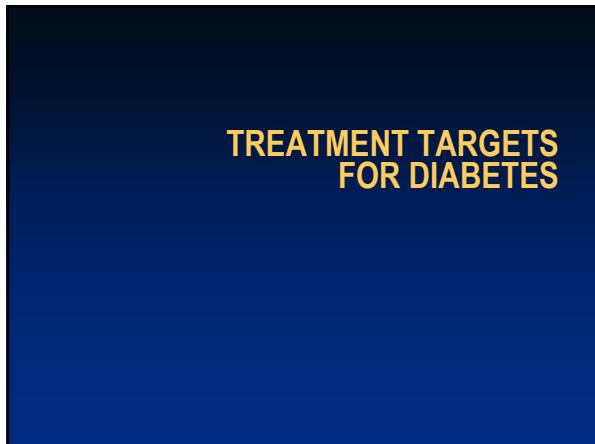
### How Well Are We Reporting?



Centers for Medicare & Medicaid Services. PQRS Reporting Experience (2008-2012). April 2013.

# Optimizing Vascular Outcomes in T2DM

## Collaboration for Quality Care – Program Slides



P

### ADA 2013 Management Goals for Diabetes

Glycemia	A1c <7.0% for most adults, but individualized based on duration of DM, age, life expectancy, comorbidities, vascular complications, hypoglycemia, and patient preference
Blood pressure	<140/80 mmHg, but individualized based on treatment response
Lipids	LDL <100 mg/dL; TG <150 mg/dL; HDL >40 mg/dL in men and >50 mg/dL in women
Cardiovascular risk factors:	Estimate 10-year risk; aspirin 75-162 mg/day for primary prevention if 10-year risk >10%

American Diabetes Association. *Diabetes Care*. 2013;36:S1-S66.

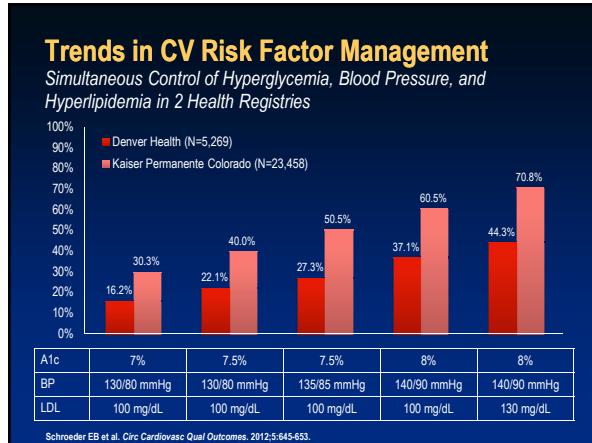
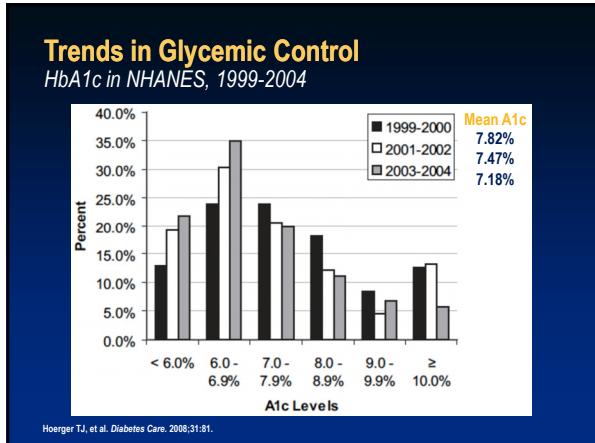
O

### Diabetic Retinopathy Screening

- Type I
  - First dilated eye exam: 3-5 years after diagnosis
  - Recommended follow-up: Yearly
- Type II
  - First dilated eye exam: At time of diagnosis
  - Recommended follow-up: At least yearly
- Prior to Pregnancy
  - First dilated eye exam: Prior to conception or first trimester
  - Recommended follow-up: Depends on severity: monthly to yearly

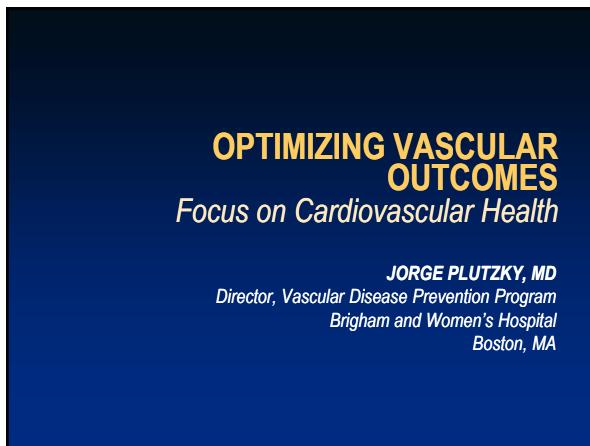
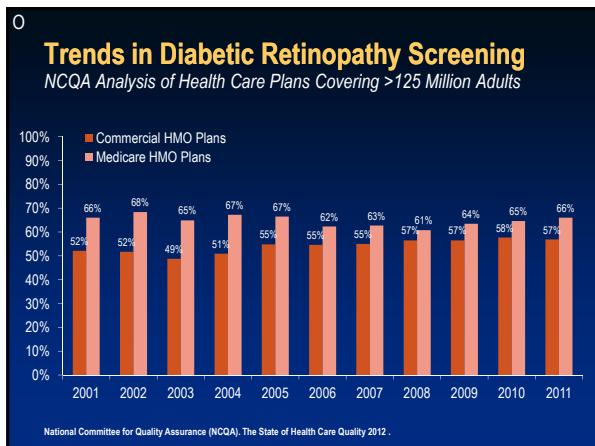
B

### HOW ARE WE DOING? Trends in Diabetes Care Quality



# Optimizing Vascular Outcomes in T2DM

## Collaboration for Quality Care – Program Slides

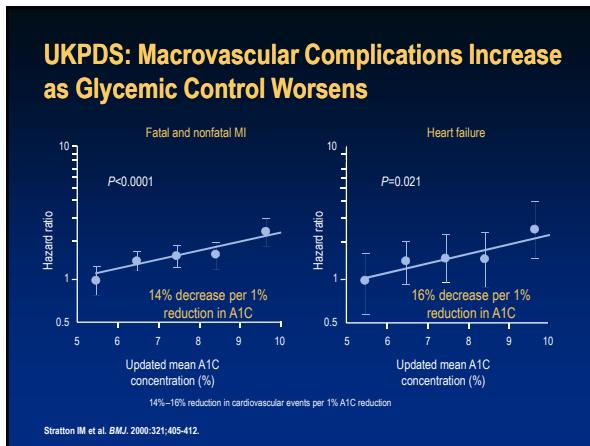
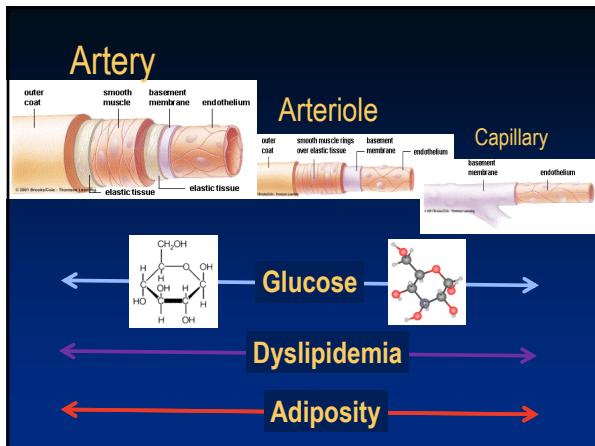


### Case Presentation

- 62-year-old man returns to clinic for follow-up after recent coronary stenting for non-ST elevation MI. Patient is a former smoker, with occasional alcohol use.
- History: hypertension, central obesity, "borderline diabetes"
  - BP 135/84 mmHg; pulse 60 BPM
  - BMI 30.5 kg/M<sup>2</sup>
  - EKG normal, nonspecific ST/T waves, no Q waves
  - LDL 60 mg/dL, HDL 32 mg/dL, TG 220 mg/dL
  - FPG 115 mg/dL, A1c 7.0 %
- Meds: atorvastatin 80 mg, clopidogrel, aspirin, lisinopril 10 mg, metformin 1,000 mg, metoprolol XL 25 mg

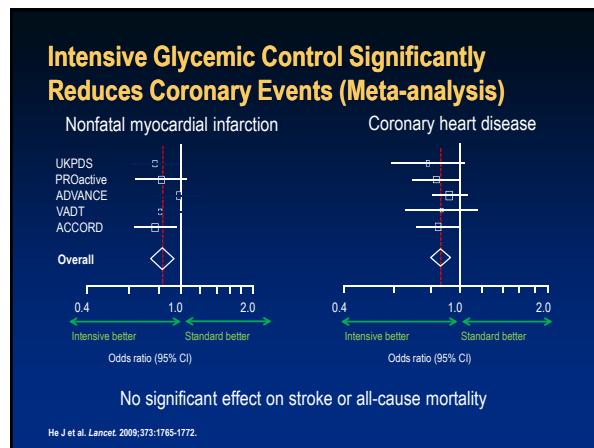
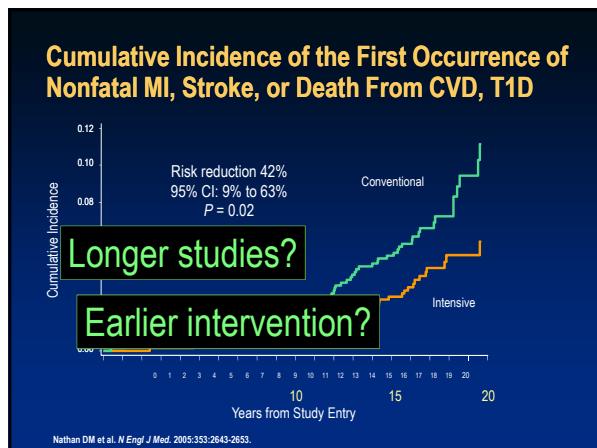
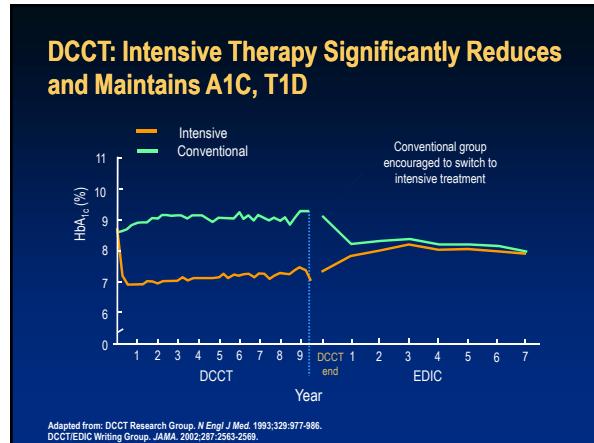
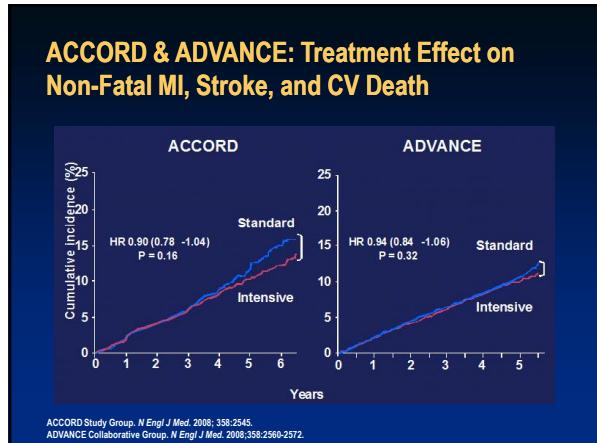
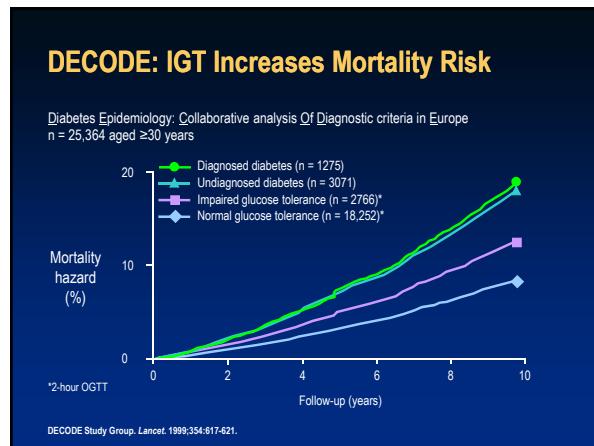
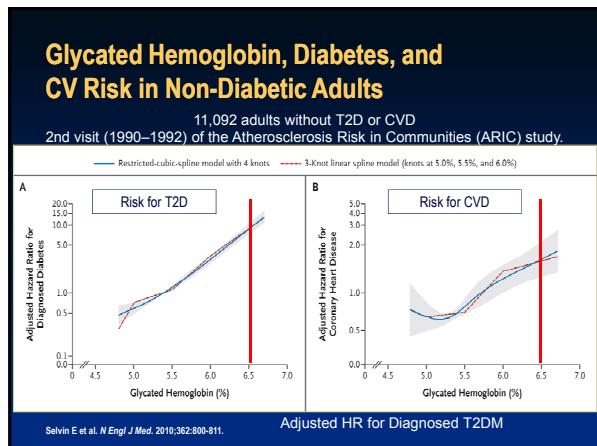
### History Review

- Two years ago.....
  - A1C = 6%
  - LDL = 135 mg/dL, HDL = 34 mg/dL, triglycerides = 180 mg/dL
  - Pravastatin 10 mg, and aspirin 81 mg started
- One year ago...
  - BP = 144/90
  - LDL = 110 mg/dL, HDL = 35 mg/dL, triglycerides = 190 mg/dL
  - A1C = 7.0, FPG = 140 mg/dL
  - Increased shortness of breath with exertion
  - Metformin 500 mg and lisinopril 5 mg started
- His BMI increased gradually over the past 10 years



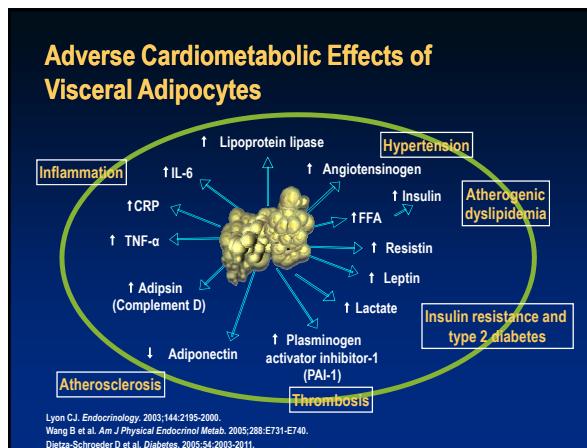
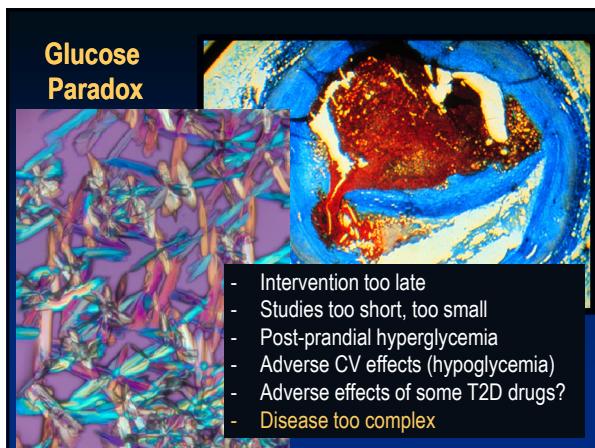
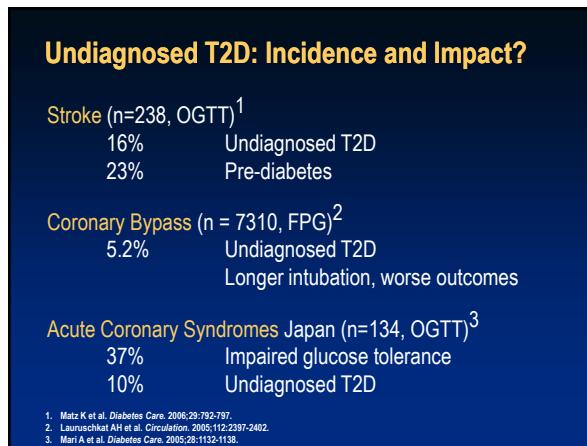
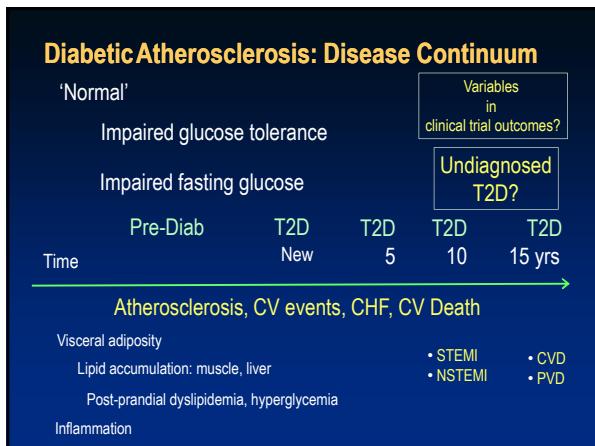
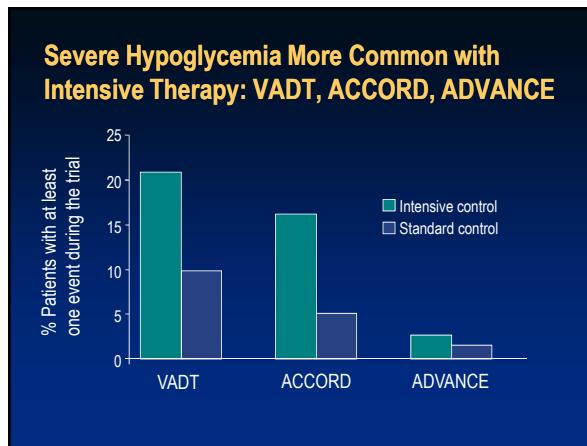
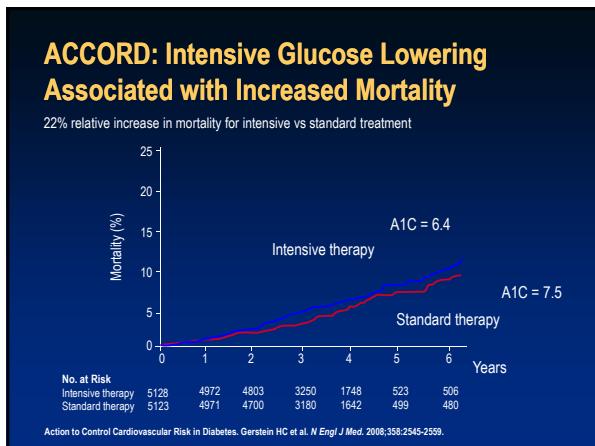
# Optimizing Vascular Outcomes in T2DM

## Collaboration for Quality Care – Program Slides



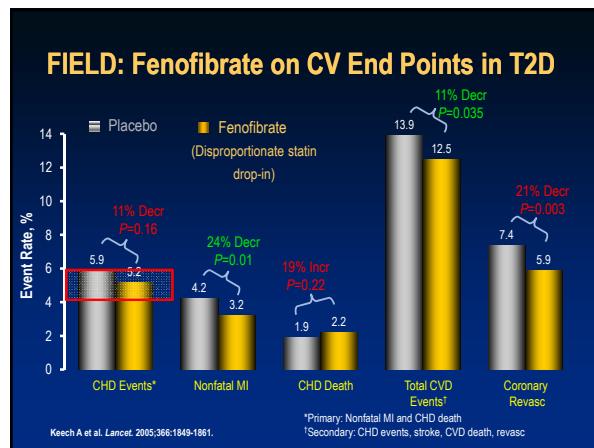
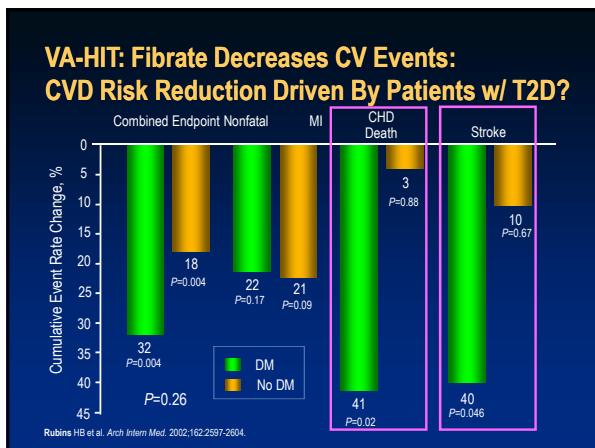
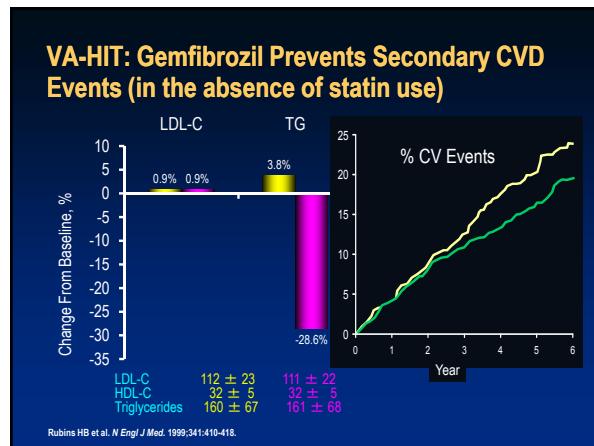
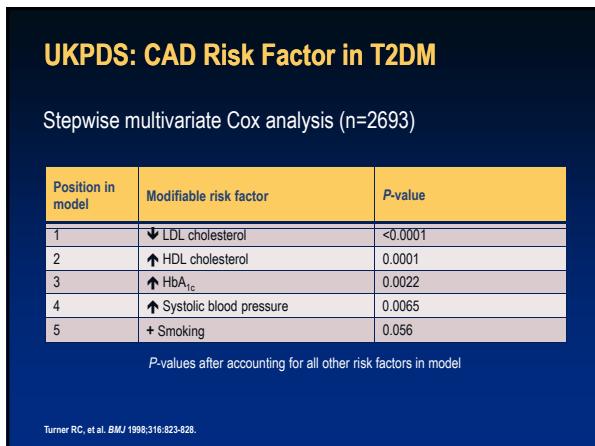
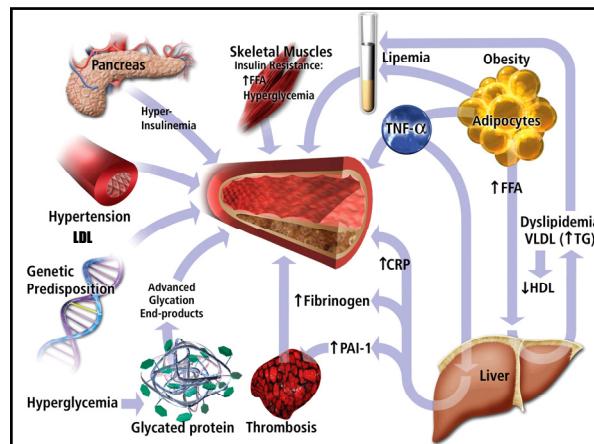
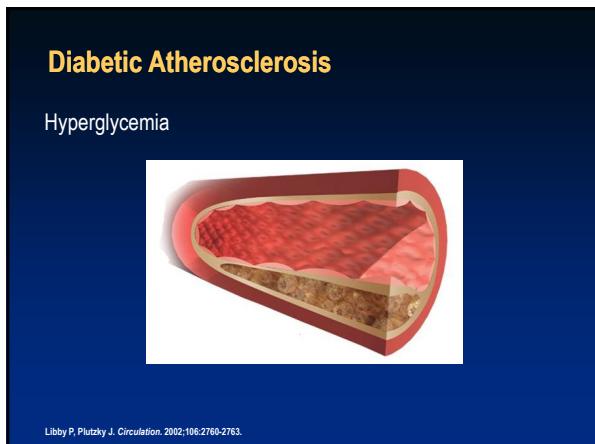
# Optimizing Vascular Outcomes in T2DM

## Collaboration for Quality Care – Program Slides



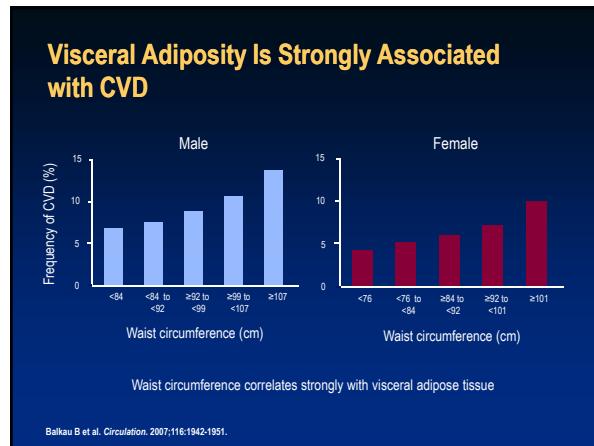
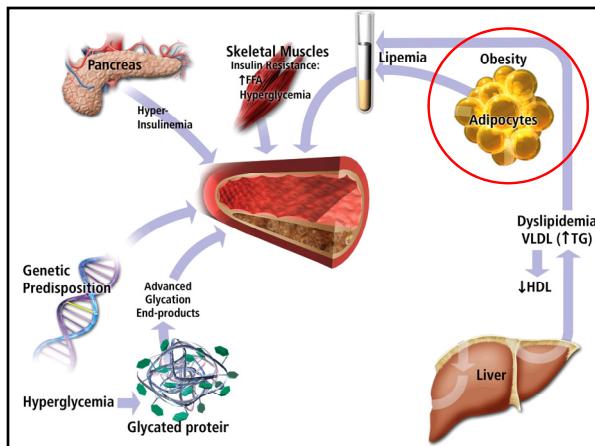
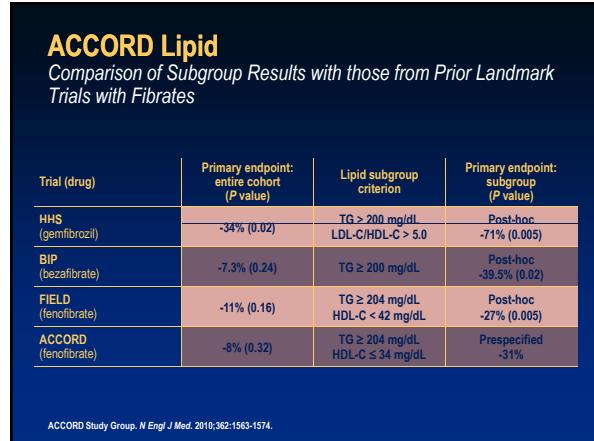
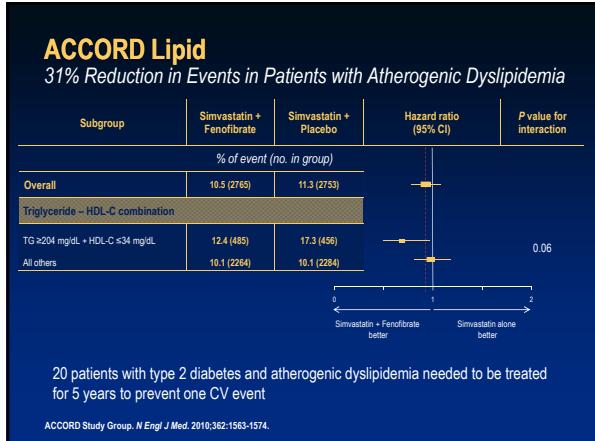
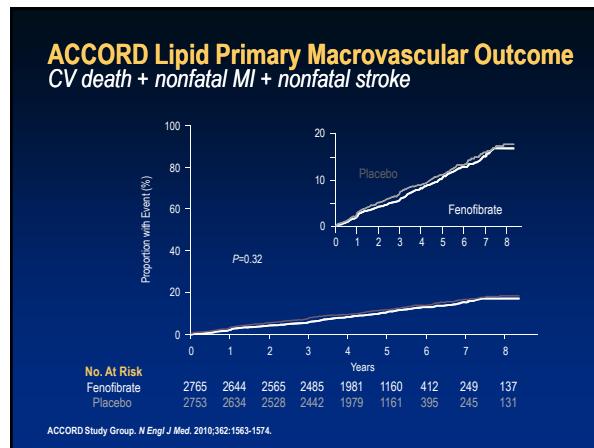
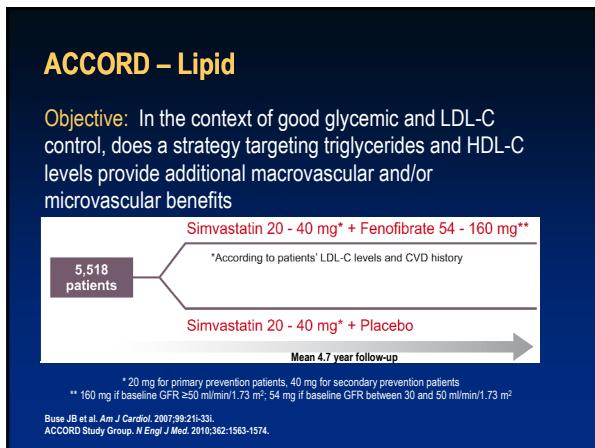
# Optimizing Vascular Outcomes in T2DM

## Collaboration for Quality Care – Program Slides



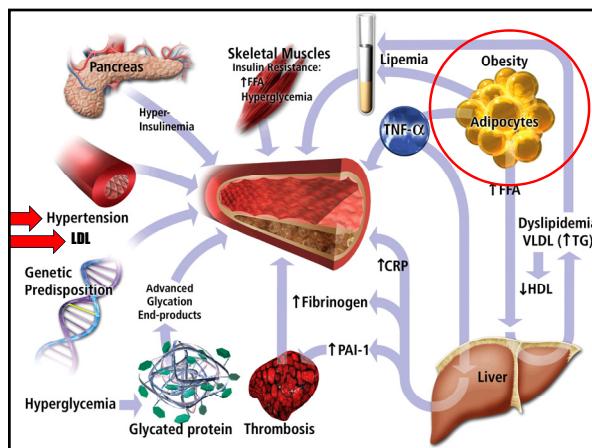
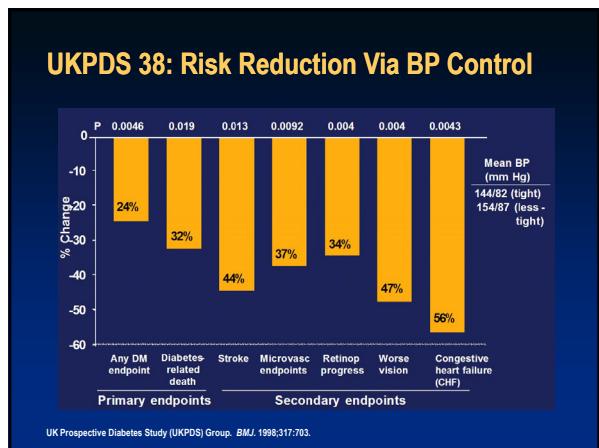
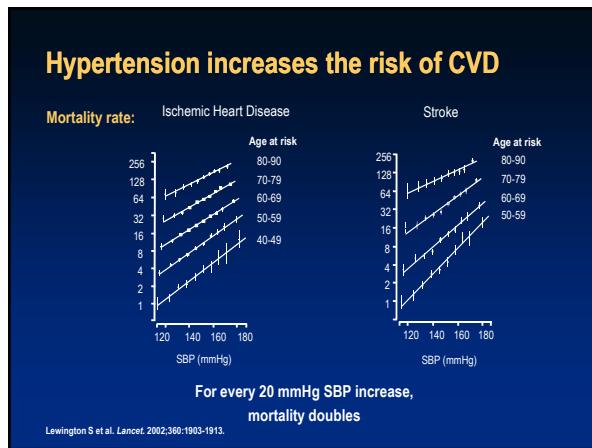
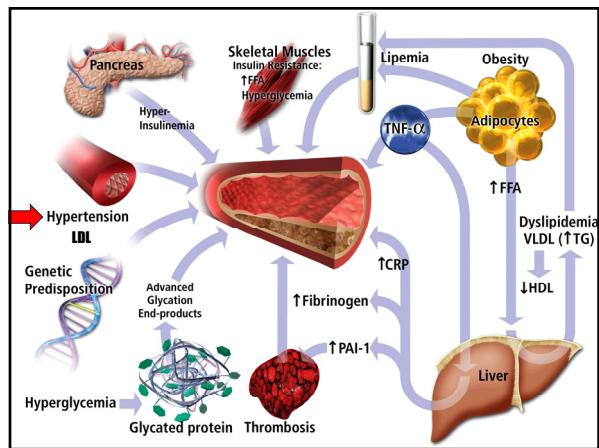
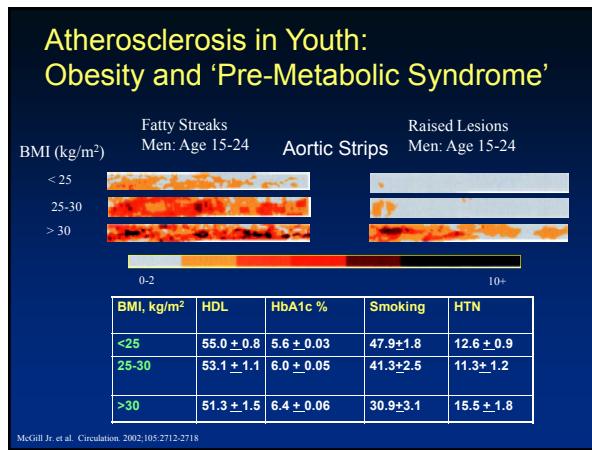
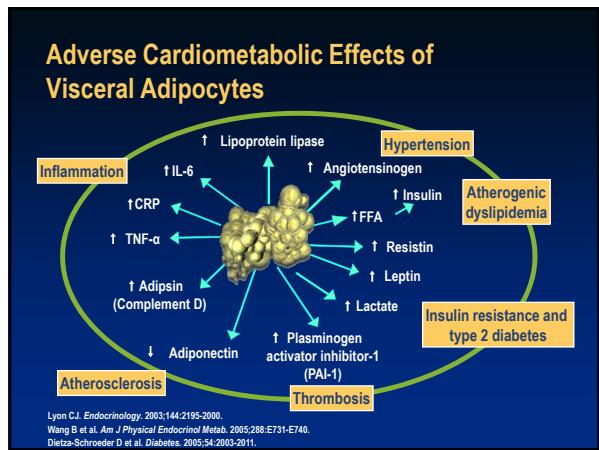
# Optimizing Vascular Outcomes in T2DM

## Collaboration for Quality Care – Program Slides



# Optimizing Vascular Outcomes in T2DM

## Collaboration for Quality Care – Program Slides



# Optimizing Vascular Outcomes in T2DM

## Collaboration for Quality Care – Program Slides

**B**

### New Approaches for CV Risk Reduction in T2DM

- PPAR agonist
- SGLT2 inhibitor
- Incretin agents

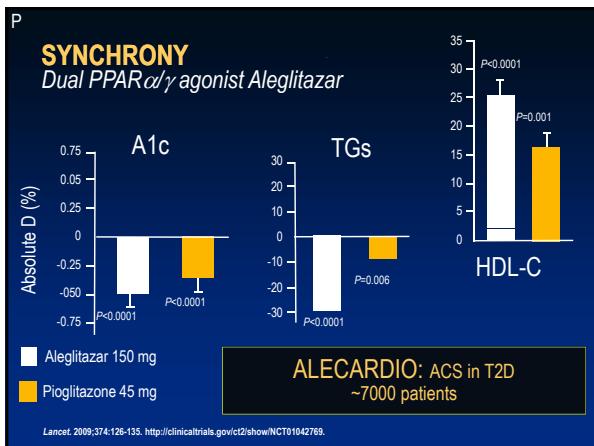
**P**

### Present Landscape of CVD Outcomes Trials in Type 2 DM

Trial	Drug	Sample Size	Stage
ORIGIN	Insulin glargine	12,500	Started 9/2003
TECOS	Sitagliptin	14,000	Started 12/2008
ACE	Acarbose	7500	Started 2/2009
TIDE	Rosi/PIO	16,000	Halted
EXAMINE	Alogliptin	5,400	Started 09/2009
CANVAS	Canagliflozin	4500	Started 11/2009
T-emerge 8	Tasoglutide	2,000	Halted
AleCardio	Aleglitazar	7,000	Started 2/2010
SAVOR TIMI-53	Saxagliptin	16,500	Started 4/2010
ELIXA	Lixisenatide	6000	Started 6/2010
EXSCEL	Exenatide LAR	12,000	Started 6/2010
C-SCADE 8	Empagliflozin	12,500	Started 7/2010
CAROLINA	Linagliptin	6000	Started 10/2010
LEADER	Liraglutide	8723	Started 8/2010

<http://www.clinicaltrials.gov>

**>144,000 patients**



**B**

### HbA1c and Body Weight Reductions with Canagliflozin

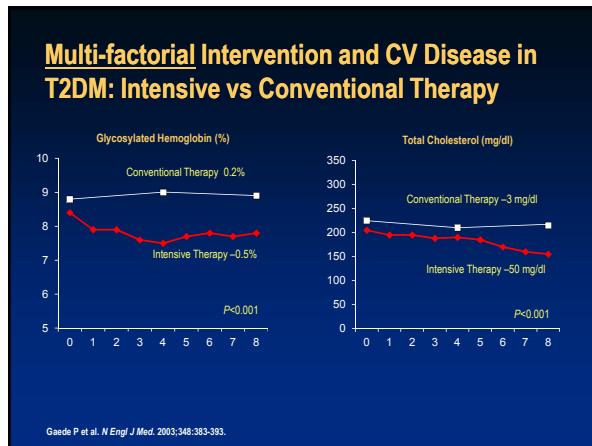
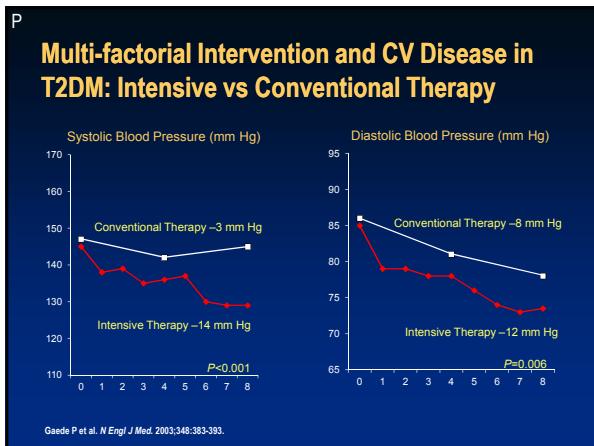
	Canagliflozin 100 mg, 300 mg monotherapy <sup>1</sup> Phase 3, 26 weeks	Canagliflozin 100 mg, 300 mg add-on to MET + SU <sup>2</sup> Phase 3, 26 weeks
Baseline HbA1c	8.1, 8.0 Placebo: 8.0	8.1, 8.1 Placebo: 8.1
HbA1c, % (from baseline)	-0.77, -1.03* Placebo: 0.14	-0.85, -1.06* Placebo: 0.13
Baseline weight	85.9, 86.9 Placebo: 87.5	93.5, 93.5 Placebo: 90.8
Weight, kg (from baseline)	-2.8, -3.9* Placebo: -0.6	-2.1, -2.6* Placebo: -0.7

\*LOCF and modified ITT data; least squares % mean change from baseline

HbA1c = glycated hemoglobin; ITT = intent-to-treat; LOCF = last observation carried forward; MET = metformin; SU = sulphonylurea

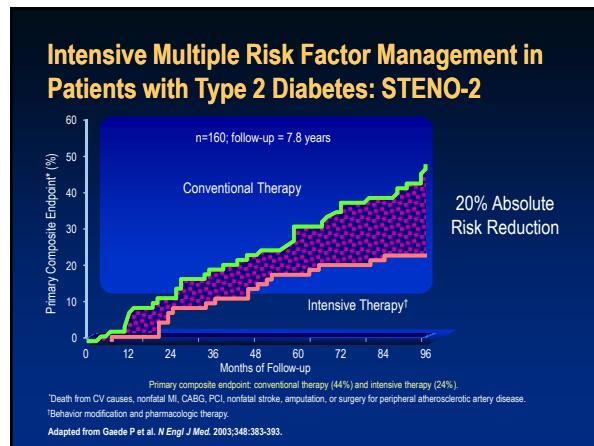
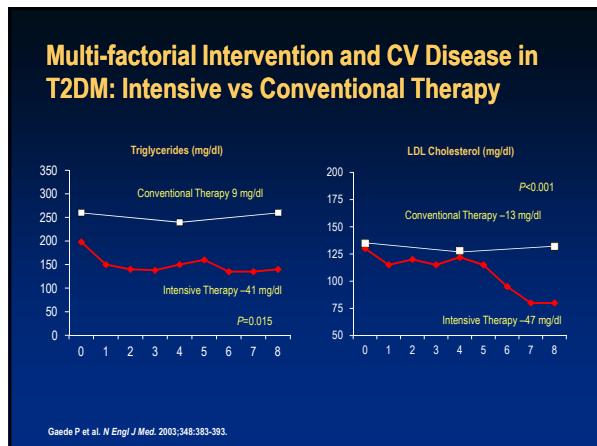
1. Stenlof K et al. Presented at ADA 2012.

2. Wilding J et al. Presented at ADA 2012; Poster #1022-P.



# Optimizing Vascular Outcomes in T2DM

## Collaboration for Quality Care – Program Slides



B

### CV Case Discussion

*How should the patient have been treated?*

PB

### CV Case Discussion

- Earlier intervention in natural history would have made a difference
  - Metformin and low-dose TZD use
  - Other antidiabetic therapy
  - Earlier statin or aspirin use
  - More aggressive BP therapy
  - More aggressive lifestyle interventions
- Role for more intensive screening earlier
  - Stress test
  - Coronary calcium
  - CRP

B

### CV Case Discussion

*How should the patient be treated going forward?*

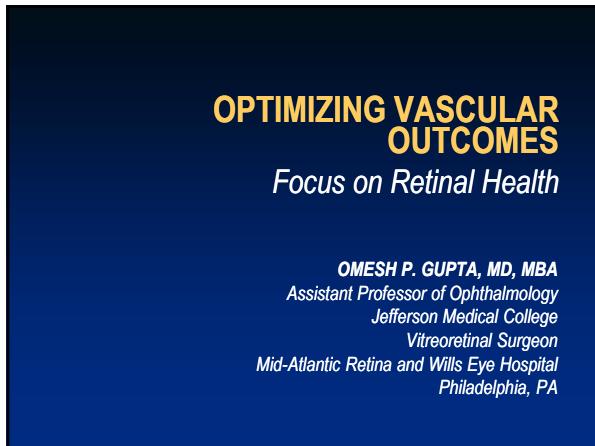
PB

### CV Case Discussion

- Following the CV event, is HDL...
  - A marker for increased CV risk
  - A drug target, and if so, which drug should be used?
    - Niacin
    - Fibrate
    - Fish oil (over the counter or prescription)
    - Other?
- What is the appropriate A1c target for this patient?
- What is the optimal anti-diabetic regimen for this patient?

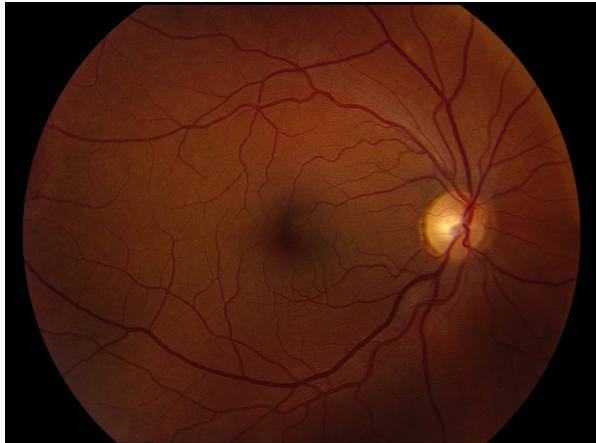
# Optimizing Vascular Outcomes in T2DM

## Collaboration for Quality Care – Program Slides



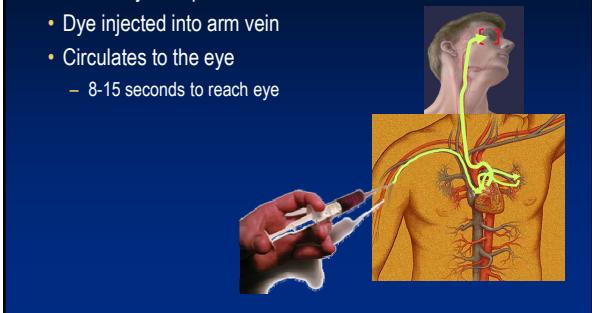
### Case Presentation

- HPI: 47-year-old CM was referred by ophthalmologist for retinal changes; patient denies any visual complaints
- POH: None
- PMH: None
- Meds: None
- Vision R eye: 20/20; L eye: 20/25



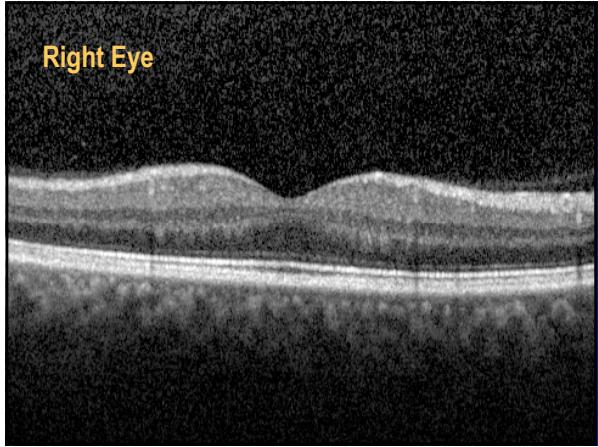
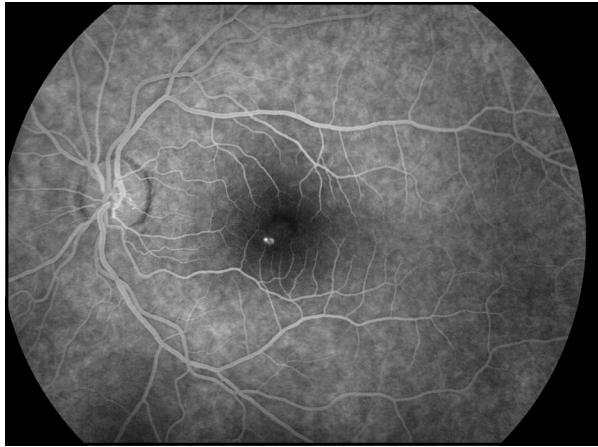
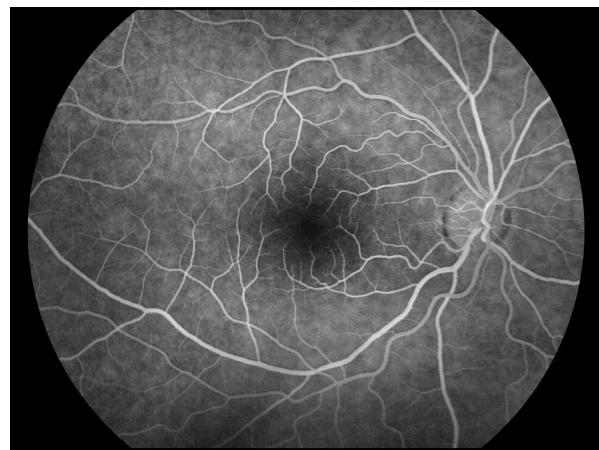
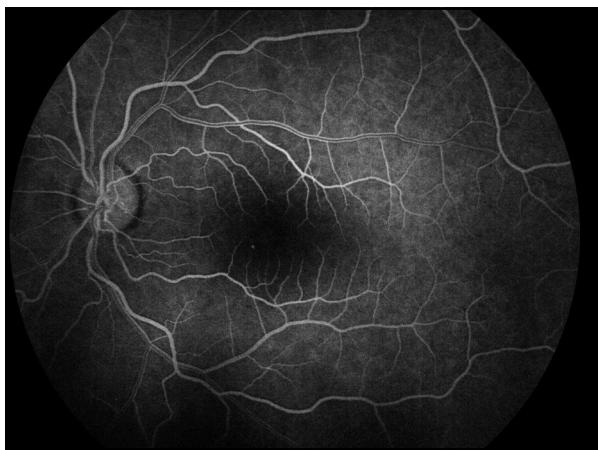
### Fluorescein Angiogram Technique

- Relatively inert plant resin
- Dye injected into arm vein
- Circulates to the eye
  - 8-15 seconds to reach eye



# Optimizing Vascular Outcomes in T2DM

*Collaboration for Quality Care – Program Slides*



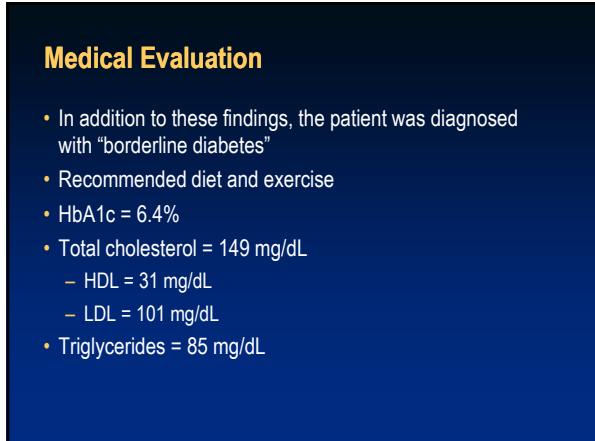
# Optimizing Vascular Outcomes in T2DM

## Collaboration for Quality Care – Program Slides



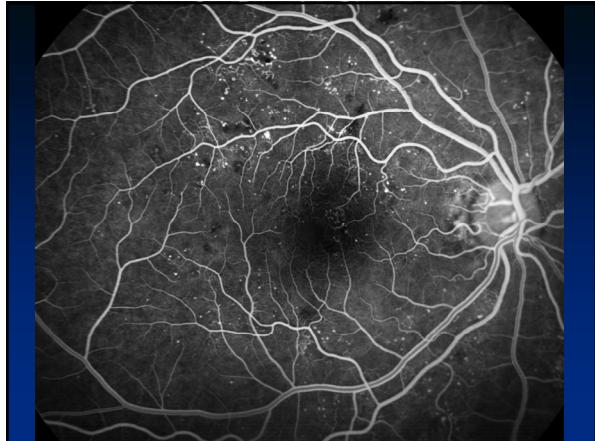
### Summary of First Patient Encounter

- Appeared to present and respond to treatment like diabetic retinopathy
- Fluorescein angiogram and OCT was consistent with this diagnosis



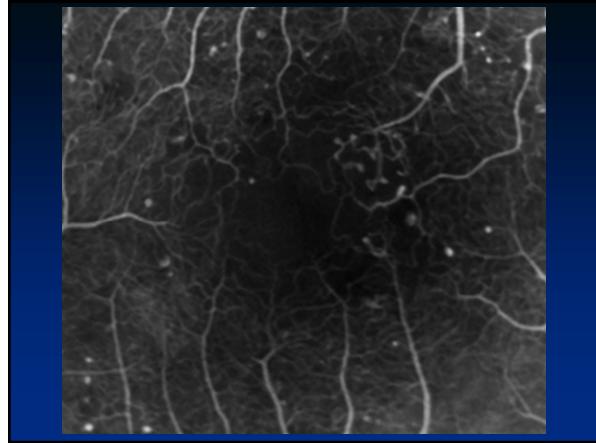
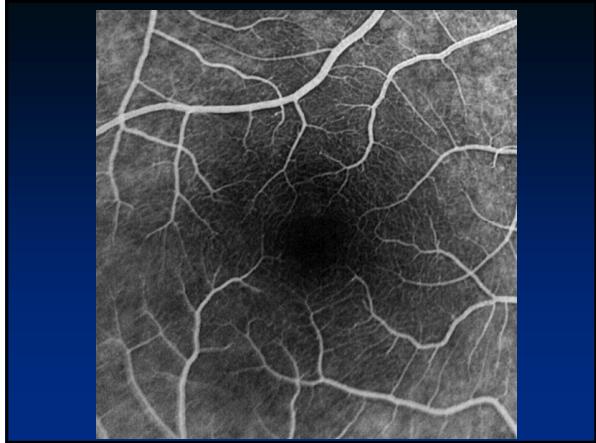
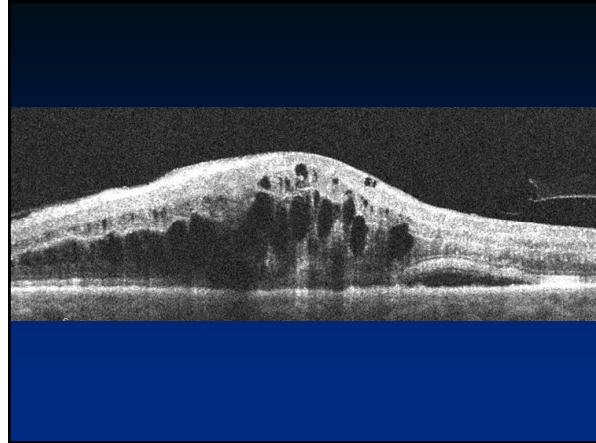
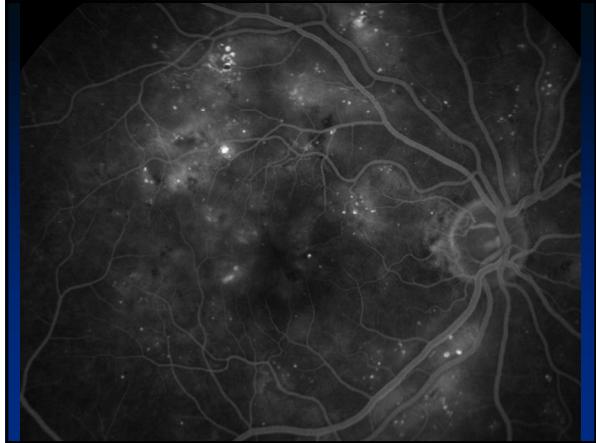
### Three years go by....

- Received mixed messages from different health care providers
- Lost to follow-up partially due to non-compliance
- Admits that has not been doing a good job with diet and exercise



# Optimizing Vascular Outcomes in T2DM

## Collaboration for Quality Care – Program Slides



### Summary of Second Patient Encounter

- Significant progression of diabetic macular edema
- Macular ischemia

### Retinopathy Case Discussion

- How should the patient have been treated after the first encounter?

# Optimizing Vascular Outcomes in T2DM

## Collaboration for Quality Care – Program Slides

### This patient is not alone.....

- 40% of diabetics older than 40 years have diabetic retinopathy according to the NEI
  - 8% have vision-threatening disease
- DR is the leading cause of blindness in Americans aged 20-74 years according to the CDC
- From 2005 to 2050, the number of diabetics with DR will triple from 5.5 mil to 16 mil and the number of those with vision-threatening disease will increase from 1.2 mil to 3.4 mil
- Almost 50% of patients with diabetic macular edema do not know they have it

### Multifactorial Nature of Retinopathy Risk

- Key role of glucose levels
- UKPDS study
  - Every percentage point decrease in HbA1c (e.g. 9% to 8%), there was a 35% reduction in the risk of microvascular complications

### A1c and Diabetic Retinopathy Outcomes Pre- vs Post-1985 (Meta-analysis)

	1975-1985		1986-2008	
	A1c (%)	Incidence	A1c (%)	Incidence
PDR, 5-year	9.3 (7.8-10.7)	18.0%	8.0 (7.9-8.1)	6.4% 3.6%
SVL, 5-year				
PDR, 10 yr	9.3 (7.6-10.9)	11.5%	8.2 (7.7-8.7)	6.6% 2.6%
SVL, 10 yr				

PDR=Proliferative Diabetic Retinopathy  
SVL=Severe Visual Loss

Wong TY et al. Diabetes Care. 2009;32:2307.

### What Should Have Been Done?

- SCREEN – *Initiate screening at diagnosis*
- REFER patients with *any* degree of macular edema, any stage of PDR, or severe non-proliferative DR to an ophthalmologist
- MANAGE all risk factors
  - ACCORD Eye Study: Intensive glycemic and dyslipidemic control reduced the rate of progression of DR in patients with T2DM who were at high risk for CVD [ACCORD Eye Study Group, 2010]
  - Prospective study of laser photocoagulation or PDR, better glycemic control (i.e. HbA1c levels <8% during the pre-treatment, treatment, and post-treatment periods) significantly predicted response to photocoagulation therapy and regression of retinopathy symptoms [Koloula, 2005]

### Retinopathy Risk: Other Factors

- Duration of diabetes
- Blood pressure
- BMI
- Other factors: insulin levels, cholesterol levels, triglycerides, C-peptide, ratio of urinary albumin to creatinine, systemic inflammation, and endothelial dysfunction

### Rationale for Diabetic Retinopathy Screening

- Risk of blindness
- Retinopathy as a harbinger of vascular complications
  - DR showed significant predictive value in differentiating diabetic nephropathy from non-diabetic renal disease in patients with T2DM [He, 2013]
  - Relationship between DR and CVD [Roy, 2012; Kawasaki, 2012]
  - Relationship between DR and insulin resistance [Anan, 2009]
- New therapies can change the natural history of DME and progressive retinal pathology

### **Retinopathy Case Discussion**

- How should the patient be treated going forward?

### **How Should the Patient Be Treated Going Forward?**

- Anti - Vascular endothelial growth factor (VEGF)
  - Bevacizumab and ranibizumab
  - Early intervention with anti-VEGF therapy helps to preserve visual potential for patients with DME
- Laser photocoagulation, vitrectomy surgery

### **Conclusions**

- Patients with T2DM remain at high risk for CV events despite current standards of care
  - The risks of macro and micro vascular complications begin early in the disease process and should be acknowledged and addressed
- The management of T2DM patients is shifting from a glucocentric to a multifactorial approach
- Emerging therapies may reduce hyperglycemia and cardiometabolic risk factors inhibiting the progression of atherosclerosis and CV complications
- Optimization of vascular health in T2DM requires collaboration between all care providers and patient involvement

# PHYSICIAN QUALITY INITIATIVES

## A GUIDE TO OPTIMIZING T2DM REPORTING

The Physician Quality Reporting System (PQRS), from the Centers for Medicare & Medicaid Services (CMS), provides incentive payments to eligible health care providers (HCPs) who voluntarily and satisfactorily report data on quality measures for covered Physician Fee Schedule (PFS) services furnished to Medicare Part B beneficiaries (including Railroad Retirement Board and Medicare Secondary Payer). HCPs who do not report or report unsatisfactorily will incur penalties. This guide provides strategies for implementing a PQRS program for type 2 diabetes (T2DM) based on requirements as of June 2013.

### GETTING STARTED – THE BASICS

**Step 1:** Determine if you are eligible... See chart at right.

**Step 2:** Determine which PQRS reporting method best fits your practice.

- Claims based
- Registry based
- Electronic Health Record (EHR)
- Group practice based

**Step 3:** Determine which measure reporting option you will use.

- For claims based or registry based
  - Individual measure: select at least three clinically applicable measures to submit in an attempt to qualify for a PQRS incentive payment

**OR**

- EHR based
  - 3 core measures and 3 additional measures
- Group practice based
  - Registry: report on 3 measures

**OR**

- Web based: report all web-based measures

**Step 4:** Submit all data using measure-specific coding

- ICD-9 (ICD-10 in 2014) diagnosis codes, patient demographics, and CPT codes, and modifier(s) as needed

### PENALTIES AND INCENTIVES

- Reporting must satisfy the requirements in at least 80% of eligible instances if reporting via a registry **OR** 50% of the eligible instances if reporting via claims for each selected measure.
- To avoid the 2015 PQRS Payment Adjustment, professionals and group practices must satisfactorily report in 2013 or elect to participate in the administrative claims-based reporting mechanism by October 15, 2013.
- Eligible professionals who do not satisfactorily report data on quality measures in 2013 for covered professional services will be subject to a payment adjustment in the amount of 1.5% in 2015. In 2016 and subsequent years, the payment adjustment will increase to 2.0%.
- In contrast, eligible professionals who satisfactorily report data on quality measures will earn up to 0.5% incentives.

### MAINTENANCE OF CERTIFICATION (MOC) AND QUALITY REPORTING

Physicians can earn additional 0.5% incentives by working with an MOC entity and by completing the following:

- Satisfactorily submitting data for a 12-month reporting period **AND** participate in an MOC Program and successfully complete a qualified MOC Program practice assessment.

### ELIGIBILITY FOR PARTICIPATION

#### 1. MEDICARE PHYSICIANS

- Doctor of Medicine
- Doctor of Osteopathy
- Doctor of Podiatric Medicine
- Doctor of Optometry
- Doctor of Oral Surgery
- Doctor of Dental Medicine
- Doctor of Chiropractic

#### 2. PRACTITIONERS

- Physician Assistant
- Nurse Practitioner\*
- Clinical Nurse Specialist\*
- Certified Registered Nurse Anesthetist\*  
(and Anesthesiologist Assistant)
- Certified Nurse Midwife\*
- Clinical Social Worker
- Clinical Psychologist
- Registered Dietitian
- Nutrition Professional
- Audiologists

\*Includes Advanced Practice Registered Nurse (APRN)

#### 3. THERAPISTS

- Physical Therapist
- Occupational Therapist
- Qualified Speech-Language Therapist

#### Eligible but not able to participate:

- Professionals who provide Part B services, but bill Medicare at a facility or institutional (Part A) level.
- Professionals who do not bill Medicare at an individual National Provider Identifier (NPI) level, where the rendering provider's individual NPI is entered on CMS-1500 type paper or electronic claims billing, associated with specific line-item services.
- Professionals who reassign benefits to a Critical Access Hospital (CAH) that bills outpatient services at a facility level, such as CAH Method II billing, cannot participate, since the CAH does not include the individual provider NPI on their Institutional (FI) claims.

## QUALITY MEASURES FOR T2DM

Quality measures consist of a unique denominator (eligible case) and numerator (clinical action) that permit calculating the percentage of a defined patient population receiving a particular process of care or achieving a particular outcome. Each measure or measure group has a reporting frequency or timeframe requirement for each eligible patient seen during the reporting period by each eligible professional.

2013 PQRS MEASURES LIST FOR TYPE 2 DIABETES MELLITUS					
NQF #	PQRS #	National Quality Strategy Domain	Measure Description	Measure Developer	Reporting Options
0059	1 GPRO DM-2	Clinical Process/Effectiveness	<b>Diabetes Mellitus—Hemoglobin A1c Poor Control:</b> Percentage of patients aged 18 through 75 years with diabetes mellitus who had most recent hemoglobin A1c greater than 9.0%	NCQA	Claims, Registry, EHR, GPRO/ACO, DM Measures Group (C/R)
0064	2	Clinical Process/Effectiveness	<b>Diabetes Mellitus—Low Density Lipoprotein (LDL-C) Control:</b> Percentage of patients aged 18 through 75 years with diabetes mellitus who had most recent LDL-C level in control (less than 100 mg/dL)	NCQA	Claims, Registry, EHR, DM Measures Group (C/R), Cardiovascular Prevention Measures Group (C/R)
0061	3	Clinical Process/Effectiveness	<b>Diabetes Mellitus—High Blood Pressure Control:</b> Percentage of patients aged 18 through 75 years with diabetes mellitus who had most recent blood pressure in control (less than 140/90 mmHg)	NCQA	Claims, Registry, EHR, DM Measures Group (C/R)
0088	18	Clinical Process/Effectiveness	<b>Diabetic Retinopathy—Documentation of Presence or Absence of Macular Edema and Level of Severity of Retinopathy:</b> Percentage of patients aged 18 years and older with a diagnosis of diabetic retinopathy who had a dilated macular or fundus exam performed which included documentation of the level of severity of retinopathy and the presence or absence of macular edema during one or more office visits within 12 months	AMA-PCPI/NCQA	Claims, Registry, EHR
0089	19	Clinical Process/Effectiveness	<b>Diabetic Retinopathy—Communication with the Physician Managing Ongoing Diabetes Care:</b> Percentage of patients aged 18 years and older with a diagnosis of diabetic retinopathy who had a dilated macular or fundus exam performed with documented communication to the physician who manages the ongoing care of the patient with diabetes mellitus regarding the findings of the macular or fundus exam at least once within 12 months	AMA-PCPI/NCQA	Claims, Registry, EHR
0055	117	Clinical Process/Effectiveness	<b>Diabetes Mellitus—Dilated Eye Exam:</b> Percentage of patients aged 18 through 75 years with a diagnosis of diabetes mellitus who had a dilated eye exam	NCQA	Claims, Registry, EHR, DM Measures Group (C/R)
0575	313	Clinical Process/Effectiveness	<b>Diabetes Mellitus—Hemoglobin A1c Control (&lt; 8%):</b> The percentage of patients 18 through 75 years of age with a diagnosis of diabetes (type 1 or type 2) who had HbA1c < 8%	NCQA	EHR
0729	319 GPRO DM-13 thru DM-17	Clinical Process/Effectiveness	<b>Diabetes Composite—Optimal Diabetes Care:</b> Patients ages 18 through 75 with a diagnosis of diabetes, who meet all the numerator targets of this composite measure: • A1c < 8.0%, LDL < 100 mg/dL, • blood pressure < 140/90 mmHg, • tobacco non-user, and • for patients with a diagnosis of ischemic vascular disease, daily aspirin use unless contraindicated	MNCM	GPRO/ACO

## FOR MORE INFORMATION

The reporting requirements are continuously evolving and being refined. Additional information on PQRS can be found at <http://www.cms.gov>. Other helpful links include:

- **Step-by-Step Instruction in Getting Started with the PQRS**  
[http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/How\\_To\\_Get\\_Started.html](http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/How_To_Get_Started.html)
- **2013 PQRS Implementation Guide and Measure**  
List [http://www.cms.gov/apps/ama/license.asp?file=/PQRS/downloads/2013\\_PQRS\\_MeasuresList\\_ImplementationGuide\\_12192012.zip](http://www.cms.gov/apps/ama/license.asp?file=/PQRS/downloads/2013_PQRS_MeasuresList_ImplementationGuide_12192012.zip)
- **Group Practice Reporting Option**  
[http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/Group\\_Practice\\_Reportin...\\_Option.html](http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/Group_Practice_Reportin..._Option.html)
- **2013 PQRS Maintenance of Certification Program Incentive**  
[http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/Maintenance\\_of\\_Certification\\_Program\\_Incentive.html](http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/Maintenance_of_Certification_Program_Incentive.html)
- **2013 Incentive Payment**  
<http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/AnalysisAndPayment.html>
- **2013 PQRS Payment and Adjustment**  
<http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/Payment-Adjustment-Information.html>
- **List of EHR Data Submission Vendors**  
[http://cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/Downloads/2013ParticipatingDataSubmissionVendors\\_052913.pdf](http://cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/Downloads/2013ParticipatingDataSubmissionVendors_052913.pdf)
- **List of Registry Vendors**  
[http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/Downloads/2013ParticipatingRegistryVendors\\_05172013.pdf](http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/PQRS/Downloads/2013ParticipatingRegistryVendors_05172013.pdf)

Participants are encouraged to check the CMS website to keep up to date with the newest requirements. Insurance companies and individual state Medicaid departments also are involved in data collections and reimbursement. Check with your participating insurance companies for specific requirements. For more information: Healthcare Effectiveness Data and Information Set (HEDIS)  
<http://www.ncqa.org/tabid/59/Default.aspx>