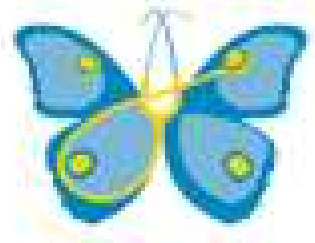


Successfully Integrating Spirometry into Primary Care

Amy Massie RRT/CRE
Angela Shaw RRT/CRE


I LOVE SPIROMETRY
ME TOO!
Asthma Facts
Triggers
How Asthma Affects Your Lungs
Medications for Asthma

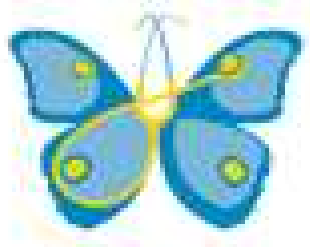
Outline

- 1300-1350
- “Getting to know you…”
- Getting to know us
- Based on above information:
  - Rationale for Spirometry in Primary Care
  - Communication with HCP’s with less Spirometry familiarity
  - Strategic Learning System for increasing familiarity
  - Implementation

Tell Us about YOU!

- Im

About Us!



- We come from St. Mary's General Hospital in Kitchener-Waterloo
- SMGH is the Regional Respiratory Centre of Excellence
- Onsite Airway Clinic provides Asthma Education, COPD Activation Program, Asthma/COPD Education in the Community, Smoking Cessation Counselling
- Staffed by RN (EC), and RRT with CAE or

St. Mary's
GENERAL HOSPITAL

Community Partnership

- Began link with Family Medicine (Primary Care) in 2005 through PRIISME program as a community based extension of existing Airway Clinic.
- Started with Asthma, then expanded to offer COPD education in 2007.
- Spirometry familiarity began then.


New Vision
Family Health Team

New Vision Family Health Team

- 11 MD's
- Started with infrequent Respiratory Education via PRIISME programs
- Inspired by the success of programs to increase availability by securing independent funding from the Ontario Ministry of Health

Currently

- RRT/CRE 2 full days/week
- Soon expanding to 3 days/week!
- We see patients for Asthma/COPD education, Smoking Cessation

Why Spirometry in Primary Care?

- Improved access to diagnostic testing
- No need to go to hospital
- Increased accurate diagnoses!
- Improved patient understanding of their condition
- Ongoing monitoring of Chronic Conditions

Strategy

- Essentials:
  - Equipment
  - Awareness among team members of what is involved in patient visits
  - Buy in from team members
  - Familiarity with Spirometry**
  - Have a site Champion.

Where to start?

Equipment Suggestions

- Choose a spirometer which will provide a custom report
- If you have electronic documentation, choose one which will allow you to attach the report to the patient record

BUSY!!

Pat-Name : AMY
Pat-Number : 7

09-02-09 19:06

Age : 30 year
Gender : F

Height : 69 ins
Weight : 165 lbs

Ethnic : C
Smoker : N

Room : B

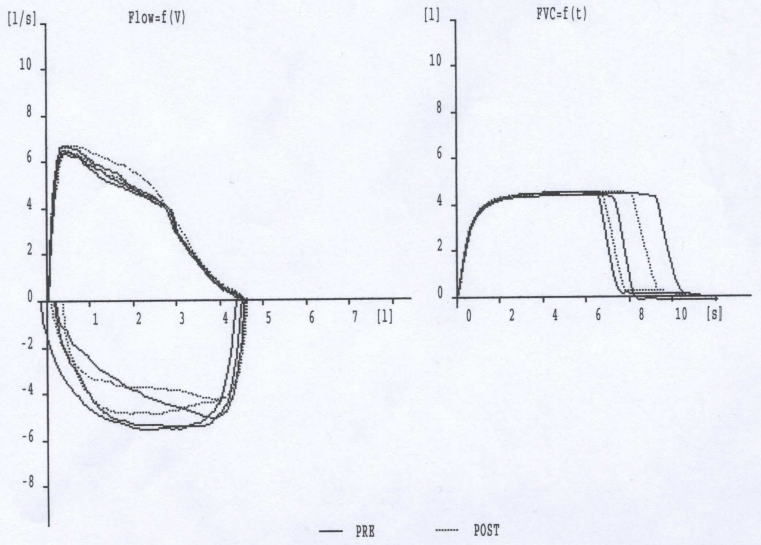
Normals : Knudson/ITS

Diagnosis : RESULTS APPEAR NORMAL
NOT CLEARLY IMPROVED
UNCONFIRMED REPORT

ATS criteria met (PRE)
ATS criteria not met (POST)

Lung age : 30 year (PRE)

			PRE		POST			PRE			POST		
		PRED	BEST	%PRED	BEST	%PRED	%CH	MEAS1	MEAS2	MEAS3	MEAS1	MEAS2	MEAS3
FVC	l	4.37	4.55	104	4.58	105	1	4.54	4.55	4.41	4.58	4.54	
FEV1	l	3.65	3.77	103	3.84	105	2	3.77	3.72	3.69	3.84	3.76	
FEV1/FVC	%	83.5	82.9	99	83.9	100	1	83.0	81.9	83.8	83.9	82.7	
FEV3/FVC	%	96.8	98.3	102	97.7	101	-1	98.4	98.3	99.2	97.1	98.4	
FEF.2-1.2	l/s	6.39	6.37	100	6.41	100	1	6.37	6.06	6.02	6.41	6.25	
FEF25-75%	l/s	3.76	3.99	106	4.27	114	7	3.99	3.90	3.96	4.27	3.88	
FEF75-85%	l/s	1.42	1.27	90	1.25	89	-1	1.27	1.14	1.34	1.25	1.26	
PEF	l/min	423	402	95	403	95	0	402	380	388	403	395	
FEF25%	l/s	6.34	5.93	94	6.35	100	7	5.93	5.72	5.55	6.35	5.72	
FEF50%	l/s	4.44	4.65	105	5.15	116	11	4.65	4.55	4.53	5.15	4.47	
FEF75%	l/s	2.02	1.91	94	1.89	93	-1	1.91	1.79	1.94	1.89	1.91	
FIVC	l		4.57		4.55		-1	4.50	4.38	4.57	4.32	4.55	
FIV1	l		3.96		3.72		-6	0.15	3.89	3.96	3.72	3.38	
FIV1/FIVC	%		86.6		81.7		-6	3.3	88.8	86.6	86.0	74.4	
PIF	l/s		5.06		4.87		-4	5.06	5.44	5.56	4.87	4.27	
FIF50%	l/s		4.26		4.86		14	4.26	5.37	5.53	4.86	3.75	



Calib. : 06-09-08

SCHILLER

SP-2 1a14

Spirometry Report

Pre vs. Post Detailed Report

Patient Information

Name: [redacted]	**ID:** [redacted]	Birthdate: [redacted]
Height at test (in): 66.0	Sex: Male	Smoking history (pk-yrs): 47
Weight at test (lb): 208.0	Age at test: 58	Predicted set: Toronto 1991

Comments:
Diagnosis: [redacted]
Physician: Dr. Mel Cescon
Technician: Amy Kropf RRT/CRE

Test date/time: 23/07/08 08:49:30 AM
Effort protocol: ATS/ERS 2005

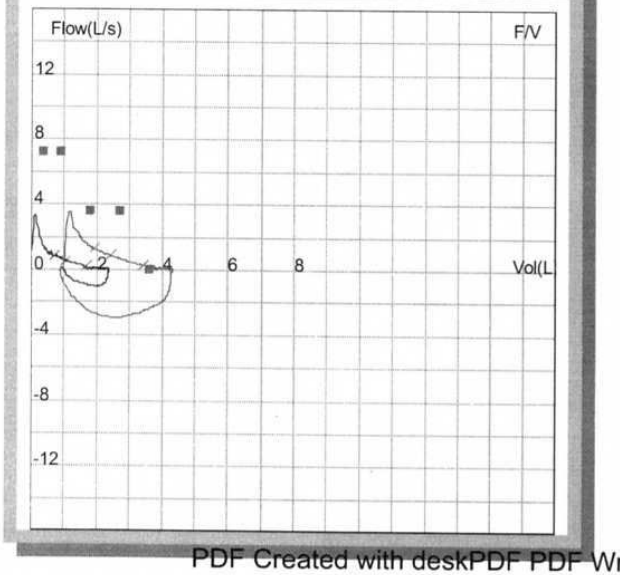
Bronchodilator:400 mcg Salbutamol with chamber

Results, Best Pre- and Post-

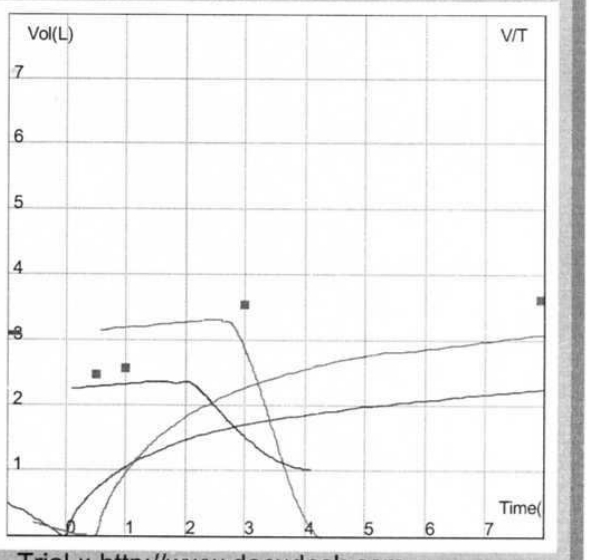
Result	Pred	Pre	%Prd	Post	%Prd	%Chg
FVC (L)	3.60	2.36	66%	3.31	92%	40%
FEV1 (L)	2.57	1.06	41%	1.47	57%	39%
FEV1/FVC	0.72	0.45	63%	0.44	62%	-1%
FEF25-75% (L/s)	3.08	0.40	13%	0.58	19%	47%
PEFR (L/s)	7.19	2.91	40%	3.62	50%	24%
Exp time (s)	9.98		9.90		-1%	

Test comments (Pre): Good patient effort and cooperation
Test comments (Post): Good patient effort and cooperation

Flow vs Volume



Volume vs. Time

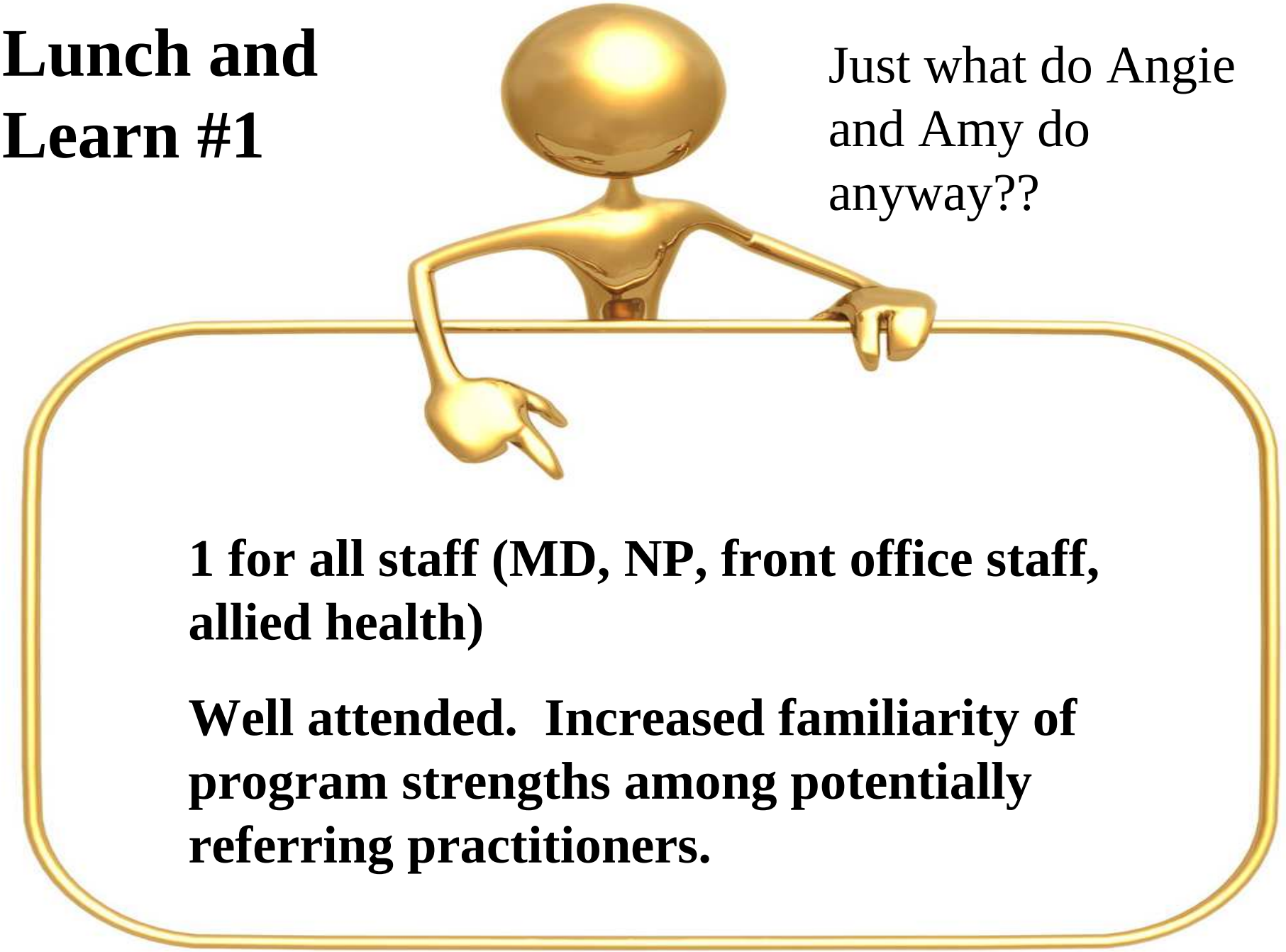


ıch Better!

Strategy

- Essentials:
  - Equipment
  - Awareness among team members of what is involved in patient visits
  - Buy in from team members
  - Familiarity with Spirometry**
  - Have a site Champion.

Lunch and Learn #1



Just what do Angie and Amy do anyway??

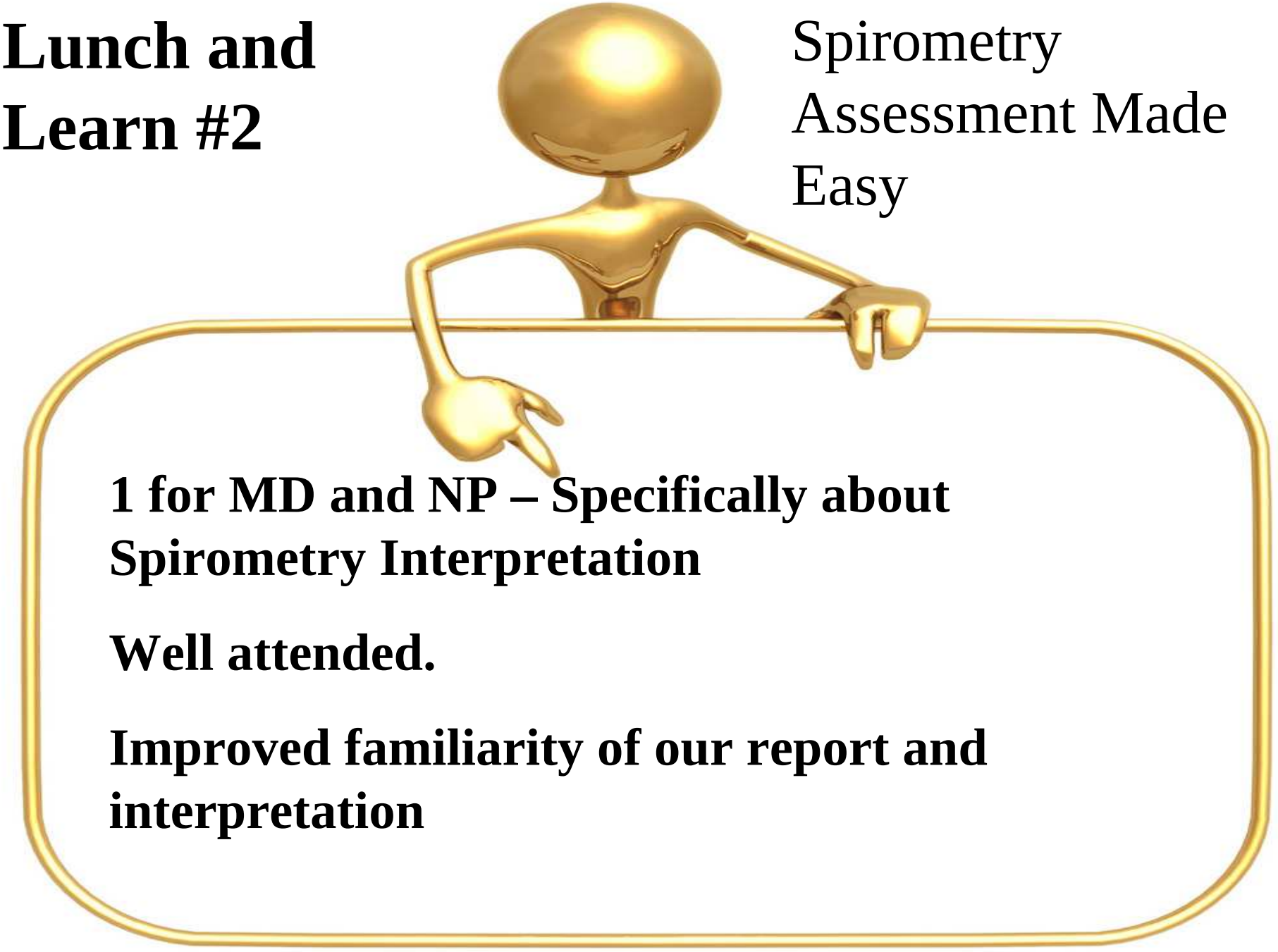
1 for all staff (MD, NP, front office staff, allied health)

Well attended. Increased familiarity of program strengths among potentially referring practitioners.

Strategy

- Essentials:
  - Equipment
  - Awareness among team members of what is involved in patient visits
  - Buy in from team members
  - Familiarity with Spirometry**
  - Have a site Champion.

Lunch and Learn #2



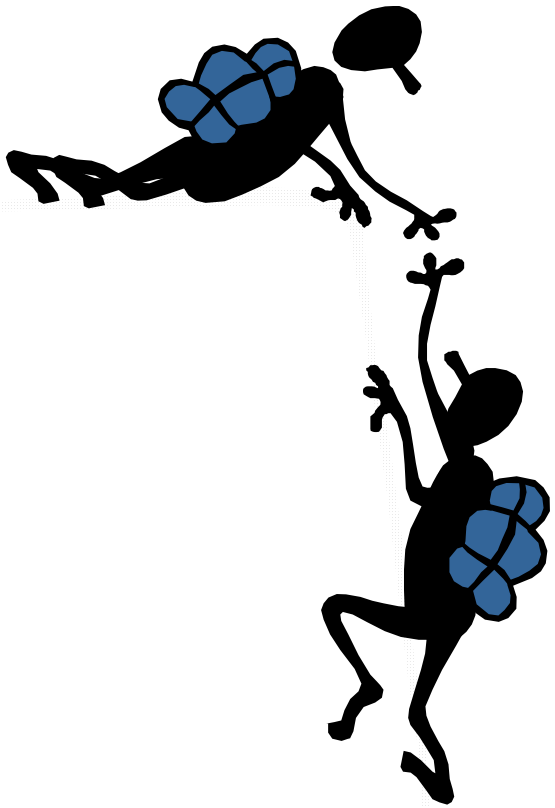
Spirometry Assessment Made Easy

1 for MD and NP – Specifically about Spirometry Interpretation

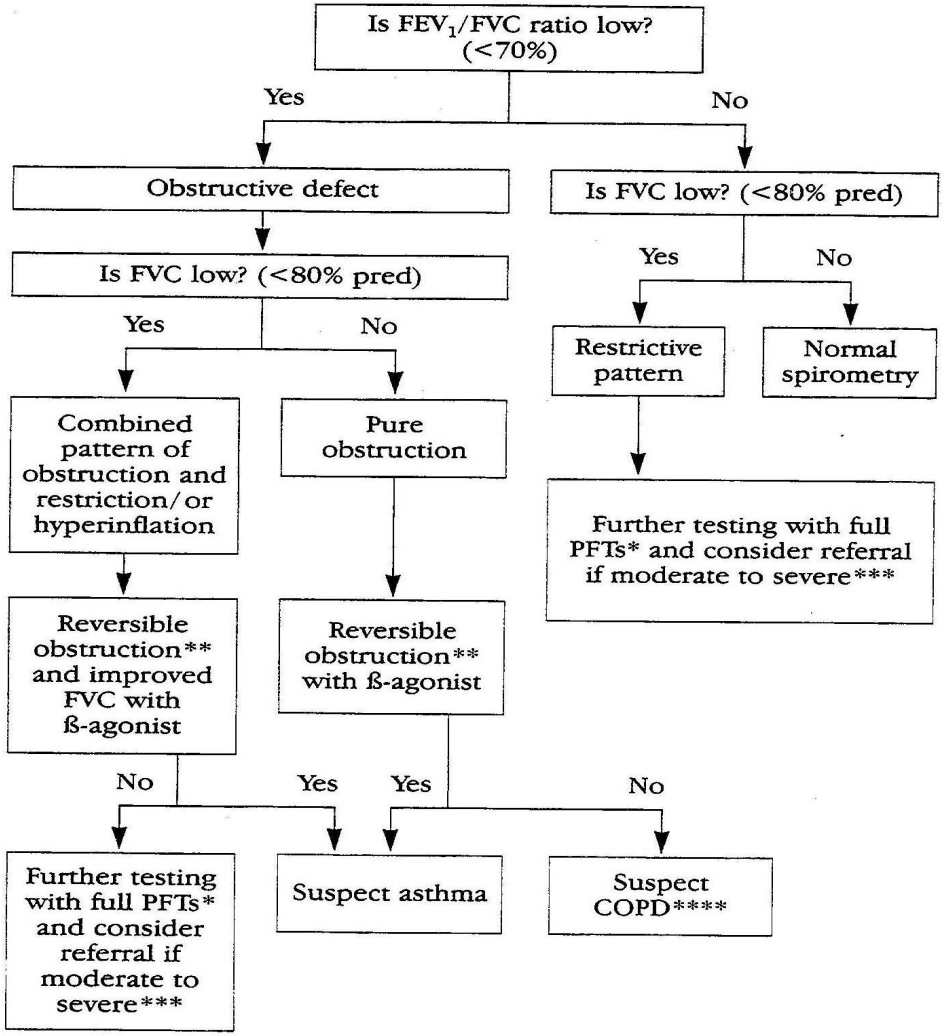
Well attended.

Improved familiarity of our report and interpretation

Cl



Diagnostic Flow Diagram



Adapted with permission from Criner [11]

* means Pulmonary Function Tests with CO Diffusion and Lung Volumes
** means > 12% and > 200 cc. improvement
*** see Table 6 for definitions of mild, moderate, and severe
**** Some chronic asthmatics will not respond to beta agonist initially. Some COPD patients will show slight improvement with beta agonist.

Spirometry Lunch and Learn

- Pearls of Wisdom
  - We provided them with lunch
  - We provided them with a Spirometry interpretation algorithm
  - We interpreted a few with them
  - … Then we pushed the limits!!
  - We pulled up their patients spirometry reports (1 for each MD in attendance) and had them interpret it.

Strategy

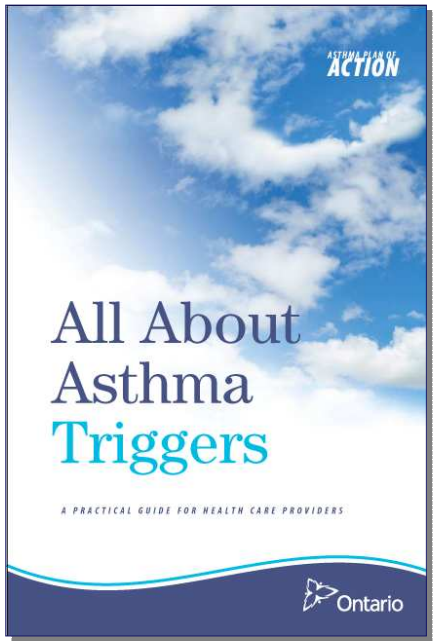
- Essentials:
  - Equipment
  - Awareness among team members of what is involved in patient visits
  - Buy in from team members
  - Familiarity with Spirometry**
  - Have a site Champion.

Grooming a Site Champion

- Physician Lead asked/appointed the newest team member.
- We met with the Champ to discuss the role
- He attended The Lung Associations Provider Education Program, “Spirometry Ins and Out’s” – Spirometry Interpretation Workshop

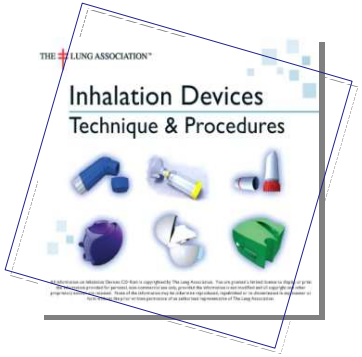
Provider Education Program

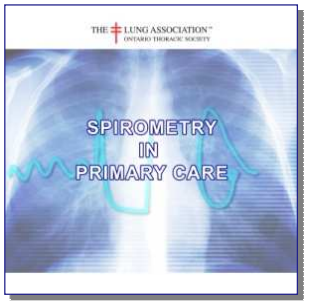
www.olapep.ca



Resources:

- Spirometry in Primary Care
- Inhalation Devices
- All About Asthma Triggers





Provider Education Program

www.olapep.ca

➢PEP workshops

Asthma, COPD, Spirometry Interpretation, COPD VS Asthma

➢Online CME

Evidence-Based Asthma Case Series – CMAJ

http://asthma.discoverycampus.com

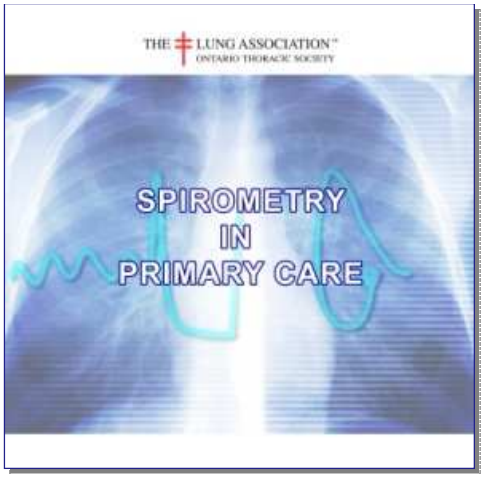
- Diagnosis and Management of Adult Asthma
- Achieving Asthma Control in Preschoolers
- Management of Persistent Asthma in the Young Child

SPIROMETRY

The Ins and Out's

Spirometry Interpretation Workshop

Objectives

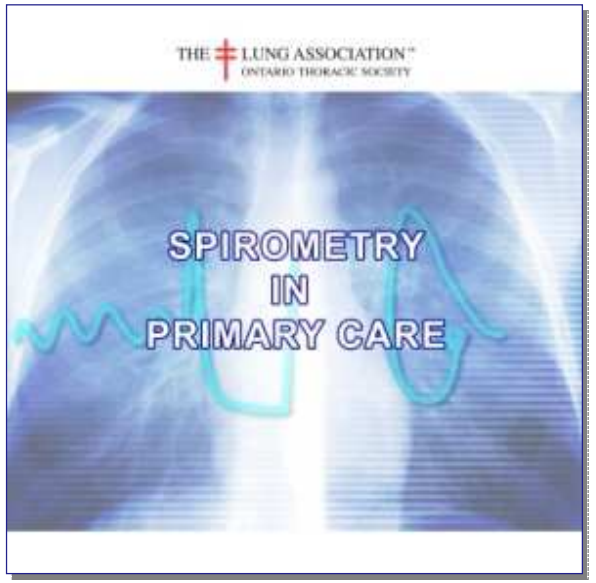


The program objectives are as follows:

- Understand the role of spirometry as an objective measurement of lung disease.
- Review spirometry testing, terms and measurements.
- Understand the criteria for best test acceptability/repeatability.
- Gain confidence in the interpretation of spirometry.

This is a two and half hours program comprised of two presentations, one on "Spirometry Ins & Out's", which includes a demonstration on how to do spirometry, and one on "Spirometry Interpretation" delivered by specialists. Following the presentations is a discussion period during which spirometry test results will be discussed. The participants have the benefit of gaining knowledge from a specialist in the field and the opportunity to actively work through

<u>interpreting test results</u>.



For More Info

- Contact
- Dilshad Moosa, BSc.RRT,CRE
  Manager, Provider Education Program
  (416) 864 9911 ext 272
  moosad@on.lung.ca

Champion cont’d

- Following attendance of the Spirometry Workshop:
  - We put him to work interpreting Spirometry reports
  - We formulated a custom stamp in the electronic record for Spirometry interpretation

Moving Forward

- We are now building a similar program at another FHT in Kitchener: The Centre For Family Medicine

- Have done our 1st staff lunch and learn and we are currently making arrangements for our site champion to participate in the spirometry interpretation workshop

Summary

1. Have Good Equipment
2. Increase awareness among team members of what is involved in patient visits
3. Have buy in from team members
4. Increase Familiarity with Spirometry
5. Have Lung Association Provide come to you!
6. Have a site Champion.

Discussion

Our Contact Information

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- Angela Shaw RRT,CRE
  - ashaw@smgh.ca