Evidence-Based Testing and Improved Diabetes Outcomes in the PCMH—One Patient's Journey

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GROUP PRACTICE FORUM

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Objectives

- **Learn practical solutions** to chronic disease management in the PCMH model
- Learn how to develop a practice culture to **support improvement in diabetes care**
- Learn how pattern analysis of **blood glucose levels** can improve diabetes outcomes
- Learn how to improve your **patients' health literacy**
- Learn how to correctly monitor and treat patients to prevent/delay the progression of **chronic kidney disease**
- Learn how to enhance the journey to physician-supervised **patient self-management**

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One Patient's Journey

- You're about to meet John—a virtual patient with type 2 diabetes
- During the course of this program we'll follow John's journey and learn how evidence-based self-testing can improve the quality of care he receives from the treatment team in a patient-centered medical home (PCMH) model

The PCMH and Diabetes—The Poster Child for Chronic Care

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The Challenge of Diabetes

- Chronic disease reaching epidemic proportions
- Associated with significant morbidity, mortality, and costs—the leading cause of end-stage renal disease
- Highest burden in minorities and the elderly
- The majority of people with diabetes are treated in a primary care setting
- Average patient/provider interaction—8 minutes

A new Primary Care Physician (PCP) model of care is required to improve quality of care and optimize outcomes for patients with chronic disease

Access to Care and Information

- Health care for all
- Same-day appointments
- After-hours access coverage
- Lab results highly accessible
- Online patient services
- e-Visits
- Group visits

Practice Management

- Disciplined financial management
- Cost-benefit decision-making
- Revenue enhancement
- Optimized coding and billing
- Personnel/HR management
- Facilities management
- Optimized office design/redesign
- Change management

TransforMED℠

Patient Centered Medical Home

Practice Services

- Comprehensive care for both acute and chronic conditions
- Prevention screening and services
- Surgical procedures
- Ancillary therapeutic and support services
- Ancillary diagnostic services

Health Information Technology

- Electronic medical records
- Electronic orders and reporting
- Electronic prescribing
- Evidence-based decision support
- Population management registry
- Practice Web site
- Patient portal

A continuous relationship with a personal physician coordinating care for both wellness and illness

- *Mindful clinician-patient communication: trust, respect, shared decision-making*
  - Patient engagement
  - Provider/patient partnership
  - Culturally sensitive care
  - Continuous relationship
  - Whole person care

Care Management

- Population management
- Wellness promotion
- Disease prevention
- Chronic disease management
- Care coordination
- Patient engagement and education
- Leverages automated technologies

Quality and Safety

- Evidence-based best practices
- Medication management
- Patient satisfaction feedback
- Clinical outcomes analysis
- Quality improvement
- Risk management
- Regulatory compliance

Continuity of Care Services

- Community-based services
- Collaborative relationships
  - Hospital care
  - Behavioral health care
  - Maternity care
  - Specialist care
  - Pharmacy
  - Physical Therapy
  - Case Management

Practice-Based Care Team

- Provider leadership
- Shared mission and vision
- Effective communication
- Task designation by skill set
- Nurse Practitioner / Physician Assistant
- Patient participation
- Family involvement options

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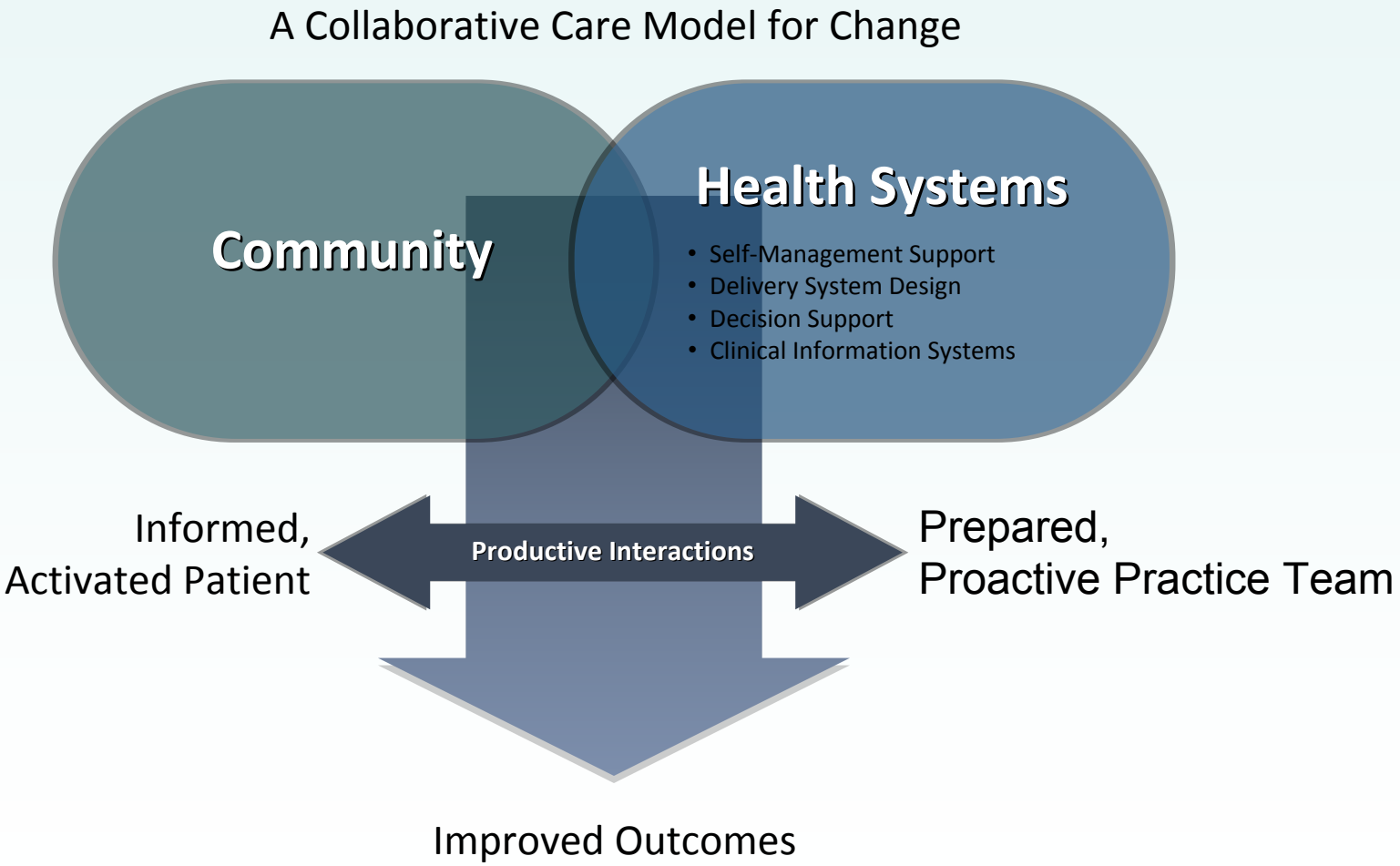
Wagner Chronic Care Model for Improvement of Chronic Illness Care



Wagner EH. *Effect Clin Pract*. 1998;1:2-4.

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Wagner Chronic Care Model: The Foundation of the Patient Journey

Patient Self-Management	Clinical Focus	Patient-Centric Approach	Tracking
• Emphasize patient role in managing illness – Personal goals – Tools to change behavior • 1-1 and group education • Cultural sensitivity and family involvement • Measurement and feedback • Improve patient communication with health care providers	• Education curriculum supported by evidence-based guidelines • Care team works to maximize cooperation and application of best clinical expertise	• Anticipate problems and provide quality-of-life service • Care team works together with patient – Office task chart – Accessible office hours/ same-day appts – Organized patient visits – Care team meets to review patient population work • Systems for communication and follow-up • Patient follow-up calls and information	• Patient census • EMR/paper record • Reminder system for patient and case team • Feedback loop • Care planning

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Mapping John’s Journey

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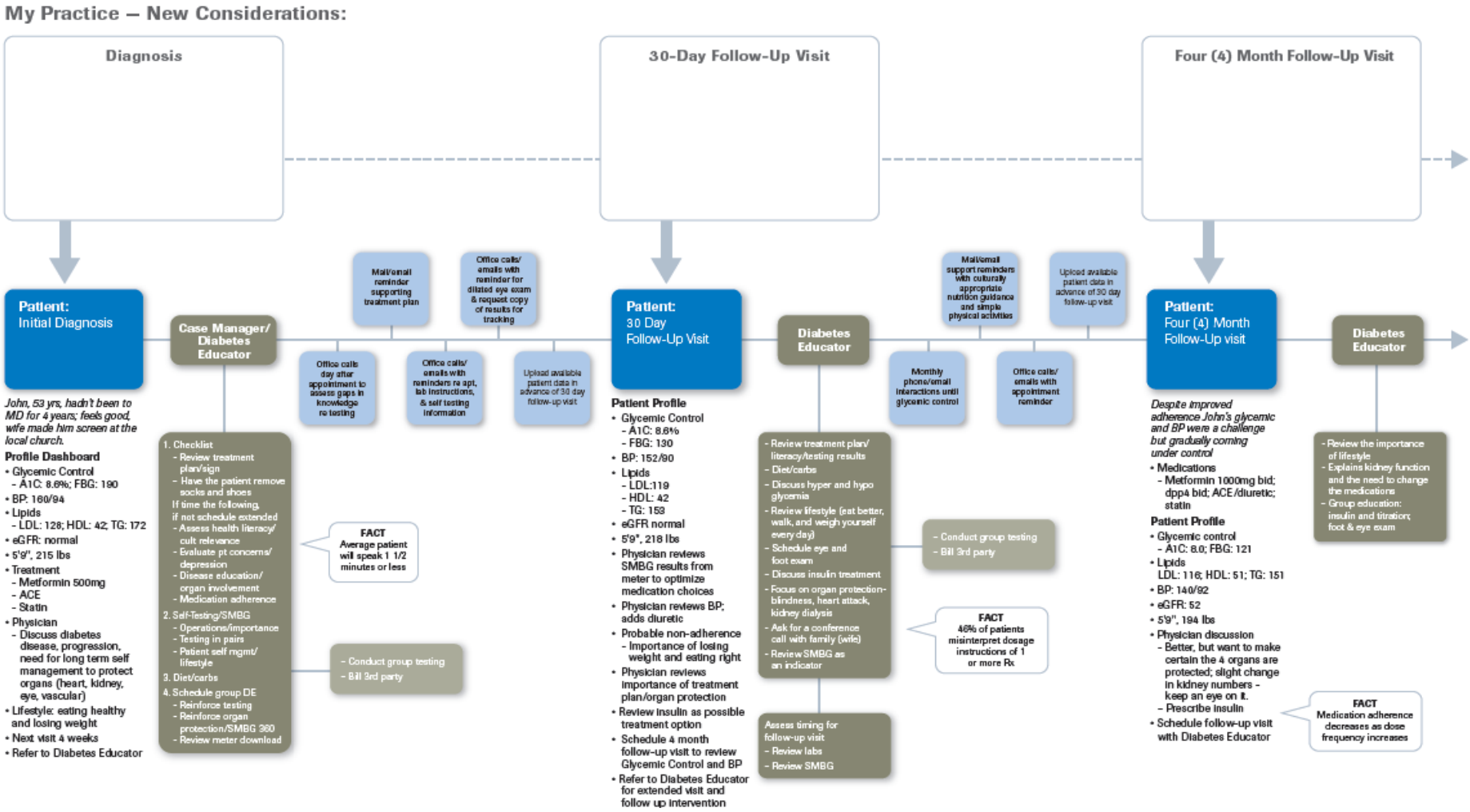
John's Journey



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Team-Based Care:
Every Member Plays a Part

Shared Responsibilities to Reach a Common Goal

	Checked Blood Glucose Log	Motivational Interview	Checked Medication Adherence	Updated EMR	Distributed Educational Tools	Lifestyle Education (diet/exercise)	Outreach to Patient After Appointment
MD		✓ date	✓ date				
Nurse/NP/PA	✓ date			✓ date	✓ date	✓ date	
Office staff	✓ date			✓ date		✓ date	✓ date
Pharmacy		✓ date	✓ date		✓ date		

Sample Task List

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Team-Based Care: Improving Patient Engagement

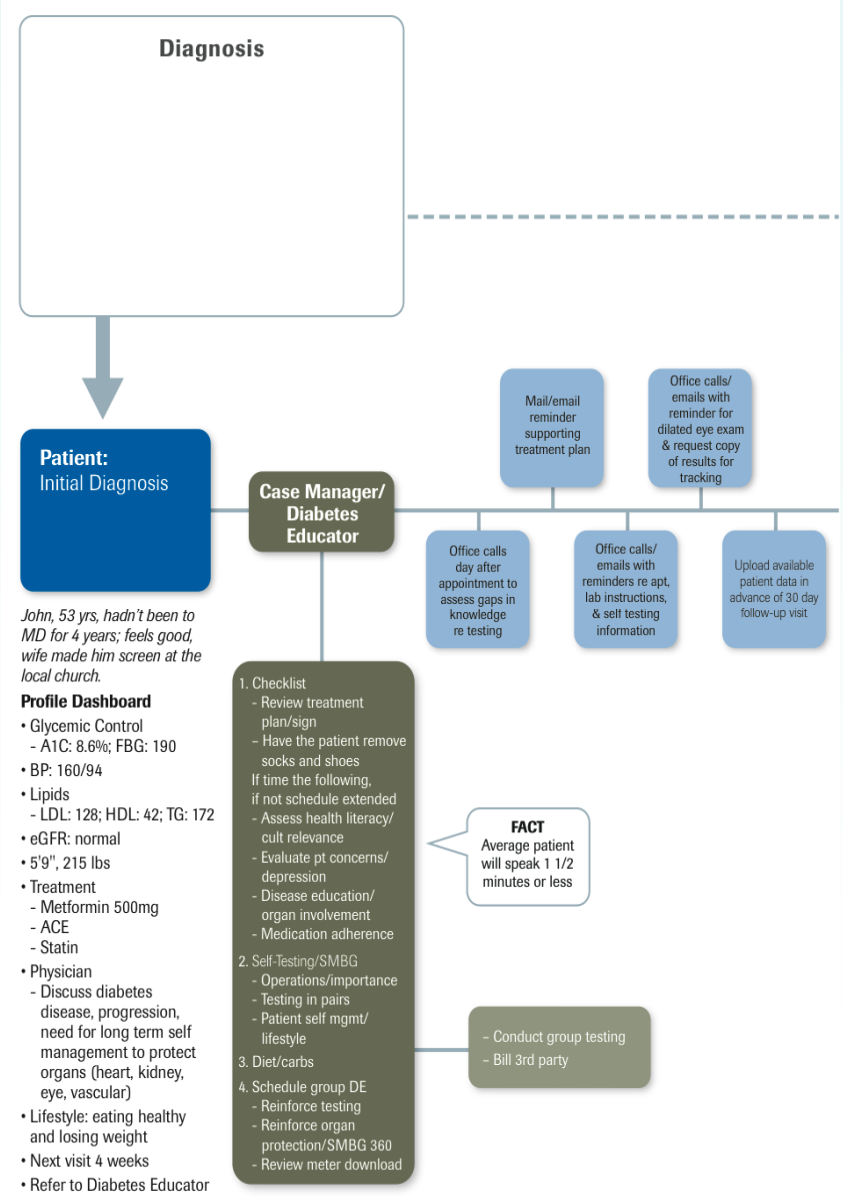
- Works within your own practice setting—whether you have
  a staff of 2 or 12
  - Can include MD, nurse, office staff, pharmacist
  - If you do not have a CDE/diabetes coordinator, consider periodic access to one
- Provides each team member with a task list that clearly outlines specific roles and responsibilities
- Utilizes face-to-face communication, e-mails, phone calls, and electronic health records to streamline and to educate

Patient Registry: Improving Information Flow

- Information systems should be able to generate chronic disease registries[1]
- A computerized disease registry enables care team to[2]
  - Call in patients with specific needs
  - Deliver planned care
  - Receive feedback
  - Implement reminder systems
  - Compare data
    - Number of patients with diabetes
    - Number receiving oral meds/insulin
    - Number non-adherent

1. Martin JC, et al. *Ann Fam Med*. 2004; 2(suppl1):S3-S32.
2. Wagner EH, et al. *Health Aff*. 2001;20:64-78.

John's Journey
DIAGNOSIS: Type 2 Diabetes Mellitus



John's Profile Dashboard: DIAGNOSIS

Evidence-Based Considerations

- John has T2DM, stage 2 hypertension, and dyslipidemia
- Physician considers non-pharmacologic/lifestyle and pharmacologic interventions

Treat Forward: Goals

- HbA1c: <7%
- BP: <130/80 mmHg
- LDL-C: <100 mg/dL (primary goal)

Initiation of Treatment

- T2DM: Metformin
- Hypertension management: ACE inhibitor and thiazide diuretic
- Dyslipidemia: statin
- Non-pharmacologic/lifestyle changes: nutrition, exercise, sodium restriction, other

Patient Dashboard

Test	Data
Age	67 years
Height	5'9"
Weight	215 lb
BMI	31.7 kg/m^2 (obese)
Average of 3 office BP measurements	160/94 mmHg
HbA1c FPG	8.6% 190 mg/dL
Kidney Function	eGFR: 68 mL/min
LDL-C HDL-C TG	128 mg/dL 42 mg/dL 172 mg/dL
Diagnosis	Type 2 diabetes; stage 2 hypertension; dyslipidemia
Treatment	• Metformin • ACE inhibitor and thiazide diuretic • Statin • Non-pharmacologic/lifestyle changes

Role of Clinician at Diagnosis

- Emotional Support
  - Reassurance that patient is not alone; disease is manageable
  - Review/introduce clinical support team
- Clinical Overview
  - What does diabetes mean?
  - Overview of the disease, treatment, lifestyle issues
- Patient Empowerment
  - Self-management
  - Patient education—knowledge is power
    - Group classes
    - Community resources
- Schedule Follow-Up Appointments
  - 24- and 48- hour calls
  - CDE/Case Manager follow-up (1-2 weeks after diagnosis)
  - 30-day follow-up with provider
  - Other health care professionals as required, i.e., podiatrist, ophthalmologist
- Conduct Preliminary Health Literacy Assessment

John's Journey: Follow-Up Visit with CDE; Two Weeks After Diagnosis

- John meets with Maria, a diabetes educator
- Maria works with two local group practices. She's in the office of John's physician twice weekly
- Maria assesses John's understanding of his condition and self-management
  - Is he overwhelmed or excessively worried? Is he sleeping well?
    - Is he physically active?
  - Does he understand his disease?
    - Is he paying attention to his symptoms and health problems?
  - Does he know how to use a meter? Is he using it properly?
    - Is he monitoring and recording his glucose levels?

PCMH CARE CONSIDERATION: EVIDENCE-BASED TESTING

An Introduction: Recommended Tests for Type 2 Diabetes

Glycosylated Hemoglobin (HbA1c)	Blood Pressure	Lipids	Kidney Function
• Evaluate at least twice a year in patients who are meeting treatment goals and have stable glycemic control • Evaluate quarterly in patients whose therapy has changed or who are not meeting goals • Use of point-of-care testing for HbA1c allows for timely treatment-related decisions and changes	• Measure during every routine visit • Patients with a blood pressure level of ≥130/80 mmHg should have measurement confirmed on another day—repeat reading of ≥130 mmHg or ≥80 mmHg confirms hypertension	• Obtain a fasting lipid profile at least annually • In adult patients with low-risk values, testing can be repeated every two years	• Evaluate the albumin:creatinine ratio • Evaluate the estimated glomerular filtration rate

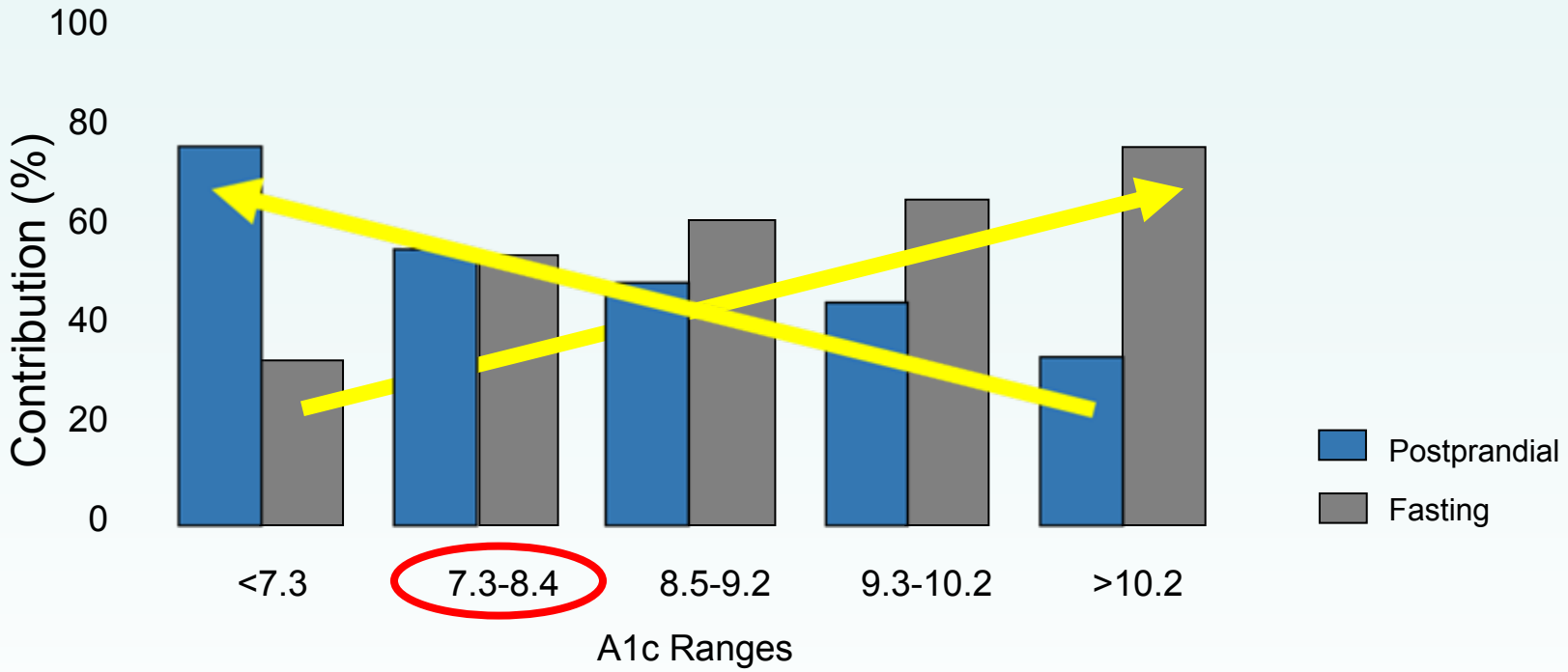
American Diabetes Association. *Diabetes Care.* 2010;33(suppl 1):S11-61.

Emerging Concepts

- Early initiation of treatment and persistent adjustment of therapy is vital
- There is a relationship between fasting glucose, postprandial glucose and A1c
- Reducing glycemic variability—especially, postprandial excursions—is an important goal of glucose control[1-3]

1. Guideline for management of postmeal glucose. International Diabetes Federation, 2007, www.idf.org
2. Ceriello A. The post-prandial state and cardiovascular disease: relevance to diabetes, Diabetes Metab Res Rev, 2005;16:125-132
3. Monnier L et al. Activation of oxidative stress by acute glucose fluctuations compared with sustained chronic hyperglycemia in patients with type 2 diabetes, JAMA, 2006;295:1281-7

Variable Relationship Between Fasting and Postprandial Glucose in A1c



So what does this mean?

- A1c >8.0% → probably means a problem with fasting bG
- A1c <8.0% → probably means a problem with postprandial bG

Adapted from Monnier et al. Diabetes Care 2003;26:881-885.

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What the A1c Doesn't Tell You

- Occurrence/severity of hypoglycemic events
- Glycemic variability throughout the day (and night)
- Effects of different meals and snacks
- Effects of physical activity
- Effects of medications

So, how do you know where to start or what to do?

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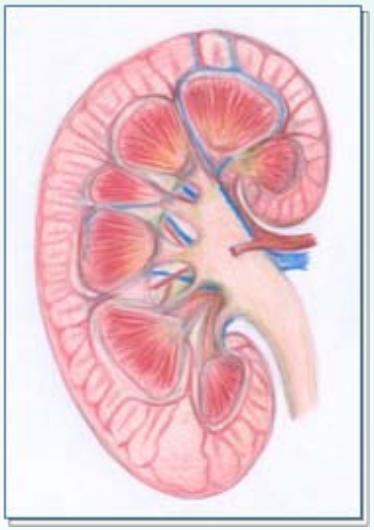
Targeted Management in Diabetes to Protect Target Organs

Diabetes is one of the most important risk factors for cardiovascular disease.[1]



In developed countries, diabetes is the leading cause of chronic kidney disease .[1]

The prognosis for patients with both cardiovascular disease and chronic kidney disease is far worse than that for patients with either condition alone. That combination is a powerful predictor of major adverse cardiovascular events and death.[1]

The estimated lifetime risk for foot ulcer in diabetic individuals is 15%.[2]

Approximately 4.1 million US adults 40 years or older have diabetic retinopathy, and one of every 12 people with diabetes in that age group has advanced vision-threatening retinopathy.[3]

1. National Kidney Foundation. *Am J Kidney Dis*. 2007;49(suppl 2):S1-S180. **2.** Reiber GE. In: Bowker JH, Pfeifer MA, eds. *Levin and O'Neal's The Diabetic Foot*. 6th ed. St Louis, MO: Mosby; 2001:13-32. **3.** Kempen JH, et al. *Arch Ophthalmol*. 2004;122(4):552-563.

Testing Should Be Proactive

- Test forward—treat forward—establish short-term and long-term goals
- Test at the right frequency, at the right times, and in the right situations to provide the information needed for better treatment decisions
- Excellence in care begins when the patient and clinician agree on:
  - The goal of glycemic control
  - Why monitoring blood glucose levels is necessary
  - When and how frequently blood glucose levels must be tested
  - Target blood glucose values (fasting, preprandial, postprandial)
  - How to record and share test results

Why Patients Don’t Self-Monitor

- Lack specific instructions on how and when to test
- Cost-prohibitive
- Discomfort, inconvenience
- Hyper/hypoglycemia is often asymptomatic—“No need to test”
- Not sure what to do with information
- Provider does not review and discuss glucose numbers with them

Why Clinicians Don’t Utilize SMBG* Data

- Data are not available—patient doesn’t bring meter or logbook
- Patient brings meter, but not logbook or graphs
- Patient checks infrequently
- Not enough time to analyze data
- Difficult to analyze data
- Limited discussion of findings between patient and clinician
- Uncertainty about moving from data to treatment choices
- Cost

*Self-monitoring blood glucose

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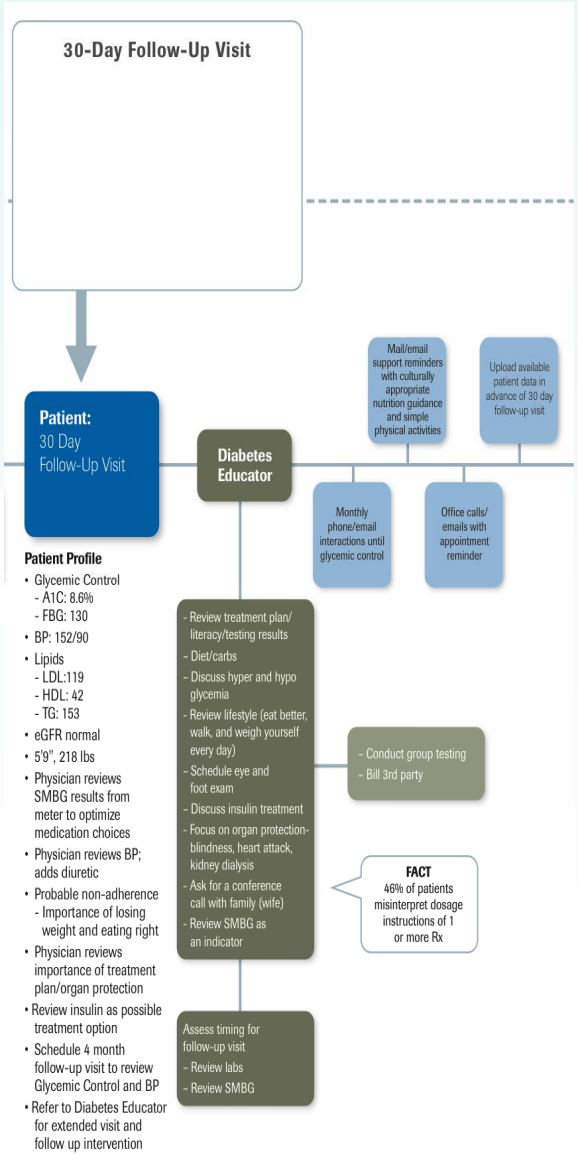
The Patient Journey:
John's 30-Day Follow-Up Visit



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Patient Profile Dashboard
John: 30-Day Follow-Up Visit

Evidence-Based Considerations

John's glycemic control, lipids, and blood pressure have all improved. His eGFR suggests renal insufficiency, which should be included in clinical decision-making.

Treat Forward: Goals

- HbA1c: <7%
- BP: <130/80 mmHg
- LDL-C: <100 mg/dL (primary goal)

Current Values

- Glycemic Control
  - HbA1c: 8.6%
  - FPG: 130 mg/dL
- BP: 152/90 mmHg
- Kidney function: 65 mL/min
- Lipids
  - LDL-C: 108 mg/dL
  - HDL-C: 50 mg/dL
  - TG: 148 mg/dL

Treatment

- Maintain drug therapy
- Adjust medication doses to protect renal function
- Review insulin therapy as possible treatment option

Patient Dashboard

Test	Data
Age	67 years
Height	5'9"
Weight	203 lbs
Average of 3 office BP measurements	152/90 mmHg
HbA1c FPG	8.6% 130 mg/dL
Kidney Function	eGFR: 65 mL/min
LDL-C HDL-C TG	108 mg/dL 50 mg/dL 148 mg/dL

Pre-Visit Preparation

Health Care Team

- Is EMR up to date, including SMBG data?
- Has clinician reviewed SMBG data?
- Has a reminder call been placed to John asking him to bring logs/diary, etc.?

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Physician Discussion Points

- Review available lab results
- Review SMBG data and reinforce importance and meaning of readings
- Review patient/provider contract and reinforce messages
- Schedule follow-up visits

PCMH Care Consideration: Health Literacy

Indicators of Limited Health Literacy

Behaviors that may suggest literacy problems

- Frequently missed appointments[1]
- Registration forms that are incomplete or inaccurately completed[1,2]
- Non-adherence with medication regimens[1]
- Patients say they are taking their medications, but lab tests or physiologic parameters do not change as expected[1]
- Reluctance to take written materials—reliance on oral explanations and demonstrations[2]
- Intermediaries serve as surrogate readers[2]

1. Weiss BD. *Health Literacy and Patient Safety: Help Patients Understand: Manual for Clinicians*. 2nd ed. American Medical Association Foundation and American Medical Association, 2007.
2. Baker DW, et al. *Arch Fam Med.* 1996;5:329-334.

Indicators of Limited Health Literacy

(cont'd)

Responses to receiving written instructions:

- "I forgot my glasses"
- "I'll read this when I get home"
- "Can you read this to me?"
- "Let me bring this home so I can discuss it with my children"

Responses to questions about medication regimens:

- Unable to name medications and explain what they're used for

Weiss BD. *Health Literacy and Patient Safety: Help Patients Understand: Manual for Clinicians*. 2nd ed. American Medical Association Foundation and American Medical Association. 2007.

Assessing Health Literacy

- Patients don't always fully understand information they receive
  - Among 395 primary care clinic patients in three cities—Shreveport, LA; Jackson, MI; Chicago, IL—46% of patients misinterpreted dosage instructions for one or more medications[1]
- In a study in the clinical care setting, the average patient spoke for ≤1½ minutes during an appointment[2]

1. Wolf MS et al. *Patient Educ Couns*. 2007;67(3):293-300.
2. Weiss BD, et al. Health Literacy and Patient Safety: Help Patients Understand: Manual for Clinicians. American Medical Association Foundation and American Medical Association. 2007.

Increase Health Literacy Via Proactive Care Management

- Ask patients (via a paper questionnaire) how many years of school they have completed[1]
- Take your time during appointments and speak slowly[2]
- Avoid complicated language[2]
- Use visual aids such as pictures or videos[2]
- Simplify explanations and instructions—and repeat them[2]
- Ensure medication dosing instructions are clear
  - Poor example for dosage instructions: Take 2 tablets by mouth daily
    - Possible interpretations: Take 2 tablets once-daily OR take 1 tablet twice-daily
- Use a "teach back" or "show me" approach to confirm understanding[2]
  - Have patient explain information back to you to ensure he or she understands
- Help the patient feel comfortable—in executing these approaches, avoid making the patient feel embarrassed or ashamed[2]

1. Baker DW et al. *Arch Fam Med.* 1996;5:329-334.
2. Weiss BD, et al. *Health Literacy and Patient Safety: Help Patients Understand: Manual for Clinicians*. 2nd ed. American Medical Association Foundation and American Medical Association; 2007.

Health Numeracy is Different from Health Literacy

- Numeracy-related tasks are common in health care, particularly in patients with diabetes who must interpret blood glucose readings
- Patients may have adequate reading ability but poor numeracy skills
- Diabetes Numeracy Tests have shown that patients with diabetes had problems with:
  - Calculating carbohydrate intake
  - Understanding glucose meter readings
  - Interpreting sliding scale measures
  - Titrating oral medications or insulin
- Higher scores on the Diabetes Numeracy Test were associated with greater diabetes knowledge and higher perceived self-efficacy

Rothman RL, et al. *J Health Commun*. 2008;13:583-595.

Consistently Reinforce and Ensure that Patients Understand…

- Their disease
  - The role they play in self-management
  - The availability of simple tools to help them
- The test results
  - Labs
  - SMBG data
- What it all means
- That there is a team to support them

PCMH CARE CONSIDERATION: DIABETIC RENAL DISEASE

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Renal Disease and Diabetes

- Nearly 40% of patients with type 2 diabetes have chronic kidney disease (CKD)[1,2]
- About 20% have moderate-to-severe CKD or end stage renal disease (ESRD)[1]
- People with diabetes and CKD are at high risk to lose kidney function and experience adverse cardiovascular events[3]

1. Koro CE, et al. *Clin Ther.* 2009;31:2608-2617.
2. National Kidney Foundation. *Am J Kidney Dis*. 2002;39(suppl 1):S1-S266.
3. National Kidney Foundation. *Am J Kidney Dis*. 2007;49(suppl 2):S1-S180.

Diabetes, Hypertension, and Renal Disease

- Inadequately controlled diabetes and hypertension increase the risk of progression of CKD to ESRD[1]
- During the past three decades, both the incidence and prevalence of ESRD have increased progressively[2]

1. National Chronic Kidney Disease Fact Sheet 2010. http://www.cdc.gov/diabetes/pubs/factsheets/kidney.htm. Accessed October 28, 2010.
2. Schoolwerth AC, et al. *Prev Chronic Dis*. 2006 Apr; 3(2):A57.

Monitoring Renal Function

- Serum creatinine should not be the only means used to estimate GFR
- Current KDOQI guidelines state that clinicians should estimate the GFR level from prediction equations that take into account the serum creatinine concentration and some or all of the following variables: age, sex, race, and body size

National Kidney Foundation. *Am J Kidney Dis.* 2002;39(suppl 1):S1-S266.

Multifaceted Approach Can Prevent/Delay/Reverse Progression of Renal Disease: The Steno Diabetes Trial

Treatment goals

- Systolic blood pressure <130 mmHg
- Diastolic blood pressure <80 mmHg
- HbA1c <6.5%
- Total cholesterol <175 mg/dL
- Triglycerides <150 mg/dL
- ACE inhibitor or ARB regardless of blood pressure
- Aspirin
- Smoking cessation
- Vitamin/mineral supplement

1. National Kidney Foundation. *Am J Kidney Dis*. 2007;49(suppl 2):S1-S180.
2. Narayan KMV. *N Engl J Med*. 2003;348:383-393.

HMG Medical Home Platform to Reliably Produce Optimal Medical Therapy

CABG and stents do not prevent heart attack or death in stable patients—COURAGE

Optimal Medical Dramatically Lowers Risk—Steno2

Risk Factor Control	Usual Care vs Aggressive Care	Events
BP: 130/80	4x	MI
HbA1c: 7.0	5x	Stroke
LDL: 70	11x	Stent
TG: 150	6x	Dialysis
	3x	Amputation

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Quarterly Risk Factor Reporting by Provider

# DM Pts	I	% Pts Meeting A1c\LDL\and BP Goals	Avg A1c	LDL	HDL	CHOL	TRIG	SYS BP	DIA BP	WGT	I
318	60	18.9%	7.1	93	41	171	195	129	75	219	34.7
174	37	21.3%	7.1	96	44	175	182	128	75	221	34.8
279	67	24.0%	7.0	92	41	166	177	127	74	224	34.6
210	70	33.3%	6.8	88	41	164	190	125	72	212	33.0
166	60	36.1%	6.9	84	42	161	171	123	74	207	32.6
313	139	44.4%	6.7	86	41	159	162	124	71	205	32.1
226	47	20.8%	7.0	97	42	177	207	125	76	208	33.0
346	117	33.8%	6.8	93	42	168	171	125	74	209	31.9
264	56	21.2%	6.9	94	41	171	185	130	76	216	32.9
285	88	30.9%	7.1	86	41	164	192	126	74	216	33.1
102	22	21.6%	7.0	87	41	162	191	126	79	213	32.6
269	59	21.9%	7.2	92	40	171	202	128	78	215	33.1
187	69	36.9%	6.9	78	42	152	164	124	72	209	32.2
254	71	28.0%	7.1	89	40	168	208	127	69	215	33.0
163	33	20.2%	6.9	98	43	178	189	130	77	199	32.8
192	63	32.8%	6.8	90	43	168	174	123	73	209	33.7
354	70	19.8%	7.1	99	42	178	193	128	77	209	32.1
380	91	23.9%	7.1	97	41	177	202	127	76	214	33.0
175	49	28.0%	7.1	85	41	161	182	129	75	209	32.0
232	74	31.9%	6.8	90	41	166	176	126	71	213	33.3
187	48	25.7%	6.9	83	41	162	195	130	75	214	32.9
169	23	13.6%	7.3	107	42	186	196	132	75	211	32.6
169	56	33.1%	6.8	86	44	167	182	127	74	206	32.9
199	43	21.6%	6.9	101	44	183	203	124	77	208	33.6
321	50	15.6%	7.1	93	40	170	198	130	77	213	33.0
Patient Total	**6806**	**1756**	**25.8%**								

Continuous Improvement
HMG Diabetic Management

	May '01	Oct '10	WHB	NHANES '06
AIC	7.1	7.0	6.9	7.15
SBP	129	127	123	130.7
DBP	75	75	74	68.1
Total C	178	170	164	196.2
TG	195	188	171	203.2
HDL	42	41	42	50.6
LDL	96.7	92	84	108.2

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Patient-Centered Performance Matters

- WHB primary physician for 160 type 2 diabetics
- 66 of these had eGFR of <60 at entry
- Managed very consistently with steno-type protocol
- Follow-up available on 63 patients

eGFR change on all patients (mL/min)

+7.8	on average
+6	>3-yr. follow-up
-0.5	expected decline/mo

Gall, et al. *Diabetologia*. 1993;36:1071-1078.

Despite Quality Focus and Infrastructure Very Substantial Performance Variation

	Best	Worst
AIC	6.7	7.3
SBP	124	132
DBP	71	75
Total C	159	186
TG	162	196
HDL	41	42
LDL	86	107
Wt	205	211
All %	44.4%	13.6%

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Diabetes Trials Gluco-Centric

WHB results produced with minimal hypoglycemia, minimal postural hypotension, while facilitating weight loss

- 189 type 2 diabetic patients in clinic for 12 mo or longer
  - 5.22-lb weight reduction
  - 63% lost 13.4 lbs
  - 37% gained 8.9 lbs
- 94 type 2 diabetic patients in clinic for 24 mo or longer
  - 5.57-lb weight reduction
  - 59% lost 15.7 lbs
  - 41% gained 8.7 lbs

High-Risk Cardiometabolic Protocol
Lifestyle Potentiates Medical Management

- Diet Is Most Critical
  - Aggressive reduction of sugar content of food and drink
  - Dramatic reduction of processed carbohydrate
    (need >5 g fiber per serving in carbs that are consumed)
  - Fat limited to 20%-25% of total calories
  - Reduce the glycemic index of foods consumed to less than table sugar
- Exercise
  - The equivalent of 30 min walking five days a week. Some is far better than nothing. Diet is primary. Patients with severe physical limitations can still improve risk with proper dietary instruction.
- Adherence
  - No one does this perfectly—aim for 19-20 meals per week. Enjoy the holidays. Poor choices during the entire season will undo progress.

High-Value Medical Protocol for High-Risk Cardiometabolic Patients

Goals:

BP	LDL	Triglycerides	Glucose
<130/80	<70	<150	FBS 80-110 A1C <7

Drug selection in order. If risk not at goal change therapy at current visit

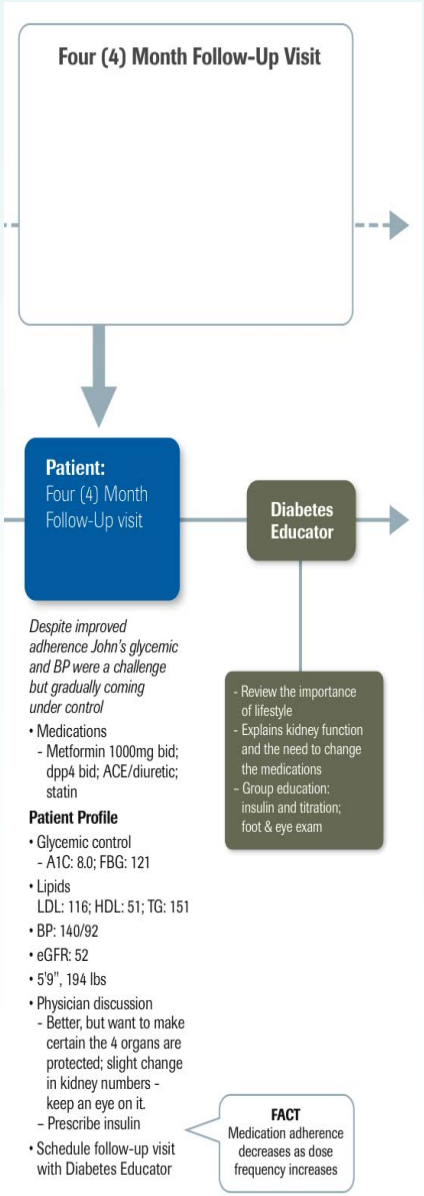
(ACE/ARB)	Statin	Biguanide
Lisinopril	Pravastatin	Metformin

(CCB)	Incretin
Amlodipine Thiazide Chlorthalidone, HCTZ	Exenatide, etc.

Aldosterone blocker	Basal Insulin
Spironolactone, eplerenone (men)	Bolus pramlintide

GROUP PRACTICE FORUM

John's Journey:
120-Day Follow-Up Visit



Patient Profile Dashboard
John: 120-Day Follow-Up Visit

Evidence-Based Considerations

John's glycemic control, lipids, and blood pressure have all improved. Treatment has been adjusted according to renal insufficiency.

Treat Forward: Goals

- HbA1c: <7%
- BP: <130/80 mmHg
- LDL-C: <100 mg/dL (primary goal)

Current Values

- Glycemic Control
  - HbA1c: 8.0%
  - FPG: 118 mg/dL
- BP: 140/92 mmHg
- Kidney function: 52 mL/min
- Lipids
  - LDL-C: 116 mg/dL
  - HDL-C: 51 mg/dL
  - TG: 151 mg/dL

Treatment

- Maintain drug therapy
- Keep patient engaged in diabetes care plan
- Prescribe insulin

Patient Dashboard

Test	Data
Age	67 years
Height	5'9"
Weight	194 lbs
Average of 3 office BP measurements	140/92 mmHg
HbA1c FPG	8.0% 118 mg/dL
Kidney Function	eGFR: 52 mL/min
LDL-C HDL-C TG	116 mg/dL 51 mg/dL 151 mg/dL

Summary

- Diabetes is reaching epidemic proportions and the majority of patients are treated in the primary care setting
- Practices are now incorporating the principles of PCMH into the management of patients with chronic disease
- The Patient Journey program is designed to address the pillars of the chronic care and PCMH models—self-management, clinical focus, patient-centric approach, tracking
- Pattern analysis of blood glucose levels can improve diabetes outcomes
- Practices need to adopt a proactive approach for improving patient health literacy
- Renal disease needs to be appropriately monitored and managed in patients with diabetes in order to prevent/delay progression