

# CVFHT Lung League

## Our journey to decreasing ER visits by 50%

October 22<sup>nd</sup>, 2013

Presented by:

James Pencharz, Gord Canning,  
Heather Hadden and Louise Smith



### OUR MISSION OF EXCELLENCE

High Standard Interprofessional Primary Care + Family Medicine Teaching

## **Presenters:**

James Pencharz, Gord Canning, Heather Hadden, Louise Smith

## **Relationships with commercial interests:**

We have no involvement with industry and cannot identify any conflict of interest

# Disclosure of Commercial Support

- This program and presenters have received no financial support or in-kind support from industry
- No specific products will be discussed in this program

# Disclosure

The content and/or presentation of the information with which Faten Mitchell is involved promotes quality or improvements in health care.

The content of this presentation and work is distinct from her work as an employee of Health Quality Ontario and was completed as a component of her Quality Improvement and Patient Safety master program with University of Toronto.

# Who are we?

## Academic Family Health Team:

- 2 sites (New bilingual Site)
- 11,000 patients
- 15 IHPs
- 10 Physicians
- 18 Admin staff
- 23 Family Practice Residents

Multiple Chronic Disease Management and Preventative Care Programs

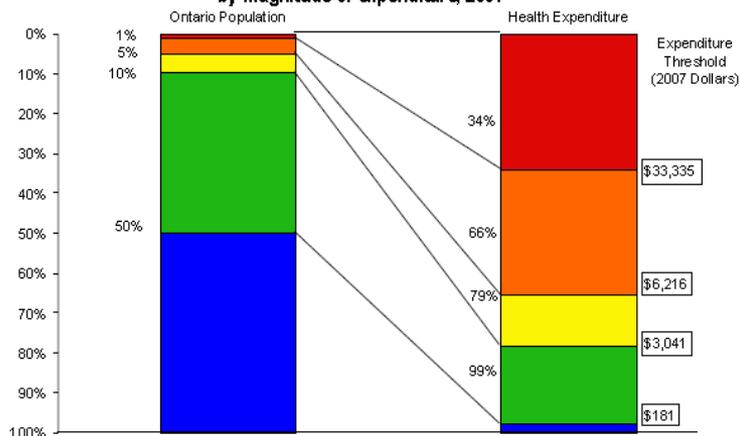




# Our Team



**Figure 3. Health Care Cost Concentration:  
Distribution of health expenditure for the Ontario population,  
by magnitude of expenditure, 2007**

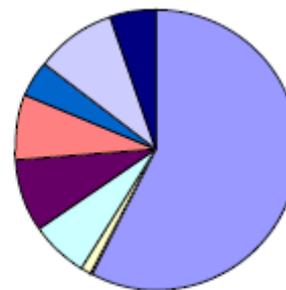


On average, health care spending is highly concentrated with the top 5% of the population (ranked by cost) accounting for 66% of expenditure

Evidence Guiding Health Care

ICES Institute for Clinical Evaluative Sciences

**B) Top 1% With Acute Care Costs**



- Acute care
- ED visits
- Same day surgery
- CCC
- Rehab
- Physician visits
- Drugs
- LTC
- Home care

Top 1% of health care users are people 65 and older with chronic disease and account for 50% of acute care costs

Conditions among the top 1% users:

- **Mostly Chronic Disease:**
  - ◆ Heart Failure, **Chronic Obstructive Pulmonary Disease**, Myocardial Infarction, General Signs and Symptoms
- Infection (Pneumonia & Urinary Tract)
- Stroke & Hip Fracture
- End of Life
- Cancer

## Top 10 CMGs Among Top 1% with Acute Admission in 2007-08

Top 10 CMGs	% of Total Acute Admissions
Heart Failure without Cardiac Catheter	4.0%
<b>Chronic Obstructive Pulmonary Disease</b>	3.8%
Viral/Unspecified Pneumonia	2.4%
Myocardial Infarction/Arrest without Cardiac Catheter	2.1%
Fixation/Repair Hip/Femur	2.1%
Lower Urinary Tract Infection	1.8%
Ischemic Event of Central Nervous System	1.5%
General Symptom/ Sign	1.4%
Palliative Care	1.4%
Chemotherapy/ Radiotherapy Session for Neoplasm	1.4%

# Selecting the Focus

Aim statement : To reduce ER visits for identified COPD patients by 50% from Nov 1, 2012 to June 30, 2013

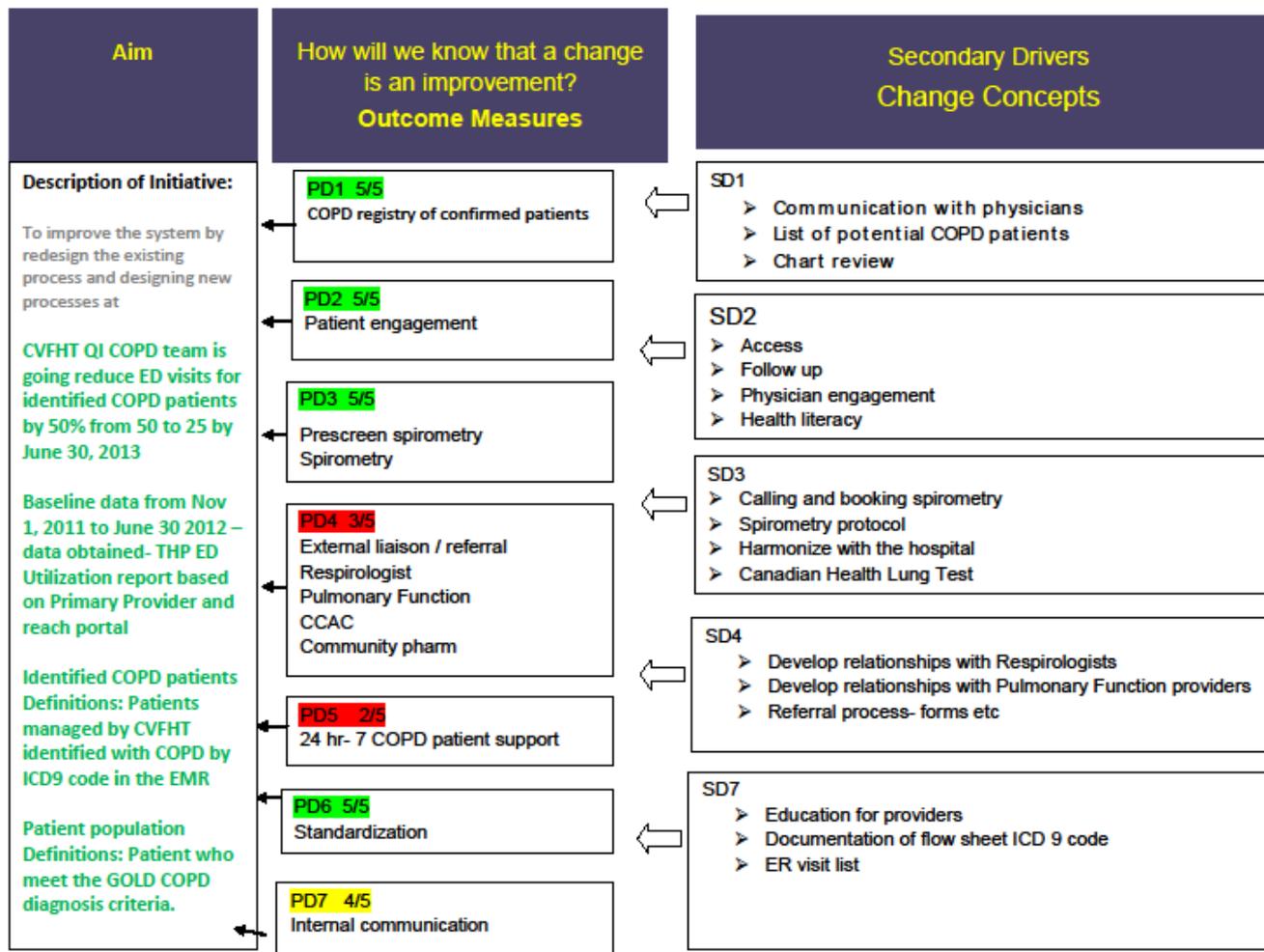


# Gaps Identified & Measured

- Identification
  - COPD registry (Gold Standard)
- Screening
  - Spirometry
  - Smoking Cessation
- Internal Processes
- External Transitions
  - Specialist, ER, hospital, CCAC

# Driver Diagram

CVFHT COPD patients Driver Diagram



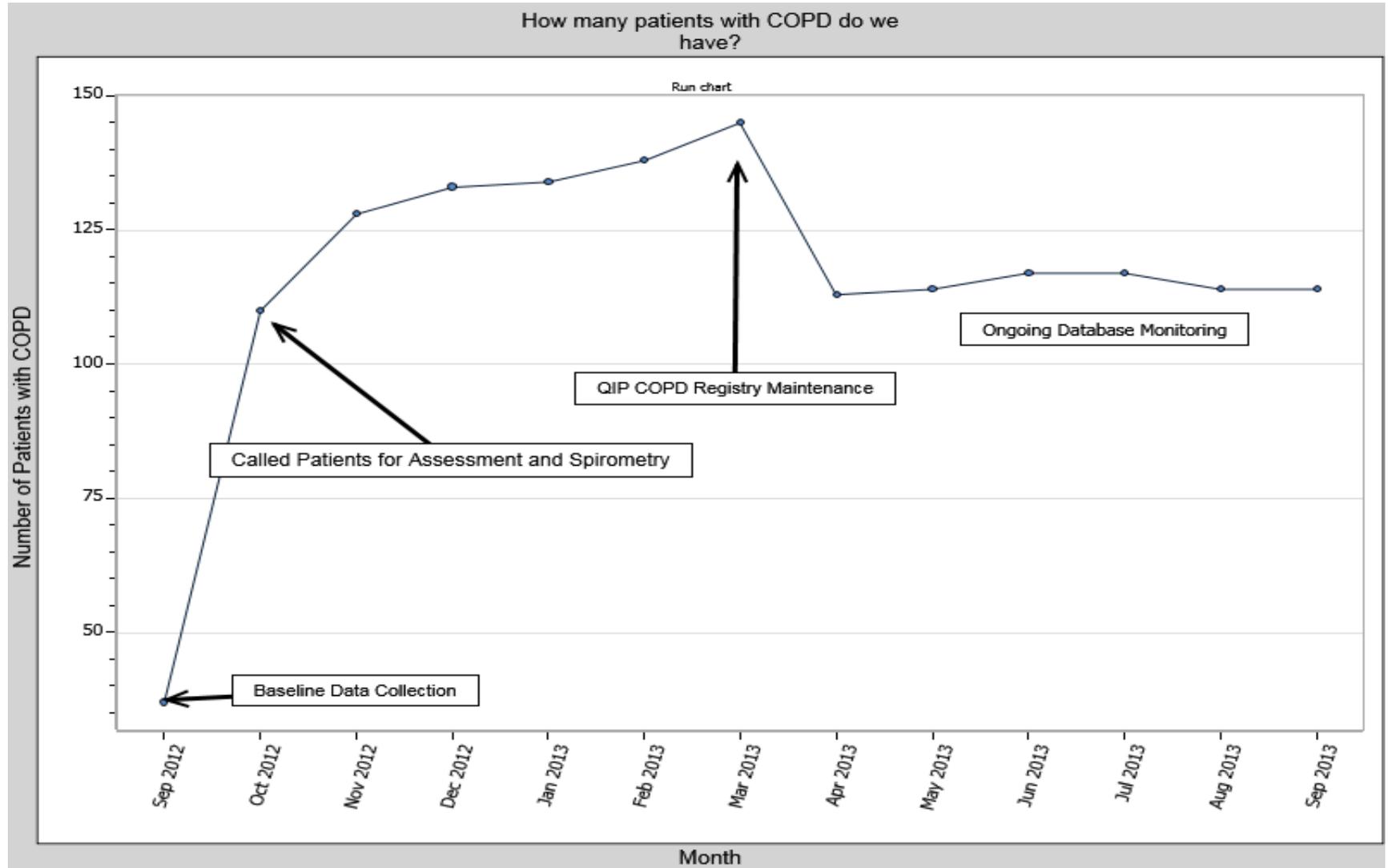
# Measurement Plan

Type of measure	Measure Name	Attribute of Quality	Driver Diagram Identifier	Operational Definition	Numerator	Denominator	How and from where will the Data collection	Who responsible for collecting the data
Outcome Measure	#of ED visits	Integrate	Aim	# of Pt visits to the THPER with AECOPD	# of ER Visits of patients with COPD	None	THPER report from corporate reports	Amanda / Gord
Process M	COPD registry (COPD R)	Pt centered	PD1	Pts who meet the operational definition of COPD by the GOLD criteria	# of COPD pts identified	None	EMR ICD9 Code, spiriva Query	Amanda / Gord
Process M	Follow up exacerbation - CLINIC	Pt centred	PD2	% of Pt from COPD R with AECOPD seen in clinic who have follow up within 72hrs	# of COPD R pts with AECOPD followed up within 72hrs (Type COPD Reason - FHT FOLLOw - UP)	# of COPD R pts seen for AECOPD	Daily report of the COPD visits from EMR, and chart review and f/u	Amanda / Gord
Process M	Follow up exacerbation - THPER	Integrate	PD2	% of pts from COPD R with AECOPD who visited THPER with f/u within 72hrs	# of COPD R pts with AECOPD THPER visit f/u within 72hrs (Type - COPD, Reason ER Follow up)	# of COPD R pts with AECOPD visiting THPER	Daily report of the COPD visits from ER utilization report, chart review and f/u	Amanda / Gord
Process M	Follow up exacerbation - HOSPITALIZATION	Integrate	PD2	% of pts from COPD R with AECOPD with hospitalization f/u within 72hrs of discharge	# of patients with AECOPD hospitalization f/u within 72hrs (Type - COPD, Reason - Hospital Follow up)	# of COPD R pts with AECOPD THP hospitalized	Daily report of the COPD visits from ER, review meditech for hospitalization.	Amanda / Gord
Process M	Pre- Screening Spirometry	Access	PD4	% of pts that were referred to spirometry with positive CLHT who received	# spirometry done on pts referred	# of pts referred	From EMR	
Process M	Communication Board	Integrate	PD5	% of months communication board is updated	# of months updated	# of months	From Communication Board	Marnie
Process M	Number of spirometry visits per month	Patient-centred	PD4	# of spirometrys booked- asthma/copd/screening with Gord or Marnie per month (- no shows)	none	none	IN EMR under Report Tab- drop down provider name and appointment reason/type for date period - for spirometry	Heather

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# COPD Registry



# Gaps Identified & Measured

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# Case Example (Screening)

Patient LB 51yr F

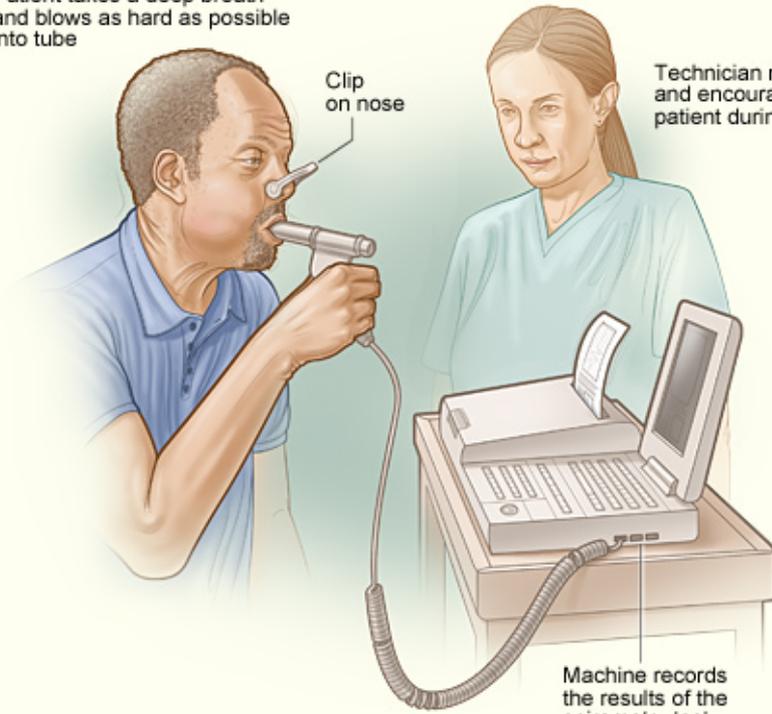
- Filled out Smoking Status Screener at front desk
- Smoker
- +Canada Lung Health Test (CLHT)
- Refused smoking cessation initially
- Referred to Spirometry due to + CLHT
- Diagnosed with COPD
- Started on Spriva
- Came to see Smoking Cessation Counselor immediately that day
- Came to Ottawa Model for Smoking Cessation (OMSC)
- STOP study (Free nicotine replacement therapy)
- Quit now x 16 months

# Spirometry – Diagnosis and Alignment

Patient takes a deep breath and blows as hard as possible into tube

Clip on nose

Technician monitors and encourages patient during test



Machine records the results of the spirometry test

# Smoking Status Screener (SSS)

CREDIT • VALLEY

Équipe de Santé Familiale • Family Health Team



UNIVERSITY OF OTTAWA  
HEART INSTITUTE  
INSTITUT DE CARDIOLOGIE  
DE L'UNIVERSITÉ D'OTTAWA

OTTAWA MODEL  
FOR SMOKING CESSATION  
IN PRIMARY CARE  
MODÈLE D'OTTAWA  
POUR L'ABANDON DU TABAC  
EN SOINS PRIMAIRES

Name/Nom: \_\_\_\_\_

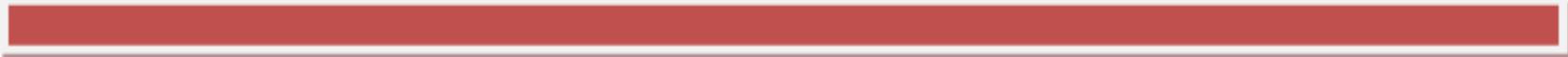
Please check ONE/Veuillez cocher UNE case:

Are you a non- smoker (**NEVER** smoked)/Êtes-vous un fumeur (**JAMAIS** fumé)?

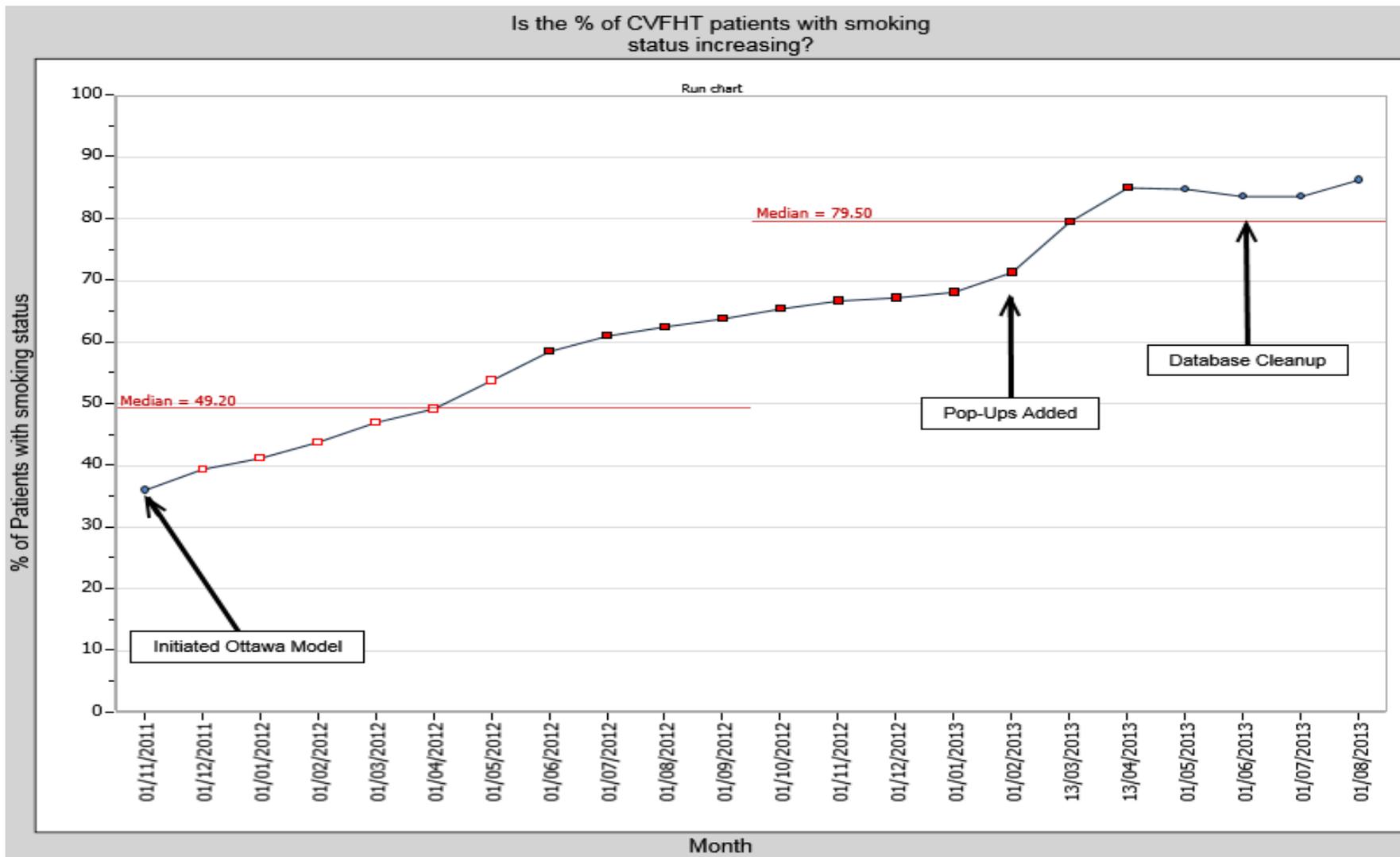
Are you an ex-smoker (**QUIT**)/Êtes-vous un ancien fumeur (**ARRÊT**)?   
Quit Date/Date de cessation \_\_\_\_\_

Have you used any form of tobacco in the past 7 days/Avez-vous fumé au cours des 7 derniers jours?

Have you used any form of tobacco in the past 6 months/Avez-vous fumé au cours des 6 derniers mois?



# Percentage of Patients with Smoking Status





### Canadian Lung Health Test/Test canadien de santé pulmonaire

If you are over 40, and smoke or used to smoke, take this test to screen for lung health/ Si vous avez plus de 40 ans et êtes fumeur ou ex-fumeur, faites ce test pour vérifier votre santé pulmonaire.

- |   | YES/OUI                  | NO/NON                   |
|---|--------------------------|--------------------------|
| 1. Do you cough regularly/Toussez-vous régulièrement?   | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Do you cough up phlegm regularly/Expectorez-vous ou crachez-vous régulièrement?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Do even simple chores make you short of breath/Êtes-vous essoufflé, même légèrement, lorsque vous accomplissez des tâches simples ?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Do you wheeze when you exert yourself (exercise, go up stairs)/Votre respiration est-elle sifflante durant la nuit ou à l'effort (par exemple, quand vous montez des escaliers)?             | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Do you get many colds, and do your colds usually last longer than your friends' colds/Contractez vous souvent des rhumes qui persistent plus longtemps que chez les gens de votre entourage? | <input type="checkbox"/> | <input type="checkbox"/> |

If you answer yes to any of the questions, a breathing test should be completed to assess your lung health/Si vous répondez OUI à l'une de ces questions, vous devriez passer un test respiratoire pour évaluer la santé de vos poumons.

# CLHT Screened

# Case Example (Screening)

Mr. and Mrs. R

- Came to CVFHT
- Pop up—smoking cessation required (Amanda)
- Smoker- did not fill out reverse (Merlika messaged Heather)
- Heather phoned-did CLHT over phone-+=CLHT
- Mentioned husband also smoked—had cough
- Rec spirometry to both
- Came in- Gord spirometry
- Lung age
- OMSC
- STOP study
- Champix



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# Internal Process Improvements

- COPD Registry Identification in EMR
- Same Day Visits
- Education of front desk staff
- Daily review of ER visits, hospitalizations and discharges
- Scheduling changes to accommodate Same Day and 72 hour follow-up

## Encounter Sheet

## Encounter Sheet

**COPD** - 2013-Oct-08 1:30pm  
**Appointment:** Gordon Canning

**Same Day Visit**  
?EXACERBATION?

**Daffy Duck** M 29 Yr ( 1984-Mar-01 )

Usual Dr: Kerrie Shaw

2364 Orlando Drive  
HOLLYWOOD

Ins:  
Home: (519) 856-4068  
Work: (000) 000-0000

File:

COPD REGISTRY

**Lifestyle**

ex-smoker

SMOKING CESSATION COUNSELING

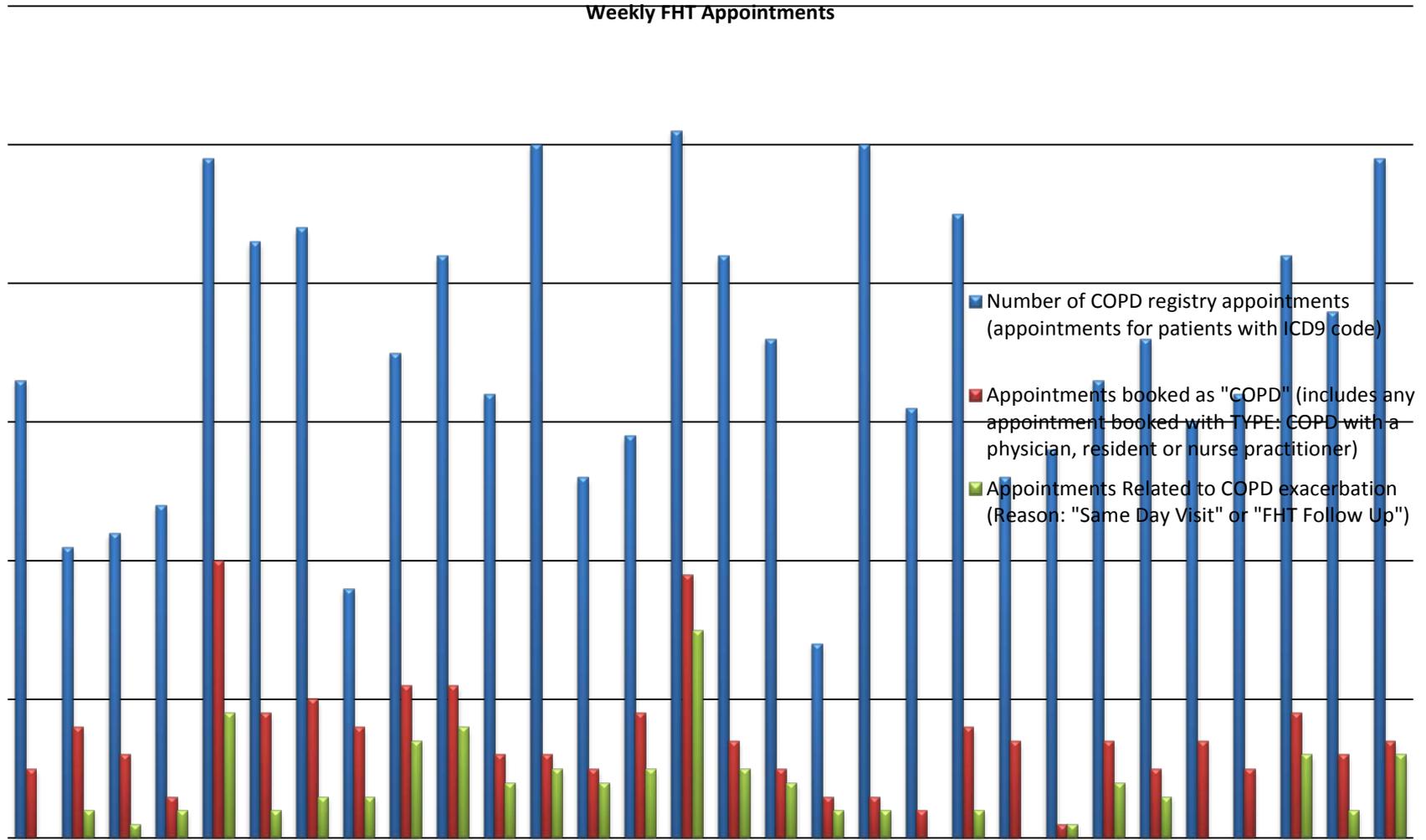
REFER TO SPIROMETRY

Alcohol [**12 beers/week**]

Drugs [**marijuana 1/week**]

# Clinic Appointments

Weekly FHT Appointments



## Mr. GC – 84 yr old M

- Severe COPD on home oxygen
- Managed reactively by respirologist in crisis
- 8 ER admissions in past year, 4 hospitalizations
- Poor compliance with all treatments
- Caregiver burnout
- COPD Registry Case finding
- Education, family centred approach
- 1 ER admission and hospitalization with primary care part of acute care support and d/c planning
- Significant improvement in CAT scores, reduced ER and hospitalization, improved quality of life
- Now managed by primary care with collaborative support from respirology



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## New External Linkages

- ER visit – THP – 3 site daily reports and follow up
  - All CVFHT ER visit including reason referenced with our COPDR
  - CVFHT THP Hospital admissions and discharges
- Respirologists
  - Improved communication with Respirology
  - Telephone support as needed, improved writing communication
- CCAC/ Respiratory Partners
  - Improved responsiveness to transitions to palliative care in the community

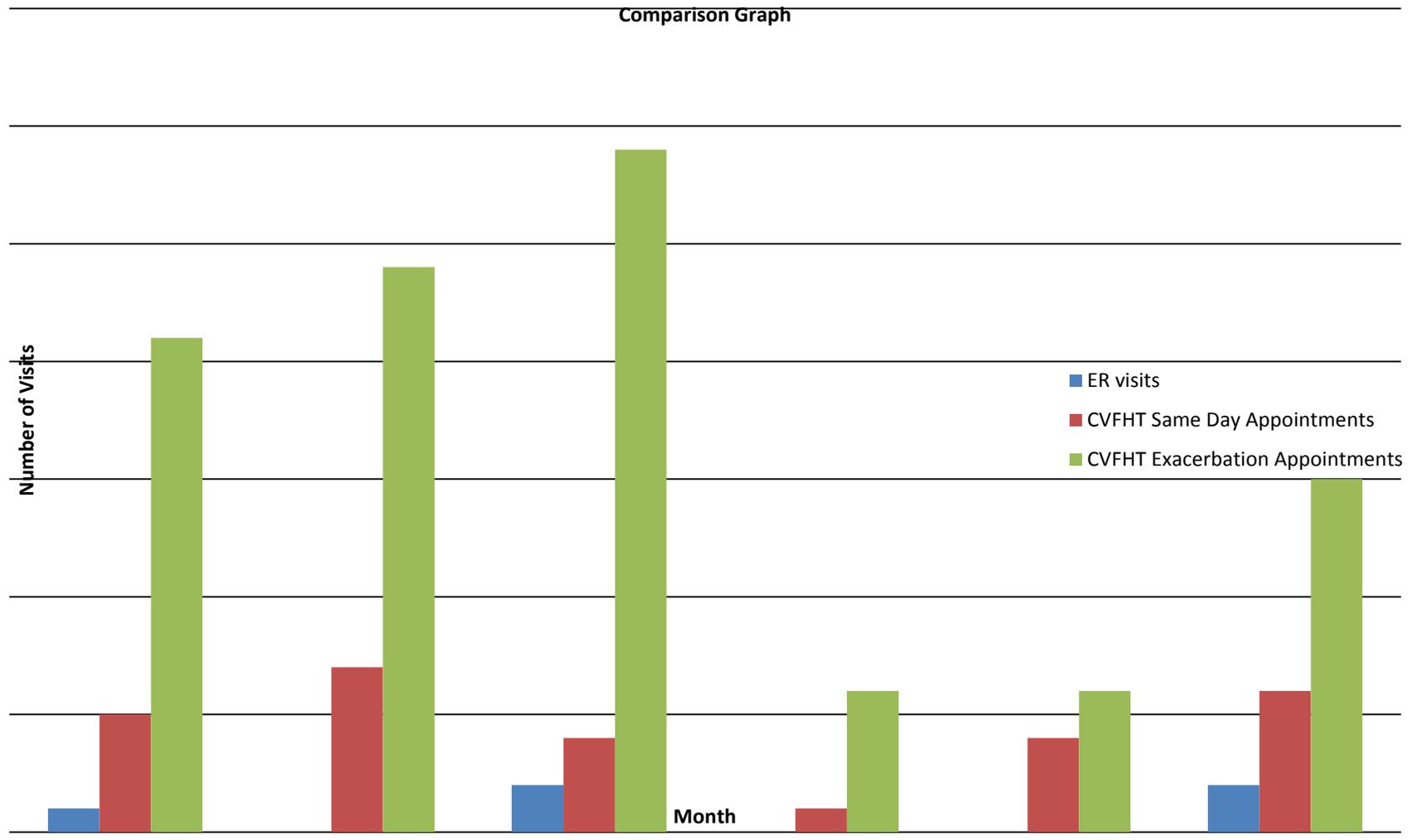
# Case Example (Transitions)

## Mr. GC – 84 yr old M

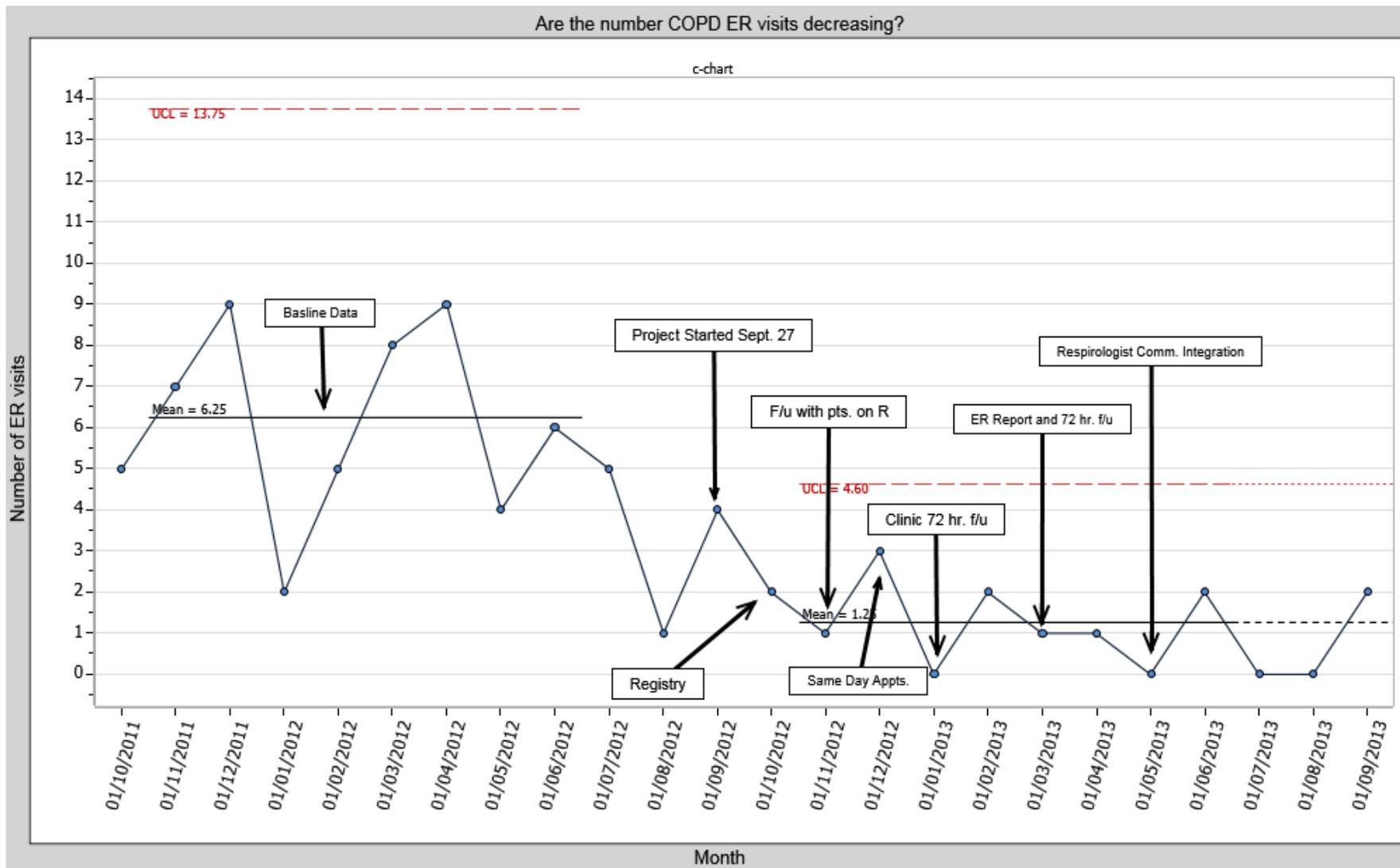
- Identified on ER report
- 72 hour follow-up
- Communication with his respirologist
- Communication with his home oxygen provider
- Liaise with CCAC
- Education to integrate all the providers of care
- Medication Reconciliation with community pharmacy regarding discharge prescriptions



# Comparison Graph

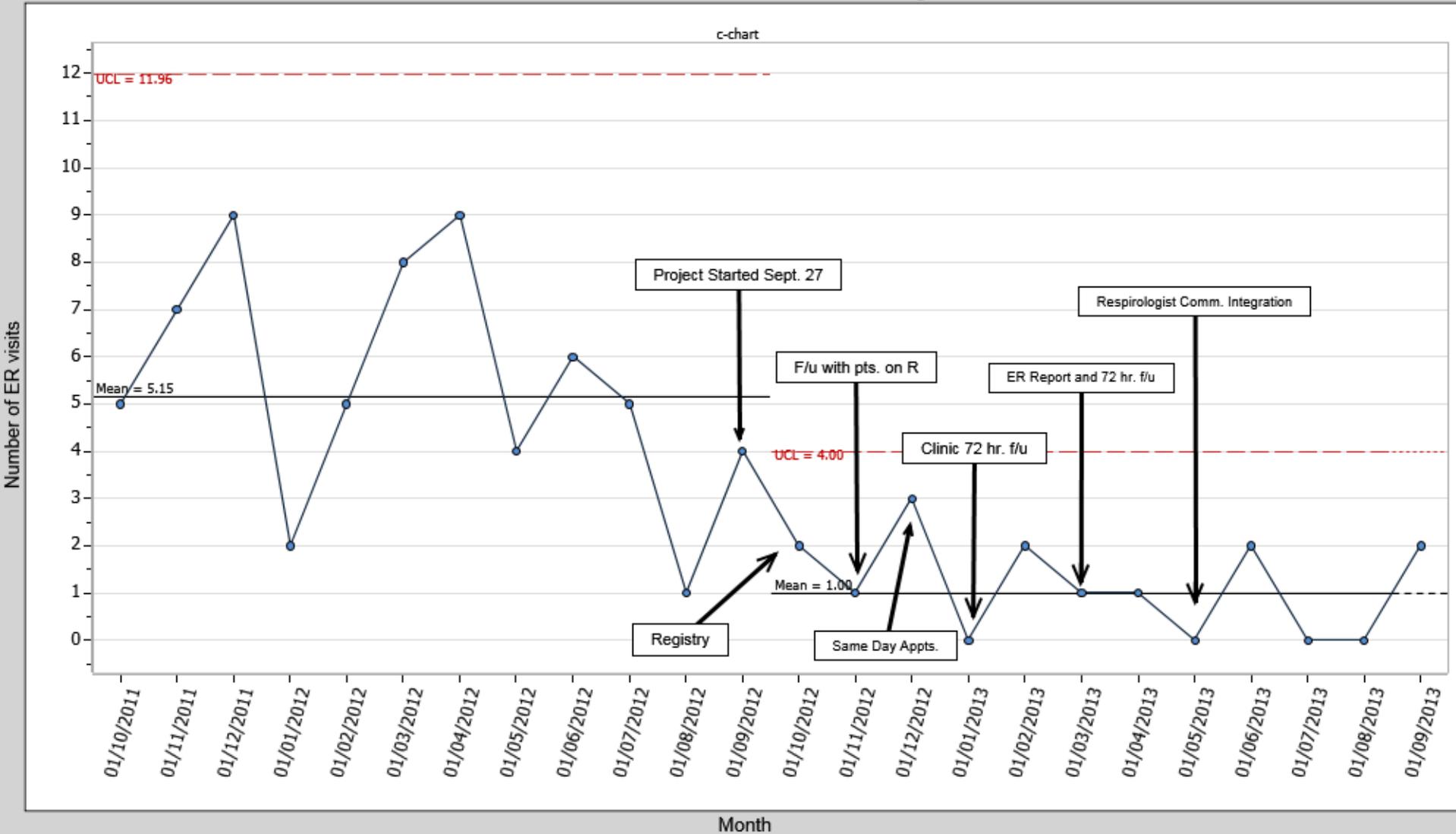


# ER visits Baseline and Post Intervention



# ER Visits year over year

Are the number COPD ER visits decreasing?



# ER Avoidance



- Avoided **51** ER visits exceeded our aim of 50%
- The actual average cost of an ER visit is \$271
- Estimated cost avoided is \$13,821

# Hospital Admission Avoidance



- Avoided **7** admissions based on ER report
- The actual average cost for a COPD hospital admission is \$10,000
- Estimated cost avoided is \$70,000
- Estimated hospital days saved is 70 days



## Green Dollars

- Identified 983 smokers to date
- 315 smokers Initial Smoking Cessation consult –at \$20.37 and 2 follow up per year at \$7.50 for total of \$10,241
- Total Potential –\$23,627 for providing excellent care

# Next Steps



# Questions

