



# Agassiz Medical Centre

PIN Progress May 30, 2008



# Agassiz Medical Centre

- Focus on Chronic disease management
- Chose Diabetes and Hypertension
- Hired dietitian Oct 2007
- Hired Medical office assistant May 2008

# First steps

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- Upgraded to Windows only version allowing use of smart fields so can extract data from the chart
- Changed data entry practices so that blood pressure, height and weight, foot exam in diabetes, and eye exam in diabetes were entered into a smart field

# Diabetic Indicators

## Diabetes Indicators

- HgA1C
- Nephropathy screen
- Fundoscopic exam
  
- Foot exam
- Lipid profile
- BP
- Obesity screen

## Compliance

- done in last 12 mo
- Alb/Creat ratio in last 12 mos
- examined by or referred to optometrist or ophthalmologist in last 12 mos
- filament test in last 12 months
- within 12 months
- within last 12 months
- BMI within last 12 months



# Hypertension Indicators

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## Hypertension Indicators

- FBS
- Nephropathy screen
- Lipid profile
- BP
- Obesity screen

## Compliance

- done in last 12 months
- Creatinine in last 12 mos
- within last 12 months
- within last 12 months
- BMI within last 12 months

# Flow sheets

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- Developed flow sheets patterned after paper flow sheets outlining best practise guidelines for care of Diabetes and Hypertension



Overview

First Steps

Preliminary Results

Conclusion

**TEST CH (21990) - Edit Note (DIASUM)** \_ □ ×

Settings Edit Print Help

**DIABETES SUMMARY (DIASUM) May 19, 2008**

05 - HOLMES C

GLUCOSE FASTING

Result	Collected	Range	
[5.8 ]	Dt[20071001]	Rng<mmol/L 3.90 - 6.10	> Nrm<N>

HGB A1C

Result	Collected	Range	
[6.0 ]	Dt[20071001]	Rng<% 4 - 6	> Nrm<N>

BLOOD PRESSURE [130]/[76 ] Dt[20071011]

TARGET BODY MASS INDEX (BMI): 18.5 - 24.9  
Height[170 ]cm Weight[100 ]kg BMI[34.6 ] Dt[20071004]

FASTING LIPID PROFILE Total Chol/HDL Ratio (Target < 4.0)

Result	Collected	Range	
[5.05 ]	Dt[20071001]	Rng<0.00 - 4.50	> Nrm<h>

DILATED EYE Exam: [ ] [20080424] previous  
Fundoscopic Eye Exam Referred[ ] [20080430] previous

MICROALBUMIN SCREEN (Albumin Creatinine Ratio: <2.0 M, <2.8 F)

Result	Collected	Range	
[0.6 ]	Dt[20071001]	Rng<mg/mmol - <2.0	> Nrm<N>

Documented Nephropathy[ ] [Y] Dt[20080422]

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Insert Block=Off <more> Screen Pg 1  
F7 Send to InBasket F6 Dr-Desktop F5 Ins. Phrase F10 Save&Exit Max Ln: 7182



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TEST CH (21990) - Edit Note (DIASUM) [ ] [ ] [ X ]

Settings Edit Print Help

DIABETES SUMMARY (DIASUM) May 19, 2008

SERUM CREATININE

Result	Collected	Range	
[83	] Dt[20071001]	Rng<umol/L 53 - 120	> Nrm<N>

FOOT EXAM - ASSESS FOR NEUROPATHY

FILAMENT TEST Performed [ ] [20080424] previous

Neuropathy Present [ ] [Y] Dt[20080306] previous

Insert Block=Off \*\*\* END OF TEXT \*\*\* Screen Pg 2

F7Send to InBasket F6Dr-Desktop F5Ins. Phrase F10Save&Exit Max Ln: 7182



**TEST CH (21990) - Edit Note (HTNSUM)** \_ □ ×

Settings Edit Print Help

**HYPERTENSION SUMMARY (HTNSUM) May 19, 2008**

05 - HOLMES C

**BLOOD PRESSURE**  
[130]/[76 ] Dt[20071011]

**Total Chol/HDL Ratio**

Result	Collected	Range	
[5.05 ]	Dt[20071001]	Rng<0.00 - 4.50	> Nrm<h>

**FBS (normal < 6, impaired 6.1 - 6.9)**

Result	Collected	Range	
[5.8 ]	Dt[20071001]	Rng<mmol/L 3.90 - 6.10	> Nrm<N>

**SERUM CREATININE**

Result	Collected	Range	
[83 ]	Dt[20071001]	Rng<umol/L 53 - 120	> Nrm<N>

**TARGET BODY MASS INDEX (BMI): 18.5 - 24.9**  
Height[170 ]cm Weight[100 ]kg BMI[34.6 ] Dt[20071004]

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F7Send to InBasket F6Dr-Desktop F5Ins. Phrase F10Save&Exit      Max Ln: 7182

# Workflow issues

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- Developed new reason for visit codes of Hypertension (HTN) and Diabetes (DM)
- Needed to identify patients with the chronic disease we were focusing on at visits so we could use our staff to help us meet the indicators
- The visit codes not always used as patients may not identify themselves with these conditions and/or doctors forget to book follow up with these codes
- Developed a smart template on encounter forms



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**TEST CH (21990) - Edit Note (taa)** [ ] [ ] [ X ]

Settings Edit Print Help

Template Office Visit (taa) May 19, 2008

05 - HOLMES C

S:

O:

A:

P:

Height[170 ]cm Dt[20071004] Weight[100 ]kg Dt[20071004]  
BLOOD PRESSURE [130]/[76 ] Dt[20071011]  
TOTAL CHOL/LDL RATIO [5.05 ] LDL [0.85 ] Dt[20071001]  
FBS [5.8 ] Dt[20071001] HBA1C [6.0 ] Dt[20071001]  
CREA [83 ] Dt[20071001] A/C RATIO [0.6 ] Dt[20071001]  
EYE EXAM [20080424] EYE EXAM REFERRED [20080430]  
FILAMENT TEST [20080424]  
[CHRONIC CONDITION NAME] Type:[ CONDITION TYPE ] Start:[YYYYMMDD]  
[CHRONIC CONDITION NAME] Type:[ CONDITION TYPE ] Start:[YYYYMMDD]

Insert Block=Off \*\*\* END OF TEXT \*\*\* Screen Pg 1  
F7Send to InBasket F6Dr-Desktop F5Ins. Phrase F10Save&Exit Max Ln: 7182

# Workflow

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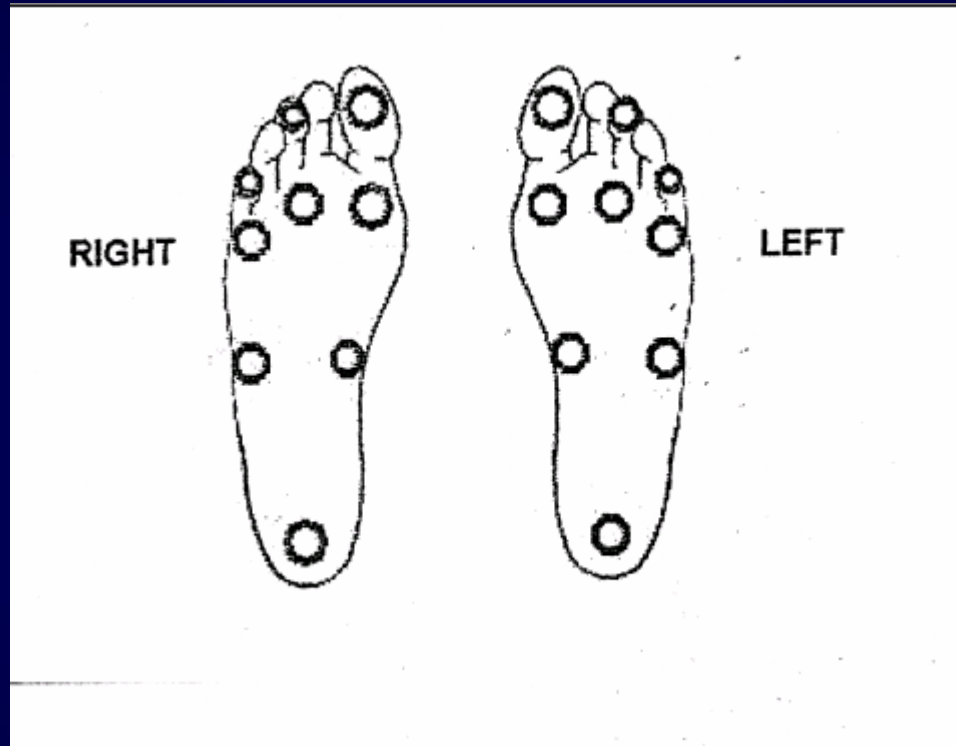
- Our reception staff review these on all patients with chronic disease DM or HTN and if no Height and weight in last year send to medical office assistant (MOA) or nurse to be done
- Plan is patients with DM or HTN will see nurses and get BP done, ask re eye exam and record and educate patient on importance, do foot exam if none done in last year

# Workflow

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- Nurses had an educational session in May by the Diabetic Education nurse on foot exam in the diabetic to allow them to help with this assessment
- MOA has been hired to do duties nurse had done that did not require their skills to free up their time to do PIN duties

# Diabetes foot exam



Abnormal foot examine will be recorded on this diagram with paint program on the computer and saved as a link on patients chart



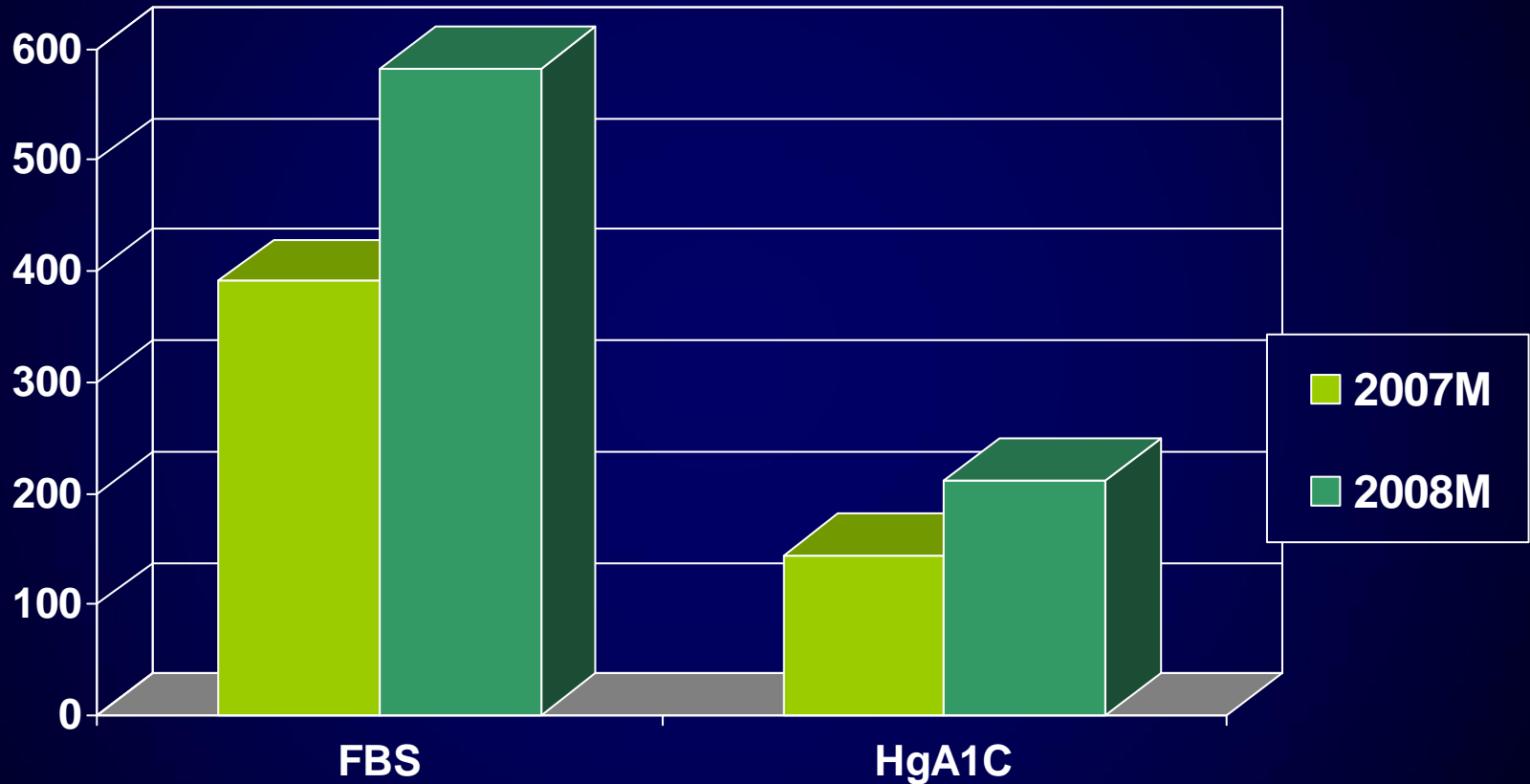
# Hospital lab impact

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- Because of the flow sheets and encounter forms that quickly show when last lab tests have been done more lab ordering has been done on our Diabetic and Hypertensive patients which has impacted BTHC lab
- The encounter form may also help with screening for Diabetes and Hypertension in the general patient population



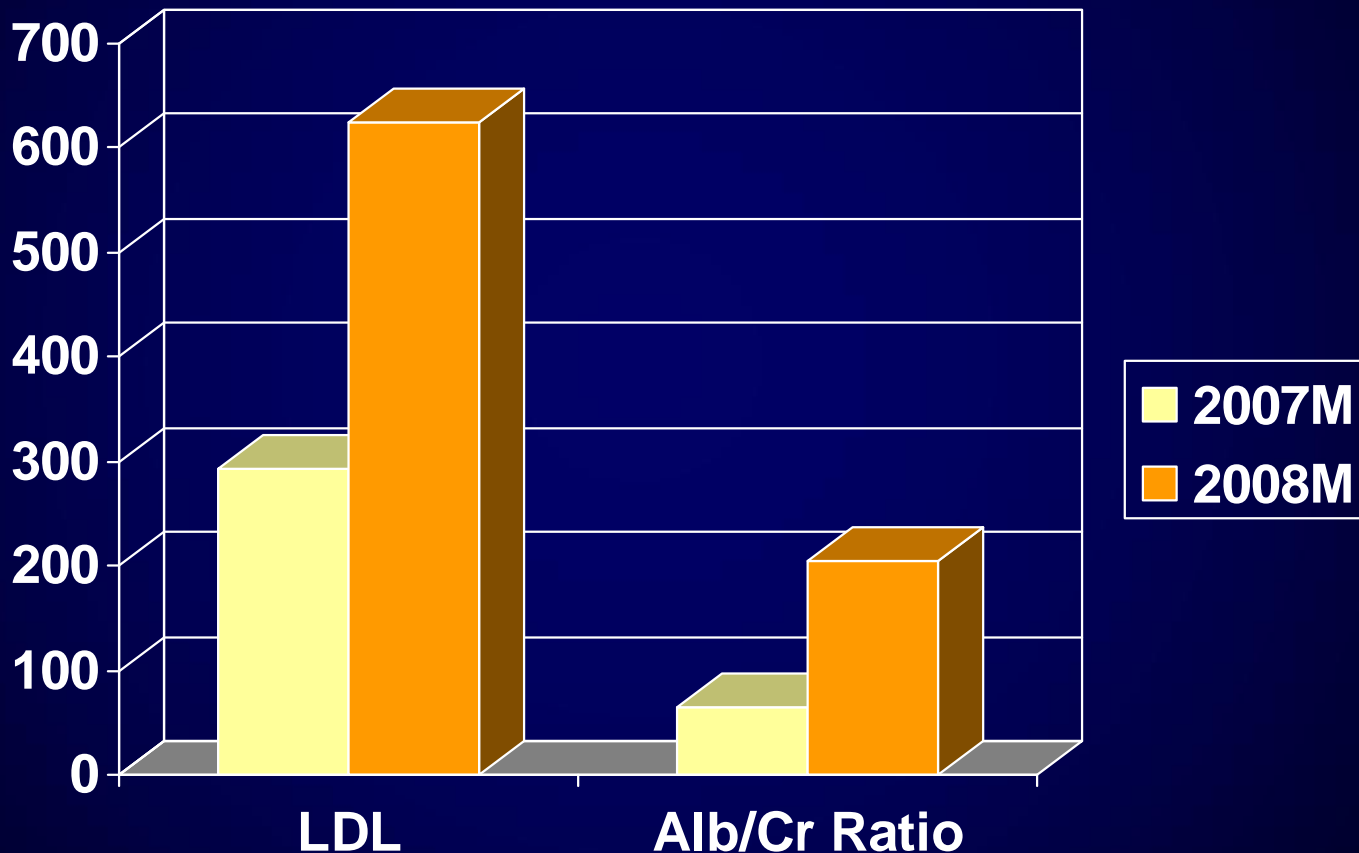
# Lab ordering changes March 2007-March 2008



**FBS 48.5 % increase**

**HgA1c 47.22 % increase**

# Lab ordering changes March 2007-March 2008



**LDL 112.63% increase**

**Urine Alb/Cr Ratio 212.12% increase**

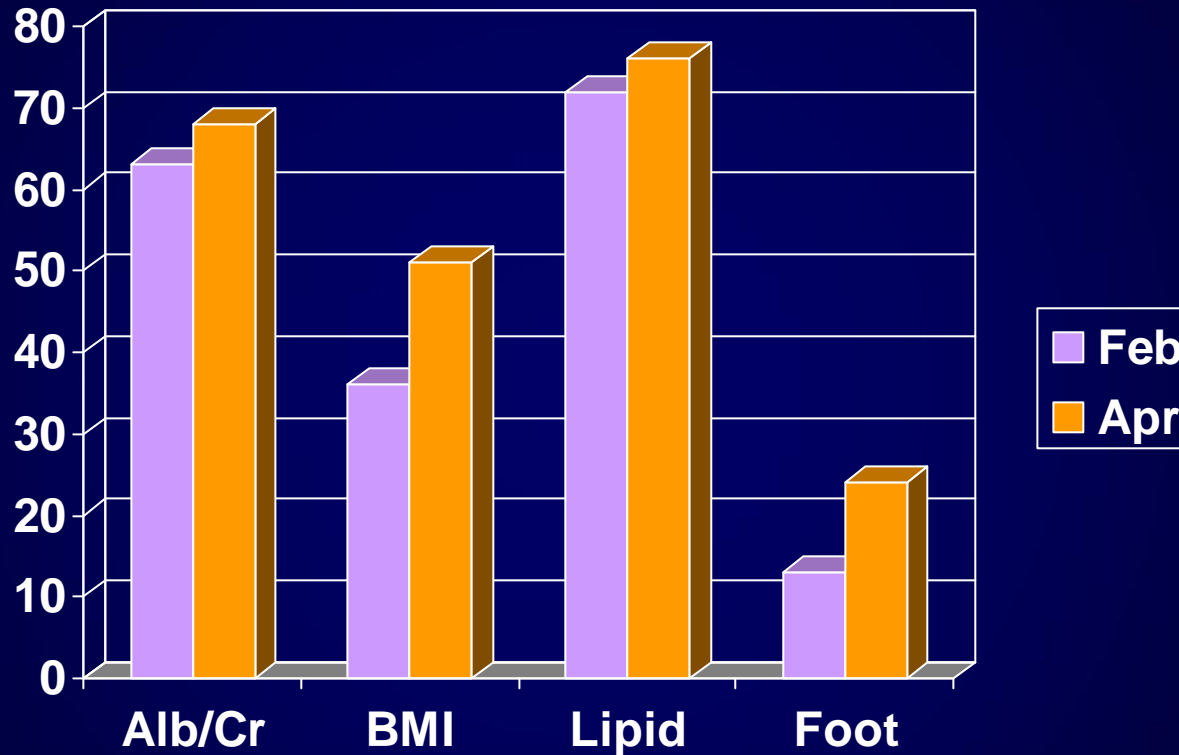


## Data Extract and Compliance Reports

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- First Data extract done February 2008 – as with most things has taken longer than expected to complete. Program needed to be written for data extract
- Report printed every 6 weeks for doctors to see the overall clinic percents and their individual stats

# Diabetes indicator



Percent of core patients having an indicator done or recorded in the last 12 months



# Compliance Numbers

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- Total compliance all indicators in Feb 53% and in April 59%
- Numbers affected as foot and eye exam require data input in new field and BMI requires smart field which started June 2007
- Ranges % compliance vary per doctor :  
Eye 0-59%, Alb/Cr 38-100%, Foot 0-97%  
Lipid 57-100%, BMI 24-100%,BP 80-100%
- Numbers of patients with DM vary per doctor from 3-76

# Dietitian

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- Dietitian has been very well received with positive comments from patients and physicians
- Recently dietitian went with one physician to Hutterite colony and gave session on healthy eating. Positively received
- Another colony has requested her services since this session

# Conclusion

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- Next step is to use our nurses to help the doctors screen their patients appropriately and to fill in data that is already in the chart but not in a smart field
- Plan group sessions by the dietitian in the future to expand the number of clients she can see