The Multidisciplinary Team: The key to successful planned diabetes care and quality improvement in our practice

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Objectives

• Review the development and evolution of a successful diabetes program
• Review our multidisciplinary team structure
• Discuss our planned, proactive care approach
• Discuss how we have used the model for improvement and PDSA cycles to transform our practice
• Along the way we will review successes, failures, and omissions
Water Cooler Discussions

- Change is scary
- Change is hard
- Change is complicated
- Change is necessary
- Change is an opportunity to improve
- Change requires leadership
- Successful change requires a well designed, active team
In the beginning:
Our practice in 1999

- 75 resident and faculty physicians
  - No non-physician practitioners
- Individual care often good, but uncoordinated
- Limited access to providers by patients
- Limited diabetes education and self-management support
- Patient barriers often not addressed because of limited time, skills, resources
Our initial diabetes program, 1999

- Two Pharm.D.s hired to improve care for indigent, ‘UNC Benefit’ patients
- Fledgling patient registry
- Requested permission to consult or intervene
  - Targeted ‘innovator’, ‘early adopter’ and resident physicians
- No standardization or algorithmic care
- Significant effort focused on patient education
We assessed root causes and actions

<table>
<thead>
<tr>
<th>Root Causes</th>
<th>Actions</th>
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<tr>
<td>Continuity of care is poor because providers have limited clinical time</td>
<td>Make clinical pharmacists available to patients daily</td>
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<td>Patients often miss follow-up appointments</td>
<td>Call patients to remind them of appointments</td>
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<tr>
<td>Transportation barriers can hinder care</td>
<td>Increase phone management; 1-800 number; transportation program</td>
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<td>Physicians lack time and skill to provide proper diabetes education</td>
<td>Pharmacists provide individualized education</td>
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<td>Patients have low education and literacy</td>
<td>Design interventions that do not rely on literacy</td>
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<td>Physicians contribute to clinical inertia by failing to escalate therapy</td>
<td>Need agreement on evidence-based treatment algorithms; Pharmacists use algorithms to escalate therapy with physician sign-off</td>
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<tr>
<td>Tracking of patient outcomes is poor</td>
<td>Design registry to allow better tracking of patients</td>
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Know your patients and where they come from
UNC Internal Medicine Clinic: Patients 2001-2002

Patients from North Carolina ZIP Codes
(93 Out of State Patients)
- 500 to 1,800 (5)
- 100 to 500 (12)
- 25 to 100 (42)
- 10 to 25 (65)
- 0 to 10 (260)

Produced by: Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.
A growing diabetes program, 2002

- Completed pilot study
- Two Pharm.D.s
- Improved patient registry
  - Reporting & collecting data *(Not run charts)*
- Referral-based intervention only
- Minimal standardization or algorithmic care
- Patient education
- Expanding care coordination
What did we learn from the first 3 years?

- ‘Every system is perfectly designed to get the results it gets’
- If we don't like the results we have to change the system- basically and radically
- Providers responded to data and information at the point of care
  - Addressed unanswered questions
- We must build consensus and standardize
- We must diversify
- We need to move more quickly
An expanded diabetes program, 2004

- Randomized controlled trial completed
- Robust patient registry
- ‘Failing’ practice patients eligible & recruited
- Expanded care team
  - RD and NP added
  - Care Assistant created
- Patient education
- Care coordination
- Standardization and monitoring algorithms
- Began quality reporting
An epiphany: The run chart, reporting AVG A1c for our clinic

2004

Average A1c

Month

A1c (%)
Diabetes planned care, since 2006

- Patient registry
- Robust decision support
- Prompting and stratification of patients by risk
  - Stepped care approach
- **All** patients eligible and recruited for care
- Patient-centered education
- Care coordination
- Expanded standardization and algorithmic care
- Extensive quality reporting
- Adoption of the Model for Improvement (MFI)
What we learned from 2003 to 2006

• A successful program includes:
  – A multidisciplinary team
  – A registry with decision support for proactive care
  – Consensus backed by evidence-based algorithms and standards

• Persistence and leadership are key

• Appropriately designed interventions or systems can overcome patient vulnerability

• We continually evolve, change is necessary and represents opportunity
  – Embrace rapid cycle change and the MFI
What would I have done differently if I had the chance?

• Earlier adoption of MFI and run chart
• Earlier incorporation of a variety of practitioners and staff
• Development of broad, comprehensive teams that were inclusive of all staff
  – Including encouragement of QI training
• ‘Democratization of decision-making’
• Blur the lines between QI, clinical care, and administration
Everything tipped in late 2007: How did we hit ‘The Tipping Point’?

• “The level at which the momentum for change becomes unstoppable.”

• "Ideas and products and messages and behaviors spread like viruses do."

– *The Tipping Point: How Little Things Can Make a Big Difference. Malcolm Gladwell*

Consensus driven growth that focused on the teamwork, contribution from all, and leadership development in QI

Acceptance from the late majority and laggards
Our current program
### Description of Current Population

- Our team currently co-manages over 1800 patients

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<thead>
<tr>
<th>Characteristics</th>
<th>Mean or %</th>
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<tbody>
<tr>
<td>Age (range)</td>
<td>57 yrs (23-87)</td>
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<tr>
<td>Female</td>
<td>60%</td>
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<tr>
<td>African American</td>
<td>69%</td>
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<tr>
<td>Less than HS Educ</td>
<td>58%</td>
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<tr>
<td>Medicaid or Pharm. Assist.</td>
<td>&gt;50%</td>
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<tr>
<td>Duration of Disease (range)</td>
<td>10.4 yrs (0-42)</td>
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Current GIM Diabetes Program

• Consists of 3 practitioners
  – PharmD, NP, RD
• Includes 4 care assistants
• Intervention performed in clinic and by telephone
Role of The Diabetes Practitioner

- All Certified Diabetes Educators (CDE)
- Patient education
- Facilitate proactive care based on algorithms
- Address and co-manage glucose, lipids, hypertension, and depression with primary care provider
  - Follow-up other issues identified by PCP
- Do not serve as primary care providers
Role of The Care Assistants

• Consists of 4 care assistants
• Care assistants see patients during provider visits
  – Patient education
  – Utilize the tools created by the database
  – Assist the physician
  – Facilitate proactive care, encourage intervention
  – Address barriers, adherence, glucose monitoring, provide smoking cessation counseling, screen for depression
Average A1c in our clinic now

Average A1c

Month

A1c (%)
Description of the current intervention:
Stepped or planned care
Risk determines interventions and point of care prompts.
An example of our stepped care approach: Green Zone

Stepped-Care Stratification

Low Risk
A patient with any of the following:
A1C < 7.5% AND BP < 140/85
AND
Global Assessment Good

Patient Care Plan
All new or recent onset patients are encouraged to attend our group class.
1. CDE visits per request (Medical Intervention).
2. Assistance and care coordination at PCP visit per request only.
3. RD MNT‡ as needed.
4. Passive medication management.
5. Phone follow-up as needed.
6. Toll-Free telephone access and after hours nurse support.
7. Automated lab ordering

Continuous Clinical Reassessment

~ 40% of our patients
An example of our stepped care approach: Yellow Zone

～35% of our patients

Stepped-Care Stratification

Moderate Risk**
A patient with any of the following:
A1C 7.5 to 8.5% AND BP 140-160/85-90
AND
Global Assessment Fair

Patient Care Plan
All new or recent onset patients are encouraged to attend our group class.

Quarterly CDE visits (Medical Intervention).
1. Intense medication management.
   If not on ASA, start.
   If not on Statin, start.
2. Assistance and care coordination at most PCP visits.
3. Target 3 RD MNT‡ visits per year.
4. Phone follow-up as needed.
5. Toll-Free telephone access and after hours nurse support.
6. Automated lab ordering and interpretation

Continuous Clinical Reassessment
An example of our stepped care approach: Red Zone

~ 25% of our patients

High Risk**
A patient with any of the following:
A1C > 8.5% OR BP > 160/90 OR
Global Assessment Poor
OR No ASA or Statin

Patient Care Plan
All new or recent onset patients are encouraged to attend our group class.

1. Bimonthly CDE visits (Medical Intervention).
2. Intense medication management.
   If not on ASA, start.
   If not on Statin, start.
3. Assistance and care coordination at every PCP visit.
4. Target 3 RD MNT† visits per year.
5. Yearly Nutrition class referral.
6. Monthly to biweekly phone follow-up.
7. Toll-Free telephone access and after hours nurse support.
8. Automated lab ordering and interpretation

Continuous Clinical Reassessment
How have we used the MFI and PDSA cycles?
Example 1
Lipid screening & management: A front desk intervention
• 55% of patients had total cholesterol tested annually

• Approximately 68% were prescribed statins

• Average total cholesterol = 185 mg/dl

• Average LDL = 99 mg/dl

• We set a goal that 90% of patients would be screened annually and prescribed a statin
Percent of Patients with Total Cholesterol Tested Yearly

- Start Automated
- Re-Start Revised Automated
- Stop Automated
Percent of Patients with Total Cholesterol Tested Yearly

% Total Cholesterol Tested

Start Automated

Re-Start Revised Automated

Stop Automated

0 20 40 60 80 100

Front Desk Process

- List of patients with diabetes
- Whether or not labs need to be drawn
- We had patients that needed labs that were not getting triaged appropriately
- Looked at front desk logs and process

Plan/Do
Study
Front Desk Logs

- About 60 patients with diabetes/week
- 30 needed a lab drawn
- Only 15 had it drawn (50%)
Pizza for 90% Fidelity

- $\frac{25}{33} = 75\%$  No pizza
- $\frac{34}{36} = 94\%$  PIZZA
Percent of Patients with Total Cholesterol Tested Yearly

Who was responsible for the improvement?
What was the role of the provider?
What was the role of the staff?
Focus on testing and utilization led to improved lipids
Example 2
Process measure improvement: Nurse-directed interventions, improving the prompts
Interventions June 2006 (version 1)

Developed prompting for nursing staff

Poorly accepted by providers and nurses.

Lacked consensus.

Weak follow-up and reporting.
Process to engage nurses

• Solidified divisional support for utilization of the intervention
• Developed educational session with nurses
  – Meeting introduction by medical director
  – Revisited intent of the yellow sheets
  – Reiterated the role of the nurse as an integral member of our team
  – Reviewed evidence behind recommendations
  – Listened to nurses’ concerns
• Developed rapid means of feedback
Items to be included in nurse assessment

• Assess as indicated on the prompt
  – Depression screening
  – Smoking assessment and intervention
  – Eye referrals
  – Monofilament testing
  – Pneumococcal vaccination
Feedback and change in clinical focus led to significant revision of the yellow sheets.
Simple procedure for tracking daily progress - Excel spreadsheet

Completed by ancillary staff

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</table>
Progress with mixed results

Bring on the pizza
Widespread, significant improvement noted

11. PHQ Depression Screening

12. Ophthalmology Exam

13. Pneumococcal Vaccination

14. Monofilament Exam in Past Year
What can you take away from all of this?
Provider satisfaction has improved: How has this affected the life of a physician?

- Delegating processes frees up time to focus on diagnostic and therapeutic issues
- A weight has been lifted
- Excellent to know how the practice performs
- Data has changed our conversations
- It is satisfying to show improved care
Diabetes Improvement Across the Practice--Lessons

• Just working harder doesn’t lead to better outcomes
• Just making a policy doesn’t mean the process gets done
• Doctors in our system don’t follow algorithms or policies very well
  – Other members of the health care team are better…and that is OK
• Each member must function at their highest level of skill
• Distractions will arise, challenges will occur
Lessons: The earlier you address these items the better

- Accept that change is good, a necessity
- Adoption of the MFI (or other QI approach) and run chart reporting
- Incorporation of a variety of practitioners and staff
- Development of broad, comprehensive teams that are representative of your practice
- Build consensus, standardize care, identify best practices
- ‘Democratization of decision-making’
References for this talk

Contact Info

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http://www.med.unc.edu/medicine/generalm/resourcetepages.html