Markham Family Medicine Teaching Unit
Health for All
FAMILY HEALTH TEAM

Family & Community Medicine
UNIVERSITY OF TORONTO

USING A QI MODEL TO DEVELOP A DIABETES PROGRAM

October 16, 2012

3:45-4:30pm

Markham Family Medicine Teaching Unit

A Cox, J Heard, J Maxted, S Rotondi & B Wilson

QI for a Diabetes Program

Overview

- QI Model
- AIM – Measure – Change
- PDSA Cycles
- Flow Sheet & Data
- Feedback
- Lessons Learned

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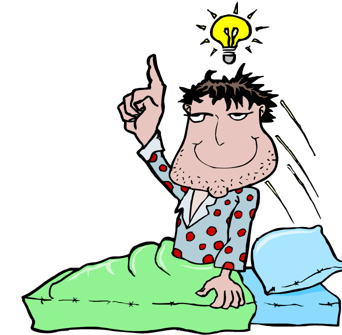
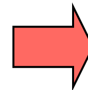
Quality Improvement Model

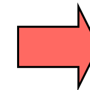


Generating Ideas

What are we trying to accomplish?



How will we know that a change is an improvement?



What changes can we make that will result in improvement?

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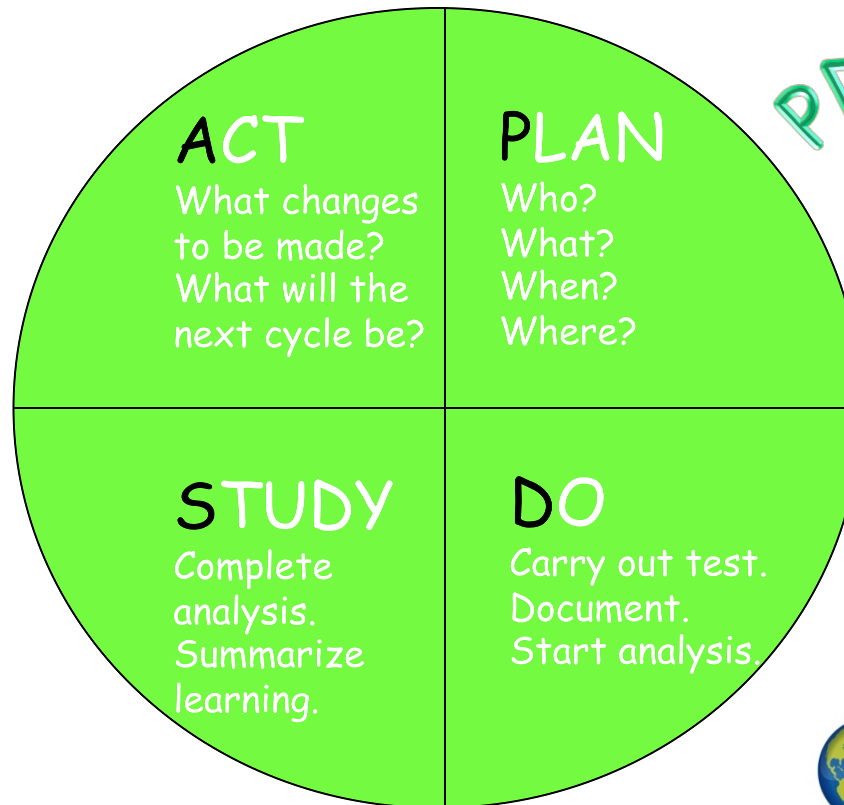
Quality Improvement Model

<u>Testing Change</u>

PDSA Cycling!



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Quality Improvement Model

PDSA Cycling!

A	P
S	D

A	P
S	D

A	P
S	D

A	P
S	D

AIM

Building Improvement

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If you don't know where you're going,

it doesn't matter which road you take!

crow - Wizard of Oz

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Our AIM

To develop a patient-centred approach to excellent diabetes care in our FHT within the next year

What are we trying to accomplish?

- *1st PDSA Cycle - May 17, 2011*
- *17th PDSA Cycle – June 28, 2012*

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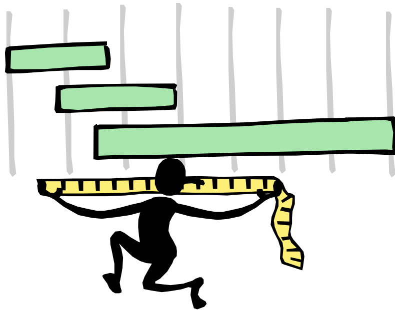
Measurement

Process measures & targets

- 75% of patients seen in last 4 months
- 75% with flow sheet
- 80% with BP in last 6 months
- 80% with HbA1C in last 6 months
- 80% with LDL in last 12 months
- 80% with eye exam in last 2 years

How will we know that a change is an improvement?



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Measurement

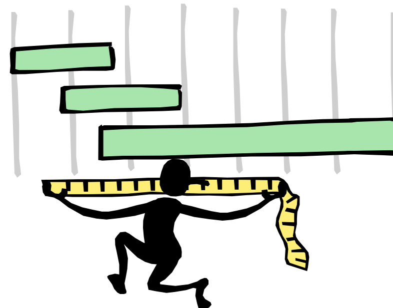
How will we know that a change is an improvement?

Outcome measures & targets

- 90% of patients involved in program
- 75% interacted with our nurses and/or dietitian
- 50% participated in our group education

Clinical outcome measures (without targets)

- BP ≤ 130/80
- HbA1C ≤ 0.070
- LDL ≤ 2.0



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Change

- Multi-disciplinary approach
- Reliable database
- User friendly tracking tool
- Patients integrally involved
- Physicians supportive
- Patients self-managing
- Patient group education

What changes can we make that will result in improvement?

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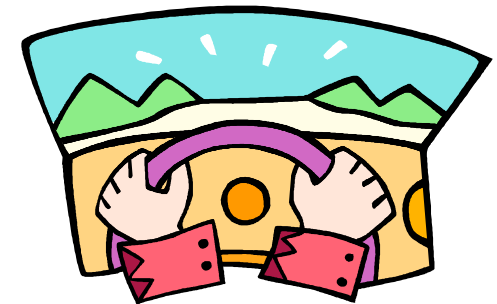
Strategies for Change

- Key Drivers
  - New practice & teaching unit -> new ideas
  - Keen desire to provide best care
  - Requirement to report to gov't (funders)
  - Positive experience applying QI model elsewhere
  - PDSA Cycles enabling rapid improvement & satisfaction
  - Physician buy-in through strategic communications



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Prioritizing PDSA Cycles

IMPACT	EASY	HARD
HI	2 Priority — FLOW SHEET; SELF-MGMT RESOURCES	3 Plan Ahead — GROUP EDUCATION
LO	1 Quick Hits — INITIAL DATA	4 Forget It!

FEASIBILITY

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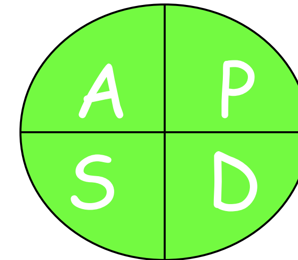
PDSA Cycle Summary



1 + 2 - initial database
3 – common language
4 to 8 – diabetes flow sheet (EMR); visit cards; dietetic flow sheet; physician communication
9 + 10 – self-management tools & resources

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Diabetes Patient Care Flow Sheet

- Patient/providers
- Risks
- Self Mgmt
- Current data, including lab
- Notes – Doctor & IHP's
- Complications
  - Neuropathy
  - Vascular disease
  - CAD
  - Vaccinations

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Diabetes Patient Care Flow Sheet© Start Date: End Date:

Name:
D.O.B.:
☐ Type 1 ☐ Type 2
Date of Onset:
Diabetic Program ☐ Yes ☐ No
Details:

Care Team: Provider Provider Provider

RISKS
☐ Hypertension ☐ Dyslipidemia ☐ CAD ☐ CKD ☐ PCOS ☐ ED ☐ Family History:
☐ PVD ☐ Foot Disease ☐ Retinopathy ☐ Neuropathy ☐ Overweight
☐ Smoking ☐ Alcohol (Date Stopped) (Assess/discussed) High Risk Pop.
☐ Mental Health Diagnosis Explain:

SELF MGMT
DM Medications:
Care Plan: ☐ Yes ☐ No Details: Diet Plan Implemented: ☐ Yes ☐ No
DM Program Education Involvement: ☐ Individual ☐ Group Details:
Monitor own BS: ☐ Consistently ☐ Inconsistently Available Record: ☐ Yes ☐ No Details:
Ht: ○ ft ○ cm BMI: WC: ○ in ○ cm Target Wt: ○ lbs ○ kg
Physical Activity (mins/wk): Details:
Stress Management: ☐ Acceptable ☐ could be better Explain:

CURRENT

Date	Wt. lbs.	BP	ac BS	pc BS	Random BS

NOTES

Date	Doctor's Notes

Date	Other Provider Notes

COMPLICATIONS

Neuropathy

Date	Lesions	Loss of Sensation	Pain	Details:
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No	

Vascular Disease

Date	ED	Ulcers	Where	Skin Changes	Where
		☐ Yes ☐ No		☐ Yes ☐ No	
		☐ Yes ☐ No		☐ Yes ☐ No	

Retinopathy Annual Eye Exam ☐ Yes ☐ No Date:
Ophthalmologist/Optometrist:
Findings:

Coronary Artery Disease
Angina: ☐ Yes ☐ No ☐ Controlled
MI: ☐ Yes ☐ No When:
CABG: ☐ Yes ☐ No When:
PTCA: ☐ Yes ☐ No When:
Date of EKG: Detail:
Date of Exercise EKG: Detail:
Echocardiogram / Other Cardiac Findings:

Vaccinations: Pneumo Vaccine: ☐ Yes ☐ No Date:
Annual Influenza: ☐ Yes ☐ No Date:

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Responsibilities - Inter-professional

(sequence of staff seen during typical visit)

Happy Patient

Happy Providers

- Administrative staff
  - Diabetes Visit Card - When / Who
- Family practice nurse
  - Initial assessment / Data record / Note
- Physician
  - Data record & med'n / Targets / Note / Flow Sheet to patient
- Dietitian
  - Diet, exercise & BGs / Dietary record & note / Grocery store tour

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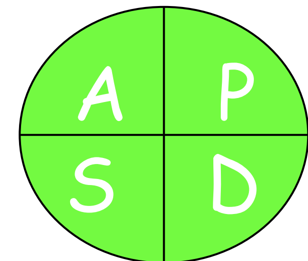
PDSA Cycle Summary

11 – reviewed resources based on *predictions* vs *learning*



12, 15 + 16 – group education sessions (Lilly Conversation Maps)

13 + 14 – data & targets analysis; physician communication (Jan 19/12)

17 – data & target analysis (May 9/12)

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Database

	31-Aug-11	19-Jan-12	09-May-12	CHANGE	TARGET	OPPORTUNITY
DATABASE						
% DM patients in group practice	6%	6%	5%	-1%		
MANAGEMENT - PATIENT VISITS & FLOW SHEETS						
% Total # DM patients seen in last 4 months	89%	90%	84%	-5%	75%	9%
% DM Flow Sheets	N/A	25%	48%	23%	75%	-27%
COMPOSITE WEIGHTED MEASURES - DIABETIC PATIENTS ONLY						
HbA1C						
PROCESS MEASURE:						
% tested in last 6 months	59%	61%	64%	3%	80%	-16%
OUTCOME MEASURE:						
% with HbA1C ≤7%	33%	33%	36%	3%		??
BLOOD PRESSURE						
PROCESS MEASURE:						
% tested in last 6 months		76%	62%	-14%	80%	-18%
OUTCOME MEASURE:						
% with BP ≤130/80		43%	36%	-8%		??
LDL CHOLESTEROL						
PROCESS MEASURE:						
% tested in last 12 months		71%	75%	3%	80%	-5%
OUTCOME MEASURE:						
% with LDL ≤2.0		32%	35%	2%		??
EYE EXAMS						
PROCESS MEASURE:						
% tested in last 2 yrs	12%	37%	45%	9%	80%	-35%

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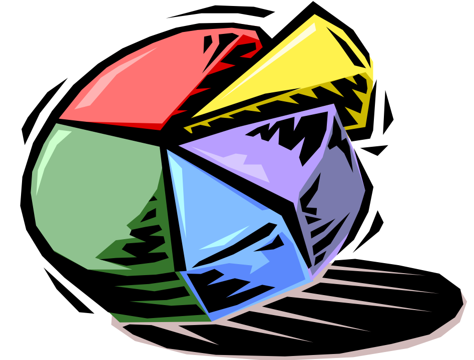
Data Update



September 14, 2012

- 328 diabetic patients (6% of group practice)
- 182 Diabetes Flow Sheets (55% of diabetic patients)

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Patient Feedback

Diabetes Patient Education Evaluation Survey

Question	Rating (out of 5)
Question 1 Compared to other ways I have learned about diabetes (Ie. books, lectures, internet, etc) I rate the conversation maps sessions as:	
Question 2 These sessions helped me set goal(s) for something I can do to care for my diabetes:	
Question 3 Compared to an individual education meeting with a health care professional, I rate this session as:	
Question 4 My questions about diabetes were answered during the conversation map sessions:	
Short answer questions: Question 5 Is there anything that would have made the conversation maps session better for you:	
Question 6 What was most meaningful for you about the conversation map sessions:	
Question 7 The facilitators were well prepared to conduct the conversation maps and were able to help me understand my diabetes:	

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Patient Feedback

Qualitative Measures (sample responses)

Question 6: Most meaningful about the conversation map sessions:

- The simplicity of the issues as depicted by the illustrations (i.e. easier to comprehend and remember)
- Shared experience with others; the conversation maps effectively guided the discussion and kept it on track.

Question 7: Facilitators well prepared… and able to help me understand my diabetes:

- They were very professional and well informed and I learned new things.

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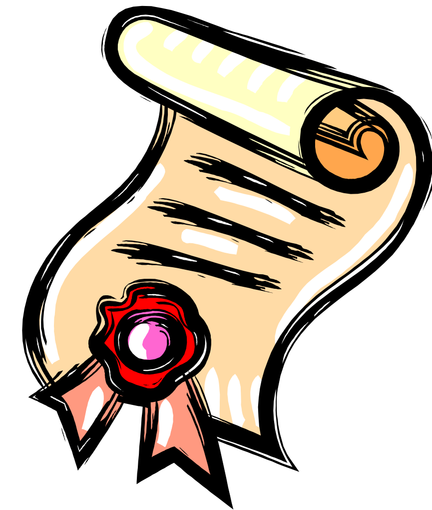
Health System Feedback

International Forum for Quality
& Safety in Healthcare
– April 17-19, 2012



Ontario MoHLTC – FHT Newsletter
– August 2012

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Dr Maxted with "precious cargo" at IHI in Paris…

QI – DM Team, celebrating successes to date

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Lesson Learned

- We must change our systems of care if we want to change how care is practiced!
- Data measurement is still hard to do from an EMR!
- Targeting process, especially outcome measures is controversial!
- PDSA Cycles are a thoughtful staged approach to continuous improvement in building programs!

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An Ethics of Improvement

1. Professionals have a duty to help improve the systems in which they work.
2. Leaders have a duty to make #1 logical, feasible, and supported.
3. No excuses for inaction on #1 and #2 are acceptable.
4. The duty to improve encompasses safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity. This requires the continual reduction of waste.
5. Those who educate professionals have a duty to prepare them for this improvement work.

Dr. Don Berwick – International Forum – Paris - April 19, 2012

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Questions & Comments

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