



Improving Quality in Type 2 Diabetes:

Reengineering Practices From the Inside

The Endocrine Society / The Hormone Foundation
American Pharmacists Association
Opus Science, LLC

Presenters / Disclosures

- Rob Bartel
 - No relevant disclosures
- Kristen Binaso
 - Owns stock in Pfizer and Janssen
- Pete Sheldon
 - No relevant disclosures

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Program Collaborators

- The Endocrine Society / The Hormone Foundation
 - 15,000+ members;
 - Significant educational experience in diabetes
 - Expert faculty and other critical resources
 - Hormone Foundation 1,000,000 unique visitors to their site and 75 bilingual patient fact sheets
- American Pharmacists Association
 - 62,000+ members
 - Largest pharmacist association in the U.S.
 - Leaders in pharmacist and diabetes patient education
 - The Asheville Project
 - Diabetes Ten City Challenge



Program Collaborators – cont.

- Opus Science
 - Educational experience including extensive work in diabetes for primary care
 - Broad experience with in-practice research and assessments
 - Diabetes; Oncology; Gastroenterology; HIV/Aids; Dermatology; Orthopedic Surgery; Internal Medicine
 - Full project management capabilities



Background

- Type 2 Diabetes
 - *The* emerging health crisis in America
- Government, health systems, payers, associations, and patient groups expending enormous time and resources
 - Aligning incentives (P4P, ACOs)
 - Reengineering primary care (patient-centered medical home)
 - Developing new technologies (EHR, mobile phone apps, etc.)
 - Capitated agreements
- Most provider-based educational programs focus on guideline dissemination/adherence and new therapy information

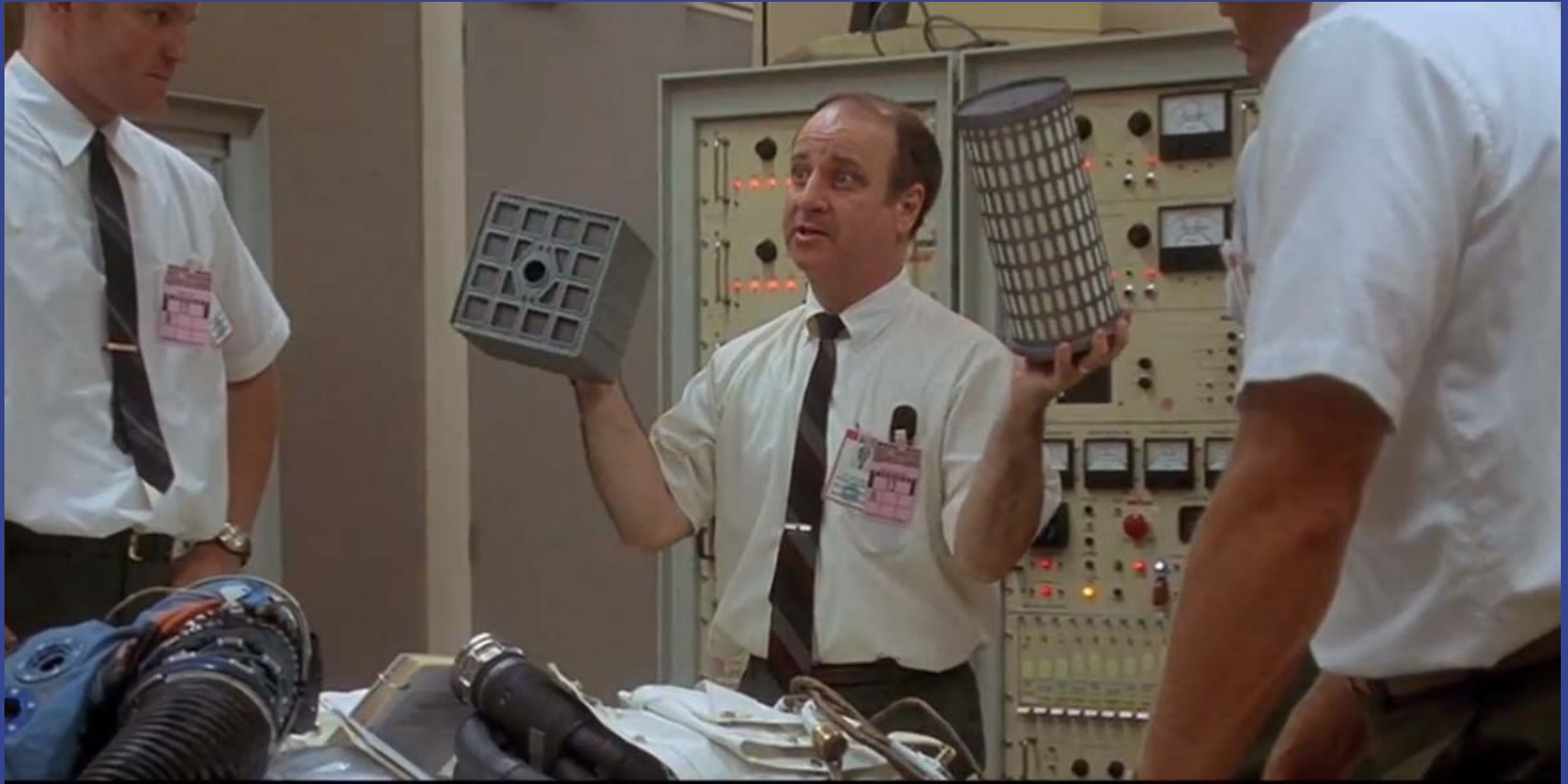


Is This The *Only* Way to Solve Diabetes Care Issues?

- Trying to implement change from the outside with new ideas, technologies, incentives
 - Can we work backward and take a fresh look at ways to tackle suboptimal diabetes care?

**What if we focused on change
from the inside?**

The Task



The Task – cont.

- Provide primary care practices with practical, easy-to-implement strategies to improve diabetes care
 - Using assets currently at their disposal
 - Doing so without significant practice burden
 - Involving users in the improvement process
 - Individualizing tactics to unique practice environments
 - Making recommendations that are readily transferable to other practices and disease states

Can we minimize system financial burden to implement?

What Do We Have to Work With?

- We are researching PCP and Endocrinology practices to:
 - Accurately categorize barriers to improving type 2 management
 - Knowledge-based
 - Systems/practice-based
 - Patient-based
 - Assess practice resources and identify those that are underutilized in practice
 - Can be mobilized without adding resource/time burden
 - Assess outside resources and patient “touch points”
 - Other HCPs
 - Pharmacy/Pharmacists

What Is Our Mission?

- Design an intervention based on 3 critical principles
- Can we create solutions that are:
 - Collaborative
 - Make use of existing assets and expertise in cross-professional cooperation
 - Flexible
 - Easily adapted to unique practice environments
 - Practical
 - Designing pragmatic tactics that fit into actual practice routines



Collaborative

- Multiple care access points and providers
 - Primary Care Practices
 - Physicians
 - Nurses
 - CDEs
 - Nutritionists
 - Non-clinical staff
 - Specialists
 - Endocrinologists
 - Ophthalmologists
 - Podiatrists
 - Cardiologists
 - Patients
 - Family
 - Caregivers
 - Pharmacists
 - Pharmacy staff



Collaborative – cont.

- For each provider type, what roles and responsibilities are collaborative, overlapping, complementary?
 - What is the “relative bandwidth” of each group to contribute to care?
 - What are the mental models of how these providers see their role *and the roles of others*?

Flexible

- One-size fits all *fits nobody*
- Use in-practice research to put quality improvement into each practice's unique context
- Gain multiple perspectives inside/outside each practice including MDs, RNs, CDEs, Pharmacists



Practical

- What would fit into actual practice flow and complement the way that PCPs currently operate?
- Focus on 4 underutilized resources in T2DM management
 - Practice data / metrics
 - Specialists
 - Patient
 - Pharmacists



#1 - Practice Data / Metrics



Practice Data / Metrics

- Physicians should regularly review chart data of their diabetes patients (in aggregate) to discover practice trends and gaps
 - Comparison to guidelines and peer performance
 - Sample size should be large enough to draw conclusions, yet small enough to be practicable

Example – Diabetes PI Program

- The Endocrine Society and Med-IQ, LLC launched an AMA Performance Improvement program in 2008 (now continuing into its 4th year)
- Physicians abstract chart data from 20 diabetes patients pre and post to help uncover current performance and practice trends (pre) and measure success in changing practice behavior resulting from the intervention (post)
- Data show that physicians who review data as part of the improvement process *show better results in making improvements*

Diabetes PI Program – cont.

- Evaluation Method: Chart review of patient data pre- and post-activity completion from PI completers as well as participants who ONLY participated in the CME-activity developed to enhance the PI experience (ie, clinician performed no PI-related chart reviews)
- The chart data were linked from pre to post so that we are looking at SAME PATIENT data

Diabetes PI Program – cont.

- Statistically significant improvement*:
- HbA1C
 - Greater than double the percentage improvement in mean HbA1C values *versus the change recorded by those who participated only in “traditional” education*
- LDL
 - 1.5 times the percentage improvement of patients at goal versus traditional education
- Blood Pressure
 - 17% increase of patients at goal of BP <130/80 vs. 7% of patients at goal after participation in traditional education

#2 – Specialist Referral And Utilization



Specialist Utilization

- Practice and patient demographics in diabetes care
- Resource allocation is critical
 - The evolving role of primary care vs. endocrinologist
 - Clinical triggers for referral
 - Newly diagnosed patients?
 - Insulin starts?
 - Complex cases?
 - What about CDEs? Nutritionists?
- *Appropriate* engagement and referrals to other specialties such as ophthalmology, cardiology and podiatry
 - Communication and care coordination with these are critical

Example – Diabetes Working Group

- Creating strong provider teams and networks provide:
 - Short-term benefits including reduced hospital inpatient stays, hospital readmissions, and related costs
 - Long-term benefits including lower A1C values and reductions in eye disease, kidney disease, and nerve damage

#3 – Patients



The Patient as Partner

- The vast majority of diabetes therapy interventions (medication and lifestyle) are controlled by the patient
 - Patients with diabetes are much more likely to have adherence issues with their treatment than patients with other chronic diseases
- Static education alone is not sufficient to facilitate better adherence
- There has to be an increased emphasis on patient responsibility and empowerment
 - Motivational interviewing
 - Patient education

Example – APhA's DOT.MED Program

- 10 Community Pharmacy Residency sites were selected through a call for applications
- Focus of project was on communication and the role it could play on affecting adherence and patient health. Tested PQA measures on adherence
- Mix of practice settings including community chain, supermarket, and independent pharmacy
- Enrolled 216 patients for a period of 6 months
- Through initial patient intake, asked patients to identify “Top 3” issues with their diabetes medications

Structured Communication Interventions (SCIs)

- APhA trained pharmacists in using motivational interviewing and other techniques to improve communication with patients
 - Remembering to Take Your Medicine
 - Keeping Track of Medicine Doses
 - Refilling Prescription Medicines on Time
 - The Benefits of Diabetes Medicines
 - How Diabetes Medicines Work
 - Managing Medicine Side Effects
 - Paying for Medicines
 - Diabetes and Depression
 - Immunizations

Results

- Patient Satisfaction:
 - 96% of patients reported that they were satisfied or very satisfied with the program
 - 97% stated that they *would recommend* the program to family and friends
 - 89% responded favorably regarding having a *better understanding of medication use*
- Physician survey results:
 - More than 54% reported being satisfied or very satisfied with pharmacist recommendations for changes to medication therapy to improve patient adherence
 - More than half (58%) of healthcare providers responded that they were satisfied or very satisfied with the availability of pharmacists to discuss questions or concerns regarding patients

#4 – Pharmacists

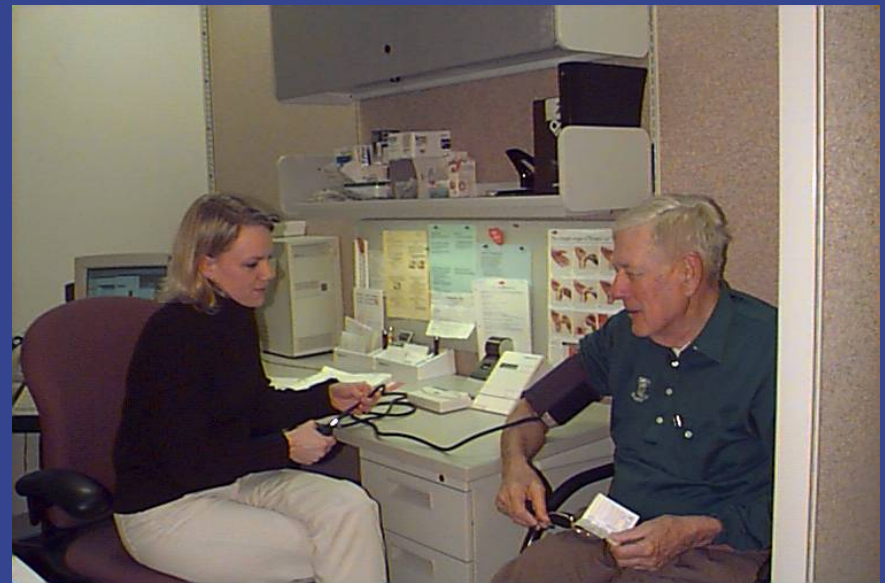


#4 - Pharmacists

- Access is critical
 - Diabetes patients visit their pharmacists far more often than their healthcare providers
- Pharmacists are the “medication experts” and through medication management offer major opportunities for:
 - Identifying patient adherence issues
 - Screening for medication side-effects/dosing issues
 - Polypharmacy concerns
 - Early recognition of disease complications
 - A reliable framework for communication is necessary
 - Opportunity for bi-directional care coordination

Example - The Diabetes 10 City Challenge

- 914 patients in 10 cities
- Collaborative model with employers, physicians, pharmacists, and patients
- Pharmacists coached patients on how to manage their diabetes
 - Once a month visits for first 3 months, then at least quarterly
 - Proper use of medications
 - Set goals and track with indicators such as cholesterol tests, blood glucose, etc.



Results

- Program outcomes
 - Decrease in A1C (5.2%), LDL (32%), SBP (15.7%), DBP (9.2%)
 - Increase in nutrition, exercise, and weight loss goals
 - Employer savings of ~\$918 per employee in total healthcare costs
 - Return on investment (ROI) of at least 4:1 beginning in the second year
 - 50% reduction in absenteeism and fewer workers' compensation claims
 - 97.5% of patients reported being satisfied or very satisfied with their diabetes care

Project Summary

How Are We Doing It?

- Identify representative practices from diverse geographic areas through a national survey on practice characteristics and diabetes care barriers
- Conduct in-practice assessments at 8+ locations including physician and staff interviews as well as practice protocol reviews to uncover specific gaps and barriers
- Conduct interviews with geographically aligned pharmacies to gauge the quantity and quality of practice/pharmacy cooperation
- Analyze individual and aggregate data



How Are We Doing It? – cont.

- Deliver individualized practice assessments and reports back to each study site through live, facilitated sessions with physicians and staff
 - Provide pharmacies/pharmacists with effective tips/tools for improved care coordination with physicians and patient education
- Measure, quantify and share results:
 - Submit a manuscript for publication in a peer-reviewed journal based on the aggregate assessments and outcomes results that will provide a lens into actual practice behavior
 - Validate proof of concept for a scaled roll-out of similar interventions in multiple locations across the U.S.

Measuring Results

- Participant pre/post surveys
- Perspectives from multiple vantage points
 - Physician, nurse, CDE and pharmacist
 - Confidence, knowledge, and competence in treating diabetes patients
 - Attitudes regarding diabetes care roles and responsibilities
 - Self-reported changes in practice behaviors

Measuring Results – cont.

- Abstracted chart data on 10 patients pre and 6 months post
 - 80 patients charts total, 160 data points
- Abstracted chart data to include:
 - Patient demographics – age, weight, gender, disease duration, and baseline BMI, BP, lipids, HbA1C, kidney status
 - Frequency of HbA1C testing and levels documented
 - Blood pressure checked and levels documented
 - Lipid levels checked and documented
 - SMBG counseled and documented
 - Foot exams (or referrals) documented
 - Ocular exams (or referrals) documented



Measuring Results – cont.

- Creatinine assessments checked and documented
- Statin therapy prescribed
- ACE/ARB therapy prescribed
- Smoking cessation counseling documented
- Nutritional/exercise counseling documented
- Patient education materials provided and documented
- Current prescribed antihyperglycemic therapies?
- Medication adherence assessed?
- HbA1C- if $>7.0\%$ what actions were taken?

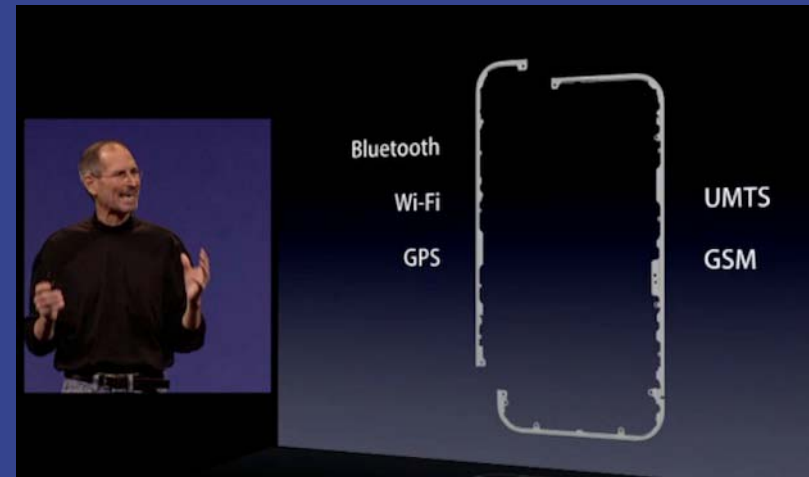
Recap

- Large-scale, system-wide improvement strategies are necessary and ongoing, but let's not abandon *what we can do now with the system we have*
- Create solutions that are based on actual practice environments and processes
- Use assets that are already in place
- Focus on current mental models of how providers see their role and the roles of others
- Measure results and continually modify as needed

Working With What You Have



Small Changes Make Big Differences



Questions?

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