

Association of Asthma Educators: Becoming an Asthma Educator and Care Manager

Produced by the Alabama Department of Public Health
Video Communications and Distance Learning Division

Case Studies

Faculty

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37 year-old WF

- This woman was diagnosed with asthma about 15 years ago
- She has had no consistent asthma care
- She visited a PCP a few weeks ago due to an asthma attack and fever and was given Combivent and Advair 250/50, both of which she has used "as needed"

37 year-old WF

- She was referred to the asthma clinic and presents with daily wheezing, chest tightness, and SOB in the AM, daily cough with dark sputum attributed to smoking, and nighttime awakenings
- She works as a clerk in a dusty store and is sensitive to perfumes, dust, and bleach

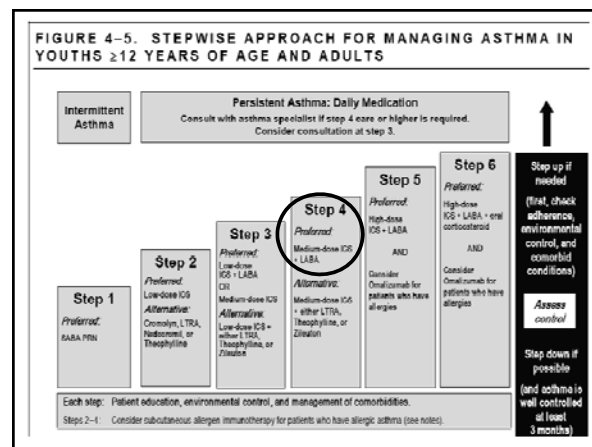
37 year-old WF

- She also reports breaking out into a rash when exposed to irritants
- Her FVC is 89% of predicted, FEV1 is 80% of predicted, and her FEV1/FVC is 74%
- Her FVC and FEV1 increased by 4% and 9% respectively post bronchodilator

- ### Issues
- Likely does not know much about asthma
 - No asthma action plan
 - Classification of severity unknown
 - Unknown status of environmental control

- ### Issues
- Poor understanding of her medications
 - She smokes
 - PFT is abnormal for her age

Components of Severity		Classification of Asthma Severity (Youths ≥12 years of age and adults)			
		Intermittent	Mild	Persistent	Severe
Symptoms	Symptoms	<2 days/week	>2 days/week but not daily	Daily	Throughout the day
	Nighttime awakenings	<2/month	3-4/month	>1/week but not nightly	Often 7x/week
	Short-acting beta ₂ -agonist use for symptom control (not prevention of EIB)	<2 days/week	>2 days/week but not >1x/day	Daily	Several times per day
Impairment	Interference with normal activity	None	Minor limitation	Some limitation	Extremely limited
	Lung function	• Normal FEV ₁ between exacerbations • FEV ₁ >80% predicted • FEV ₁ /FVC normal	• FEV ₁ ≥80% predicted • FEV ₁ /FVC normal	• FEV ₁ >60% but <80% predicted • FEV ₁ /FVC reduced ≤5%	• FEV ₁ <60% predicted • FEV ₁ /FVC reduced >5%
Risk	Exacerbations requiring oral systemic corticosteroids	0-2/year (see note)	≥2/year (see note)	Consider severity and interval since last exacerbation. Frequency and severity may fluctuate over time for patients in any severity category. Relative annual risk of exacerbations may be related to FEV ₁ .	



- ### Educator's Actions
- Asthma classified as Moderate Persistent
 - Asthma education program
 - Asthma pathophysiology, trigger identification, environmental control, medication use

- ### Educator's Actions
- WAAP
 - Medications: Advair 250/50 1 puff BID and Albuterol MDI 2puffs PRN
 - Symptom monitoring and PEF
 - Zone system
 - See that she has medications or access

Educator's Actions

- Smoking cessation
- Schedule F/U

Case Report #2: Mr. Z

- 40 yr old white male c/o SOB with activities
- Has had problems from childhood with wheeze, SOB
- Also snores and makes loud noises during sleep

Case Report #2: Mr. Z

- Has been taking DPI
Fluticasone/Salmeterol (250/50) 1 puff BID and Albuterol MDI 2 puffs PRN
- Did not feel that they did much

Case Report #2: Mr. Z

- Had a sleep study that was read as negative but patient stated that he “couldn't sleep”
- Being treated for asthma
- We saw him at the Victory clinic on his 5th visit

Mr. Z

- PMH includes obesity, renal stones, deviated septum, HTN (controlled)
- He is 6'3" tall and 320 lbs
- Only hospitalization was in 2000 for a catfish puncture to his hand

Mr. Z

- Family history
 - Son has asthma
 - Mother – DM, renal stones
 - Father has hyperlipidemia
- Occupation: Commercial fisherman
- Married , never smoked, drinks about 3 beers a month and about 3 glasses of tea or coffee a day

Mr. Z

- 1st visit in July with c/o bilateral swelling in his legs, 30 lb weight gain in 3 months
 - Some DOE noted
 - Had some labs drawn
- 2nd visit - August F/U with lab work, c/o lumbar pain – Tx with moist heat and stretching

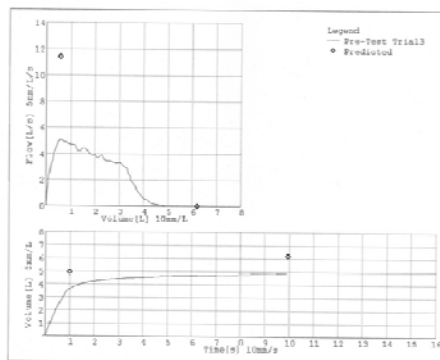
Mr. Z

- 3rd visit Oct. c/o dry cough, sinusitis
 - More issues with DOE, SOB
- 4th visit 2 weeks later in Oct. – nothing remarkable noted

Mr. Z

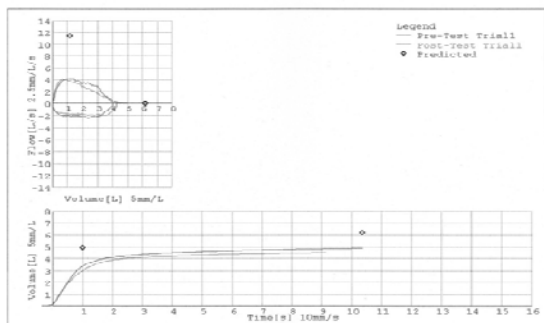
- Referred to Pulmonary clinic in Nov. for his 5th visit
 - Spirometry done with frequent errors, hard to get a good quality recording
 - Odd phonation noted

Case: Mr. Z



FVC- 4.89 L (79% predicted)
 FEV1- 3.74 L (76% predicted)
 FEV1/FVC – 76%
 No time to get pre/post... we had class
 Rescheduled for further testing

Mr. Z – 2 Weeks Later and Pre/Post Recorded



Mr. Z

Patient Information		Test Information	
Name		Test Date/Time	10-54am
ID		Post Time	11-23am
Age	40	Test Mode	DIAGNOSTIC
Weight	6 Ft 3 in	Interpretation	NLHEP
Height	210 lbs, BMI 30.5	Predicted Ref	NHANES III
Gender	MAL	Value Select	BEST VALUE
Ethnic	CAUCASIAN	Tech ID	
Smoker	NO	Automated QC	ON
Asthma	POSTTALK	WIPs (IN/EX)	1.11/ 1.04

Test Results Your FEV1 is 49% Predicted

Parameter	Pre-Test				Post-Test				Chg	
	Best	Trial#	Trial#2	Trial#3	Best	Trial#	Trial#2	Trial#3		
FVC(L)	4.89*	4.89*	4.53*	4.56*	6.20	79	4.51*	4.51*	4.33*	-8%
FEV1(L)	3.40*	3.40*	3.05*	3.00*	4.90	69	3.04*	3.04*	2.62*	-11%
FEV1/FVC	0.69*	0.69*	0.67*	0.66*	0.80	87	0.67*	0.67*	0.60*	0.69*
FEF25-75(L/s)	2.66	2.64	2.35*	2.33*	4.40	59	2.30*	2.30*	2.06*	1.65*
FEV1(s)	10.57	10.57	9.01	11.01	--	--	9.17	9.17	9.85	10.11
FIV(L)	4.44*	4.02*	4.41*	4.44*	6.20	72	4.26*	4.26*	3.85*	4.01*
PIF(L/min)	147	147	147	144	--	--	121	121	99	134

* Indicates Below LLN or Significant Post Change

Pre-Test FEV1 Var=0.18L 10.3%; FVC Var=0.34L 6.9%; Session Quality F
 Post-Test FEV1 Var=0.12L 13.9%; FVC Var=0.19L 4.1%; Session Quality F
 Interpretation: Mild Obstruction and Low vital Capacity possibly due to restriction
 Caution: No Acceptable Maneuvers - Interpret With Care.

Take-home – Mr.Z

- **Asthma symptoms need to be verified with spirometry, CXR, consider what to rule-out**
 - CHF, VCD, foreign-body aspiration
- **Asthma treatment should have a positive impact on quality of life, symptoms**
- **Stop inappropriate treatment**