Data Discipline – You *Can* Herd Cats!

David TS Barber, BSc, MD, CCFP,
Assistant Professor and IT Lead, Queen's Family Health Team
Karen Hall-Barber, BSc(Hons), MD, CCFP,
Assistant Professor & Physician Lead, Queen's Family Health Team
Danyal Martin, BAH, BEd, MA, MSc (candidate)
Clinical Program Coordinator, Queen's Family Health Team

Department of
Family Medicine
Delivering the Future of Primary Health Care

Disclosures

Danyal Martin & Dave Barber
Peer leaders for OntarioMD

Dave Barber
Network Director,Kingston, Canadian Primary Care Sentinel Surveillance Network (CPCSSN)

Objectives

1. ‘Make a case’ for pursuing data discipline
2. How to get started
3. Team building and culture change
4. Tips and tricks

A bit about us

- FHT established in 2006
- Academic FHN (23 attending physicians) – teaching site for the Dept of Family Medicine, with 50 PGY1 residents each year.
- 4.5 teams, spread across two sites
- ~13 500 patients
- FHT staff: 1 pharmacist, 1 dietitian, 2 social workers, 4 NPs, 5 RNs, 0.6 foot care RPN, 6.5 clerical, & 0.5 data analyst
- Non-FHT staff: 6 RPNs, 0.57 after hours clinic RPN, 1.5 MOA, 2.5 clerical
- Interprofessional quality improvement committee
- OSCAR – open source EMR
- CPCSSN sentinel site

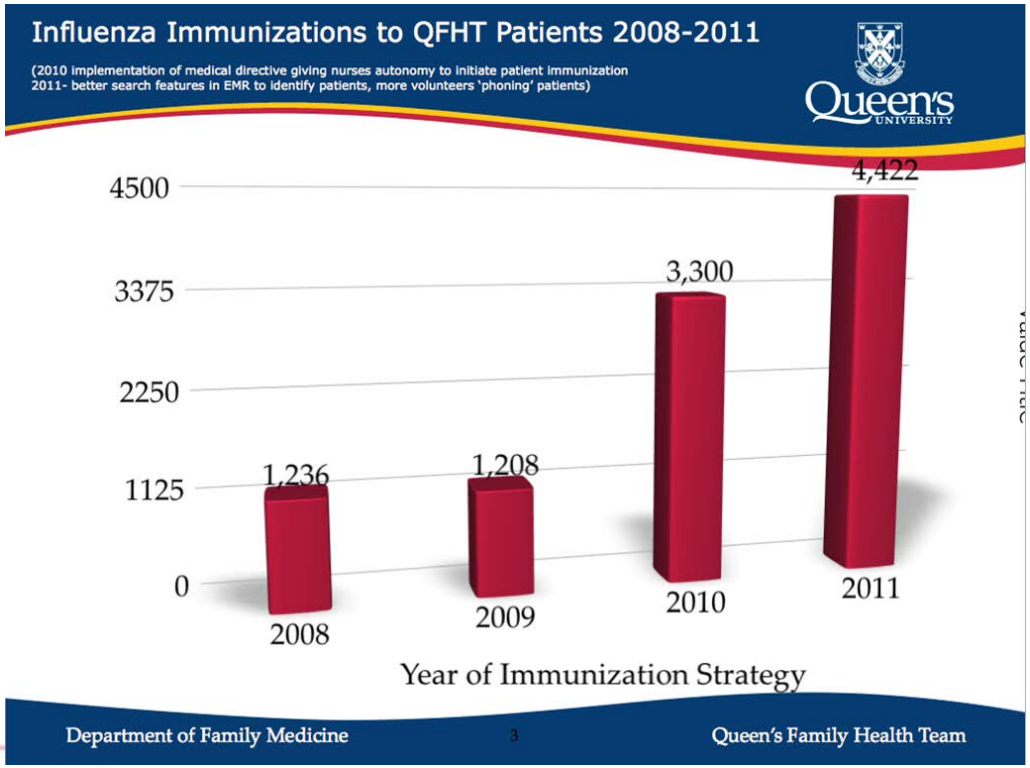
A bit about CPCSSN (Canadian Primary Care Sentinel Surveillance Network)

- Established 2008, funded by Public Health Agency of Canada, a sub-entity of the College of Family Physicians Canada
- Goal is to create a Pan Canadian Primary Care Surveillance System
- Unvarnished, anonymized data taken every 3 months from participating physicians
- Algorithms used to identify 8 chronic diseases even if poor data quality
- Benefit to participating physicians is feedback reports and more individualized reporting which can be used to clean data

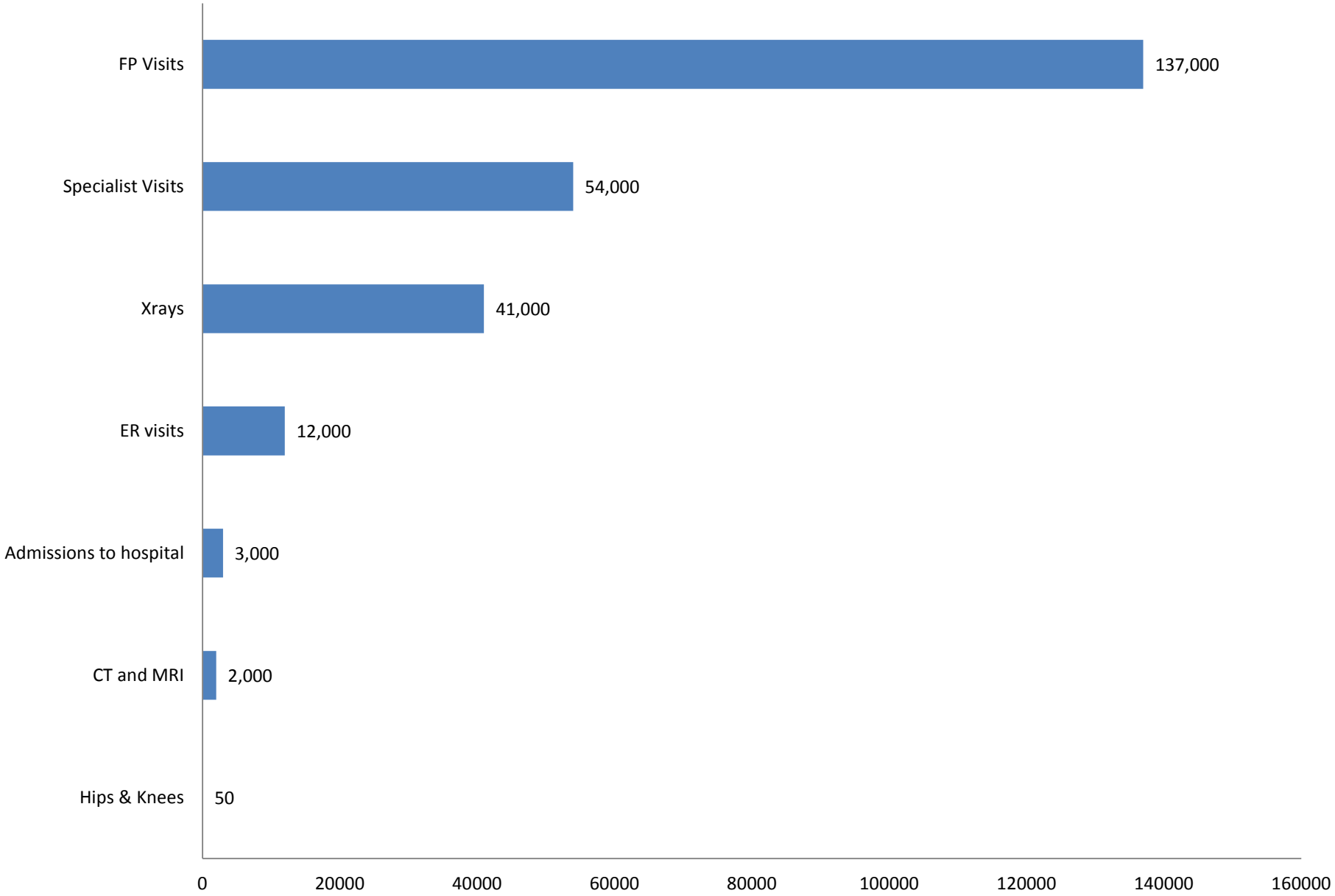
Data discipline – what is it?

- Accurately represents a particular scenario
- Timely & complete
- Consistent
- Trustworthy
- "Everything in the right spot"

Why does it matter?



Healthcare Encounteres per day in Ontario (Institue for Clinical Evaluative Studies 2003)



Why does it matter?

- It can help you offer better care
- It can make it easier to offer better care
- It can help to engage your entire team
- It might not be as difficult to implement as you think…

How to get there?


You are here

Dr. Who's Diabetic Patient Care
(as of August 29, 2012)

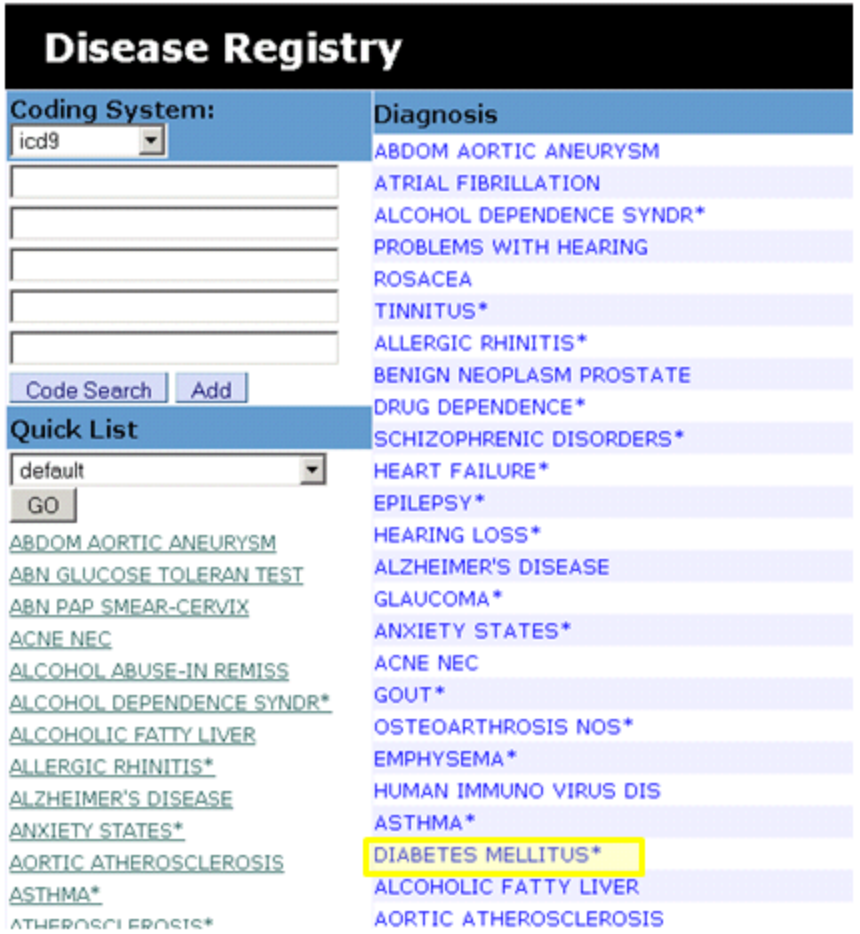
Last Name	First Name	Latest A1C	Latest Systolic	Latest Diastolic	Latest LDL
Patient	One	6.4	132	63	1.67
Patient	Two		138	87	3.89
Patient	Three	6.7	125	88	1.56
Patient	Four	9.9	128	67	3.35
Patient	Five	6.6	127	67	2.1
Patient	Six	8.7	144	79	
Patient	Seven	11.8	139	73	2.09
Patient	Eight	7.3	114	76	
Patient	Nine	7.6	145	82	2.4
Patient	Ten	8.7	113	90	1.29
Patient	Eleven	11.5	131	76	2.13
Patient	Twelve	7.6	130	86	1.96
Patient	Thirteen	8.2	105	88	1.44
Patient	Fourteen	6.7	118	89	3.12

Last Name	First Name	Overdue A1C	Overdue BP	Overdue ACE-I/ARB Rx	Overdue LDL	Overdue Eye Exam	Overdue Foot Exam	Overdue ACR	Overdue eGFR
Patient	One	No	No	No	YES	YES	YES	YES	No
Patient	Two	YES	No	YES	YES	YES	YES	YES	YES
Patient	Three	No	No	No	No	YES	YES	YES	No
Patient	Four	No	No	YES	No	YES	YES	YES	No
Patient	Five	No	No	No	No	No	No	No	No
Patient	Six	No	YES	YES	YES	YES	YES	YES	YES
Patient	Seven	YES	No	No	YES	No	YES	YES	YES
Patient	Eight	No	No	YES	YES	YES	YES	YES	YES
Patient	Nine	No	No	No	No	YES	YES	YES	No
Patient	Ten	No	No	No	No	YES	YES	YES	No
Patient	Eleven	YES	No	No	No	YES	YES	YES	No
Patient	Twelve	YES	YES	YES	YES	YES	YES	YES	YES
Patient	Thirteen	No	No	No	No	No	YES	YES	No
Patient	Fourteen	No	No	No	No	No	YES	YES	No

If diabetic patients are missing from this list or should be removed from this list, please email Abi (abigail.scott@dfm.queensu.ca)

Important

Patients need to have a diagnosis of DIABETES MELLITUS* (ICD-9 code 250) in the Dx Registry to be included in this report



CPCSSN FEEDBACK REPORT, DATA 2010-Q4

Denominator for calculating the prevalence came from Yearly Contact Group (YCG), which was adjusted for CCHS-2009 Utilization Correction Factor (UCF).

Province = Alberta
Network = SAPCReN (Calgary)
Site/Clinic ID = 01
Sentinel/Provider ID = 01

A. Demographics (YCG)

Indicators	National	Province	Network	Site	Sentinel
Age (mean years)	49.4	47.4	47.0	48.3	51.1
% Paediatric (<18 yrs)	4.5%	4.7%	5.6%	5.9%	4.0%
% Geriatric (>65 yrs)	19.8%	15.1%	14.0%	15.7%	21.2%
Sex (% male)	38.5%	35.0%	39.6%	45.6%	45.0%
N	97,393	13,220	4,425	1,138	571

B. Prevalence

Conditions	National	Province	Network	Site	Sentinel
Hypertension	17.6%	17.1%	15.9%	16.5%	16.8%
Diabetes	7.8%	6.9%	6.2%	8.1%	8.6%
Depression	11.8%	16.0%	14.7%	16.9%	19.6%
COPD	2.6%	2.5%	2.0%	2.3%	2.7%
Osteoarthritis	7.5%	9.5%	8.4%	8.3%	10.3%
Parkinson's	NA	NA	NA	NA	NA
Epilepsy	NA	NA	NA	NA	NA
Dementia	NA	NA	NA	NA	NA
N (YCG, adjusted)	121,034	16,443	5,555	1,432	709

C. Chronic Illnesses

Conditions	National	Province	Network	Site	Sentinel
None	67.3%	64.7%	66.8%	64.2%	59.9%
1 condition	21.5%	22.8%	22.5%	23.0%	26.0%
2 conditions	8.4%	8.9%	8.0%	9.8%	11.1%
3 conditions	2.4%	3.1%	2.2%	2.4%	2.3%
4 conditions	0.4%	0.5%	0.4%	0.5%	0.6%
5 conditions	0.0%	0.0%	0.0%	0.1%	0.1%
6 conditions	NA	NA	NA	NA	NA
7 conditions	NA	NA	NA	NA	NA
8 conditions	NA	NA	NA	NA	NA
N (YCG, adjusted)	121,034	16,443	5,555	1,432	709

D. Indicators (YCG)

Conditions		National	Province	Network	Site	Sentinel
D1. HYPERTENSION		***N=21,252***	***N=2,821***	***N=881***	***N=236***	***N=119***
% BP on Target (<140/90)		73.2%	66.9%	66.2%	63.1%	60.5%
% on target last quarter*		69.4%	65.7%	68.1%	60.4%	60.1%
Missing (n)		*(4,024)*	*(13)*	*(12)*	*(0)*	*(0)*
D2. DIABETES		***N=9,384***	***N=1,132***	***N=344***	***N=116***	***N=61***
% HbA1C on Target (<7)		52.6%	54.5%	47.7%	38.9%	49.1%
% on target last quarter*		45.6%	50.5%	43.4%	36.8%	48.9%
Missing (n)		*(1,811)*	*(171)*	*(107)*	*(8)*	*(2)*
% BP on Target (<130/80)		40.5%	44.4%	38.3%	43.1%	42.6%
% on target last quarter*		38.5%	40.4%	32.3%	44.1%	45.6%
Missing (n)		*(1,661)*	*(14)*	*(10)*	*(0)*	*(0)*
% LDL on Target (<2)		38.3%	42.2%	42.2%	44.1%	44.3%
% on target last quarter*		35.3%	40.5%	45.2%	40.4%	41.3%
Missing (n)		*(5,420)*	*(817)*	*(29)*	*(5)*	*(0)*
D3. COPD		***N=3,152***	***N=417***	***N=111***	***N=33***	***N=19***
% Smoking	Current	41.9%	36.7%	38.2%	100.0%	100.0%
	Past	24.4%	20.4%	38.2%	0.0%	0.0%
	Never	33.7%	43.0%	23.6%	0.0%	0.0%
% smokers last quarter*		47.7%	43.6%	35.2%	96.7%	92.1%
Missing (n)		*(1,830)*	*(98)*	*(56)*	*(23)*	*(15)*

** fabricated*

Lessons Learned #1

- Just start!
- Small is okay. (It's likely more work than you think!)
- Low-hanging fruit is okay.
- Pick something that isn't controversial
- Provide lots of training and support
- Talk about it
- Make it easy

Report By Template

DM: Recalls

Which adult diabetic patients should be called in for an appointment? Patients who have a patient status of 'Nursing Home' are excluded from this report. Note: Next Appt is with either a MRP, Resident, or NP.

Step 1: Team/Demi-team/MRP: Haynes Hall

Step 2: Generate Query — Run Query

Show/Hide Options

Report by Template

DM: Recalls

Which adult diabetic patients should be called in for an appointment? Patients who have a patient status of 'Nursing Home' are excluded from this report. Note: Next Appt is with either a MRP, Resident, or NP.

Hide/Show Query

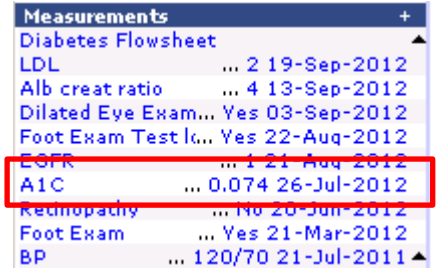
MRP	Demo	First_Name	Last_Name	Phone	Alert	Roster	Status	Days_Since_A1C	A1C	Days_CBC	Days_LDL	Days_eGFR	Days_ACR	Next_Appt
[redacted]						RO	AC							
						RO	AC	665	5.0	553	665	665		2012-06-08
						RO	AC	653	8.5	800	653	653		
						RO	AC	457	6.6	457	457	457		
						RO	AC	451	6.0		451			
						RO	AC	403	7.4	403	403	403		
						RO	AC	388	6.3	388	388	388		
						RO	AC	374	6.2	374	456	374		
						RO	AC	359	7.6	359	452	359		
						RO	AC	309	6.6	309	462	309		
						RO	AC	309	6.2	357	487	388		2012-06-08
						RO	AC	290	6.2	290	88	290		2012-06-15

Front of Report: Results

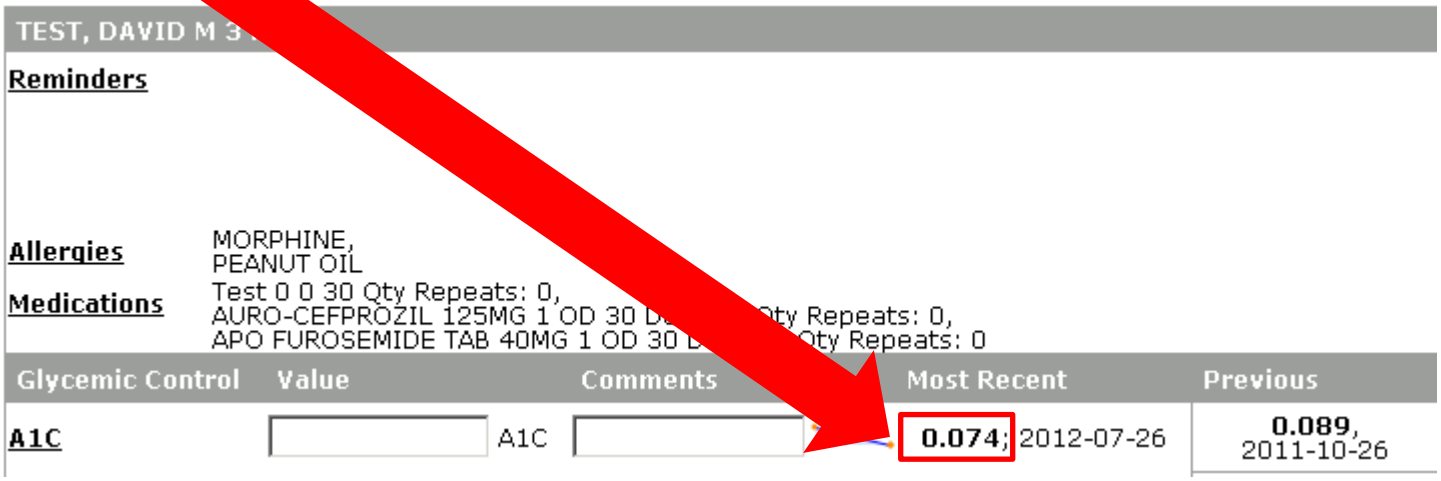
Last Name	First Name	Latest A1C	Latest Systolic	Latest Diastolic	Latest LDL	Next Appt	May Need Insulin *
Patient	One	6.5	116	77	2.24		
Patient	Two	8.5	128	75	1.73		
Patient	Three	9.1	120	86	3.49		YES
Patient	Four	6.8	114	68	2.05	5-Sep-12	
Patient	Five	560	140	69	1.81	5-Sep-12	
Patient	Six	7.6	131	81	1.98		
Patient	Seven	6.3	118	69	1.12		
Patient	Eight	7.7	124	73	2.86	21-Oct-12	
Patient	Nine	6	119	71	2.1		
Patient	Ten		133	62	2.14		
Patient	Eleven	6.4	110	79	2.13	28-Sep-12	
Patient	Twelve	8.6	144	85	3.21		
Patient	Thirteen	8.2	118	70	3.17	7-Sep-12	
Patient	Fourteen	6.4	117	62		2-Nov-12	

* Patients whose latest H[illegible] was 9% or higher and who do not have an active insulin prescription

Also, you will see in Measurements:



Comes from the Diabetic Flowsheet in the patient's chart



TEST, CARL

Reminders:

Pharmacy: SDM - Princess 136 (Bagot)

Allergies: HMG-COA REDUCTASE INHIBITORS,
PENICILLIN

Medications: VENTOLIN DISKUS 200µG 1 OD 0 Day 0 Qty Repeats: 0,
test 0 0 30 Qty Repeats: 0,
AMOXICILLIN 250MG 1 OD 0 Day 0 Qty Repeats: 0,
AVA-RAMIPRIL 5MG 1 OD 30 Days 30 Qty Repeats: 0,
PMS-LOSARTAN 50MG 1 OD 30 Days 30 Qty Repeats: 0,
VARENICLINE 1.0MG TABLET 0 bid 0 Day 28 Qty Repeats: 4,
AMOXICILLIN 500MG 2 bid 3 Days 12 Qty Repeats: 3,
AMOX 500 CAP 500MG 1 bid 10 Days 20 Qty Repeats: 0,
VARENICLINE 0.5MG/VARENICLINE 0 od 3 Days 1 Qty Repeats: 0

Preventions:

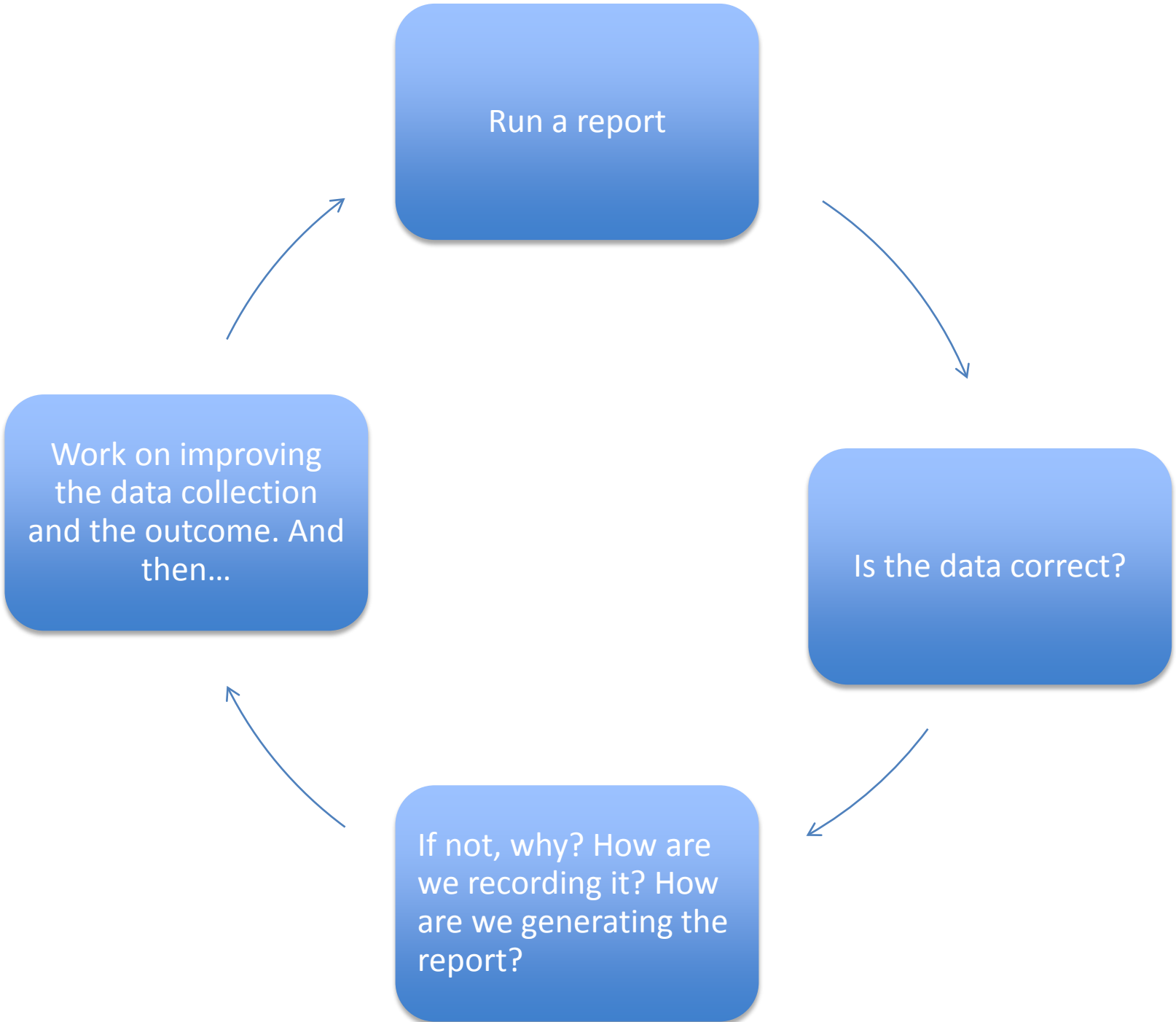
Other: **Diabetic Flowsheet**

Vitals

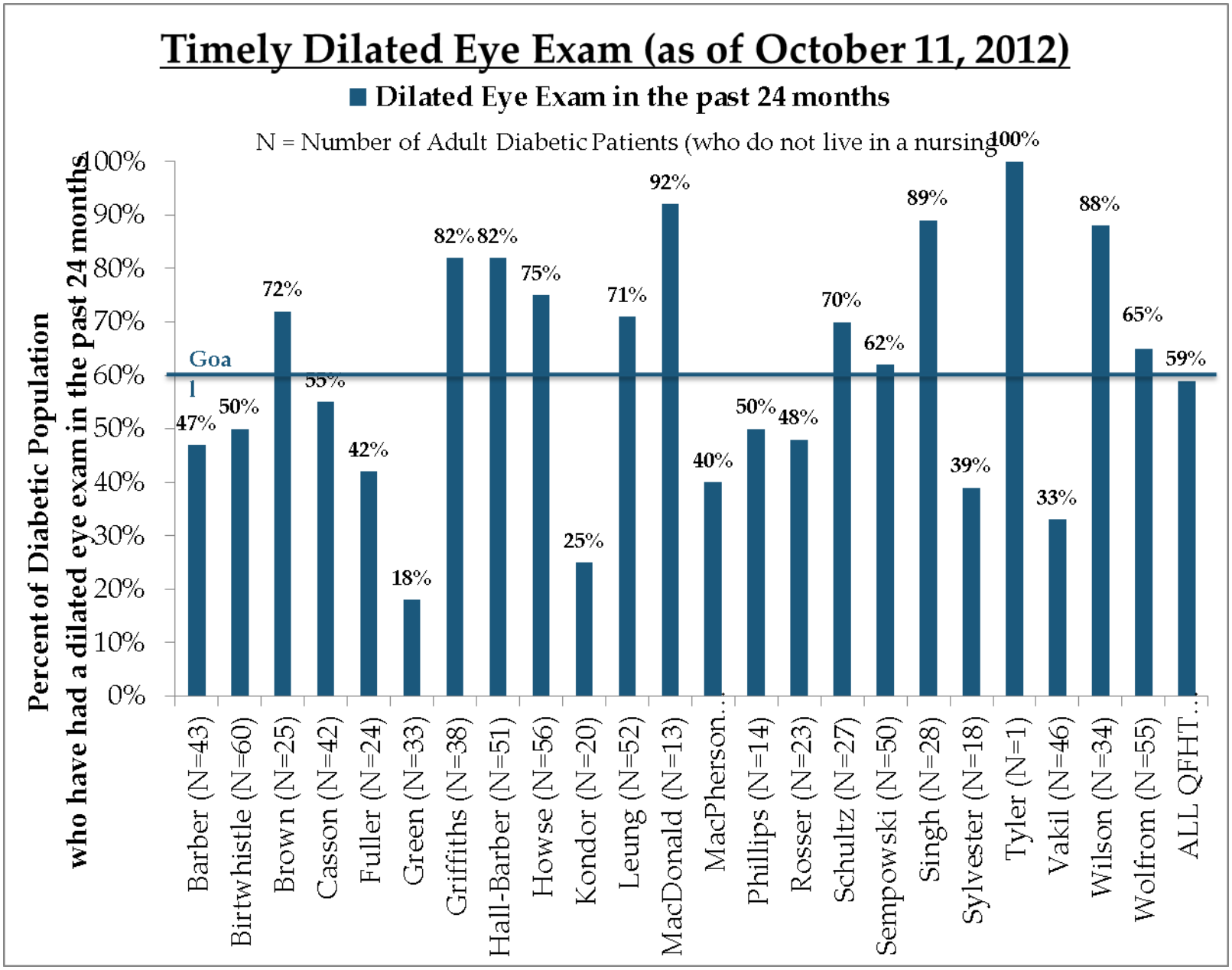
Measurement	Value	Comment	Last Value	Last Date	Last Comment
Height:	cm				
Weight:	kg				
BMI:					

Lessons Learned #2

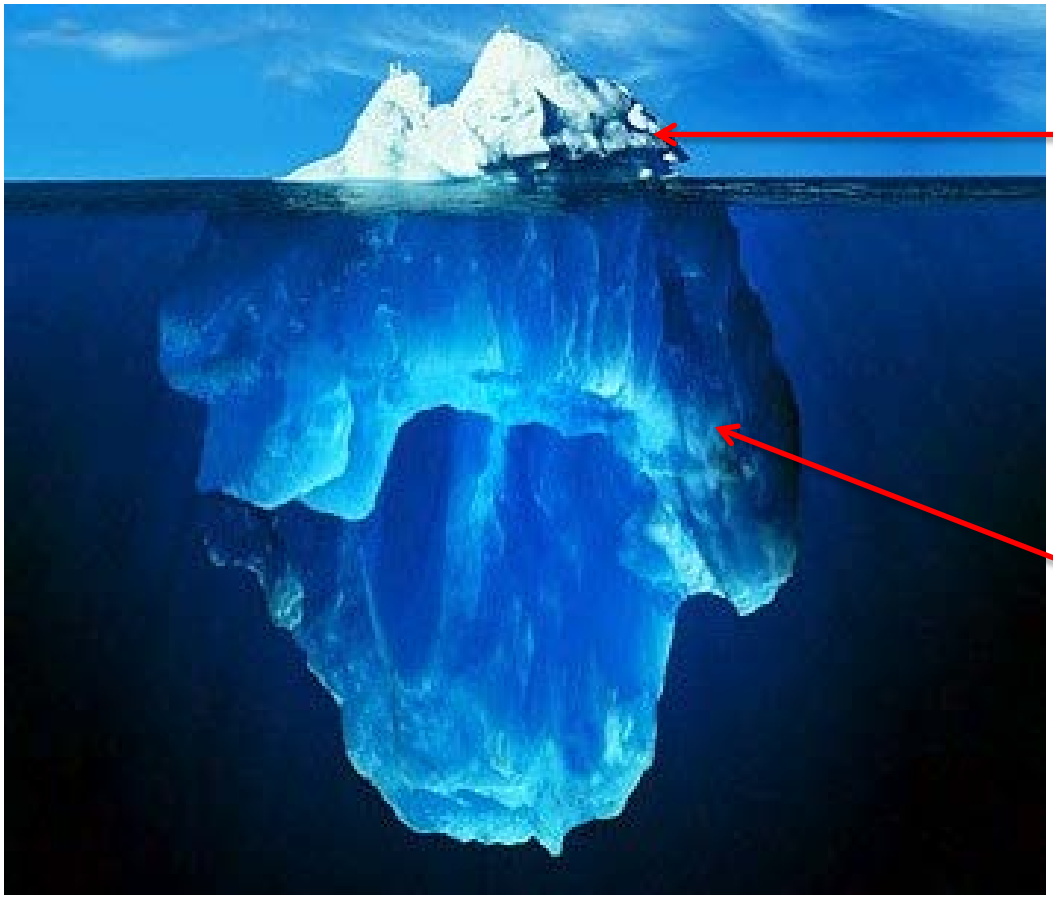
- Give them the data. It doesn't have to be perfect at the beginning – in fact, this is how to build buy-in and how you clean up the data.
- This will take time – that is okay.
- This is a great opportunity to clarify roles and improve/standardize processes.


Run a report
Is the data correct?
If not, why? How are we recording it? How are we generating the report?
Work on improving the data collection and the outcome. And then…

Timely Dilated Eye Exam (as of October 11, 2012)




SWEATIN'
TO THE

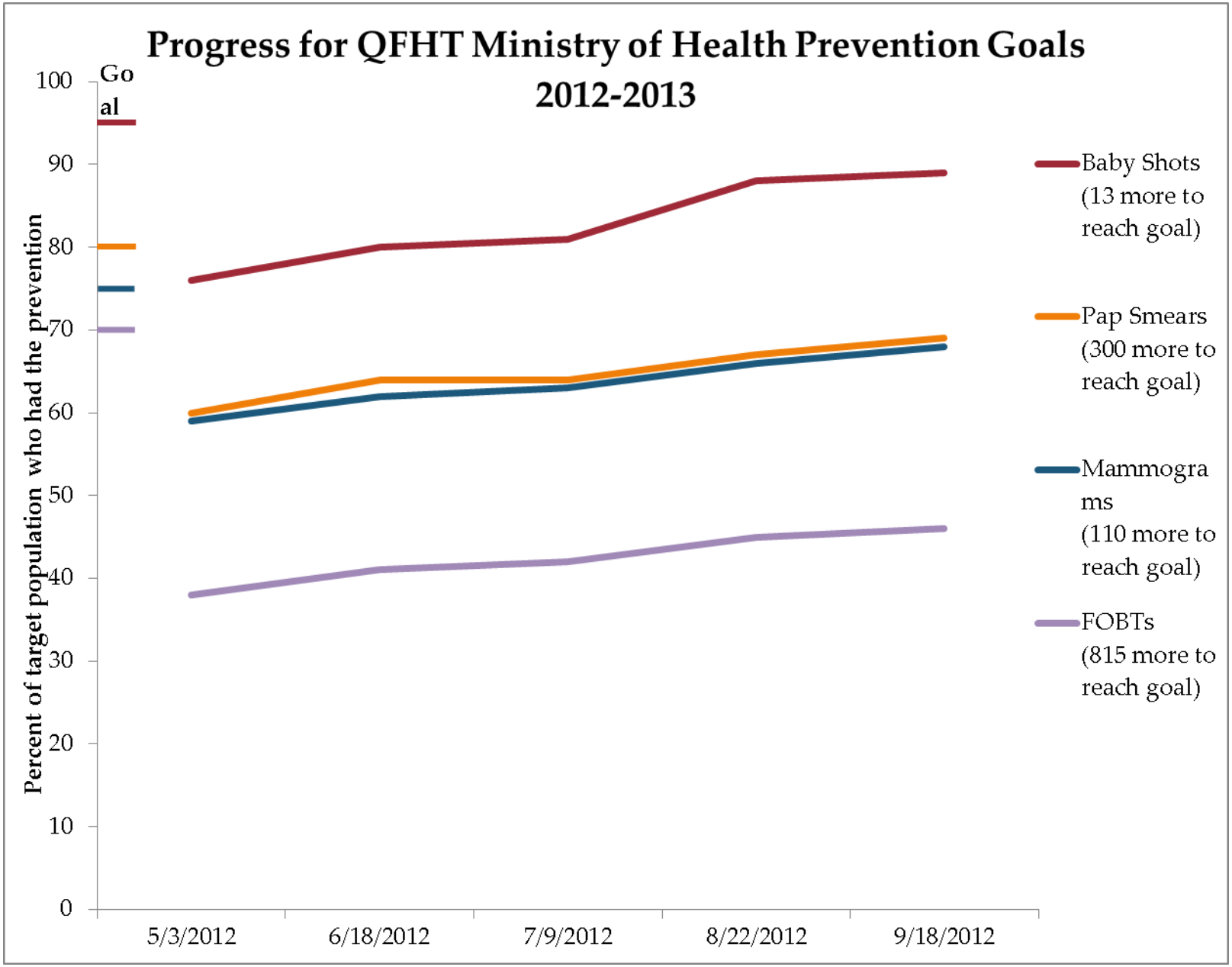


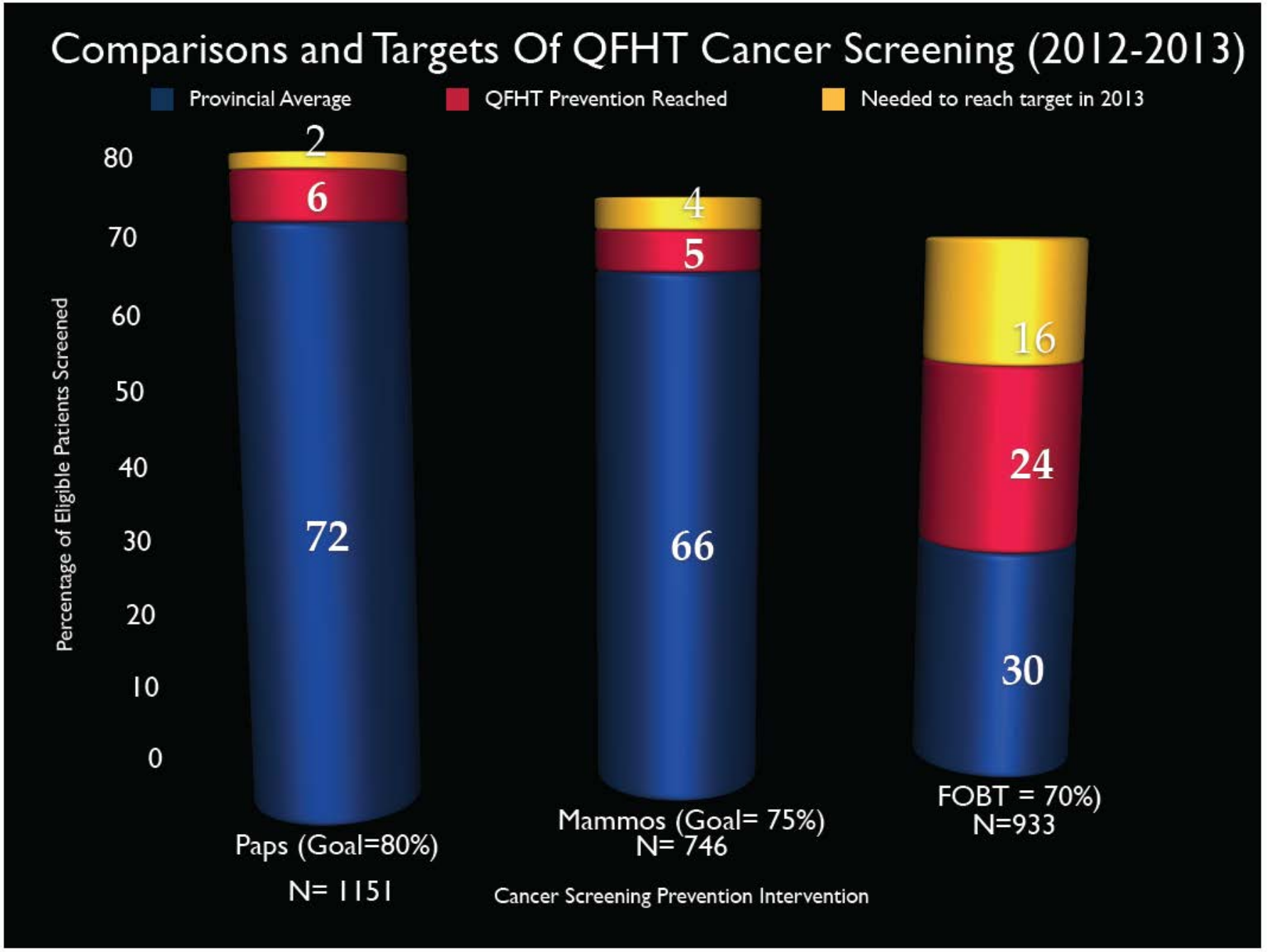
Patients who come in.

Everyone else.

Lessons Learned #3

- Consider unblinding the reports – but make it a safe space
- Engage the entire team – share the work and the successes
- Give them the tools they need to be successful
- Care for your entire roster – not just the ones that come in


Progress for QFHT Ministry of Health Prevention Goals
2012-2013
Percent of target population who had the prevention
Goal
100
90
80
70
60
50
40
30
20
10
0
5/3/2012
6/18/2012
7/9/2012
8/22/2012
9/18/2012
Baby Shots (13 more to reach goal)
Pap Smears (300 more to reach goal)
Mammograms (110 more to reach goal)
FOBTs (815 more to reach goal)

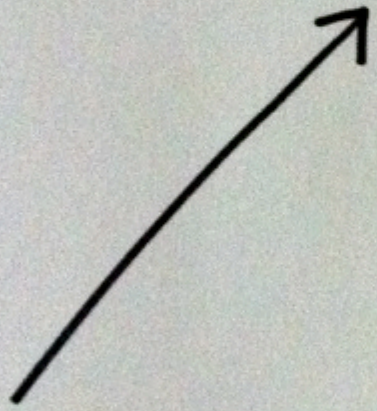

Comparisons and Targets Of QFHT Cancer Screening (2012-2013)
Provincial Average
QFHT Prevention Reached
Needed to reach target in 2013
Percentage of Eligible Patients Screened
80
70
60
50
40
30
20
10
0
2
6
72
4
5
66
16
24
30
Paps (Goal=80%)
N= 1151
Mammos (Goal= 75%)
N= 746
FOBT = 70%)
N=933
Cancer Screening Prevention Intervention

Lessons Learned #4

- Make it visual
- What would you like them to do with this information?
- Make clear goals
- Give frequent updates

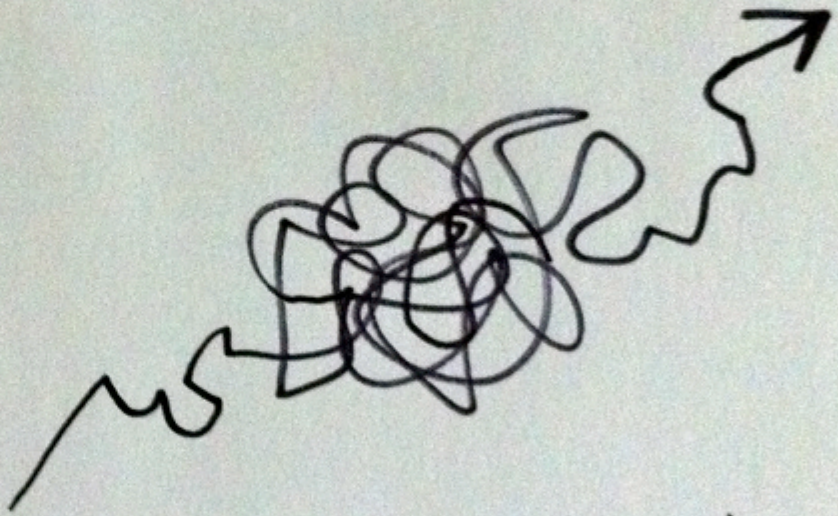
Like you we see ourselves as resource poor

Success



what people think it looks like

Success



what it really looks like

Questions or ideas?

Dr. Dave Barber
david.barber@dfm.queensu.ca
Dr. Karen Hall Barber
karen.hallbarber@dfm.queensu.ca
Danyal Martin
danyal.martin@dfm.queensu.ca