

COPD UPDATE

South GP CME 18.8.12

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The Burden of Respiratory Disease- NZ

- 600,000 smokers (-6-8yr of life)
- COPD known to GP ? 70,000 – 2000 enrolled pts – 100+
- COPD consultations – 400,000
- 150,000 do not yet know what is wrong – by the time they do >50% of the lung may have gone
- Admissions with 1^o diagnosis COPD 10,000+
- After acute admission 20% 1y mortality; 30% 2y; 50% 5y
- COPD deaths 2000 – another 2000 die with COPD
- 1600 lung cancer diagnoses – 90% deaths
- > 500,000 have asthma

COPD definition: not just pulmonary

- Airflow limitation
- Airway remodelling , parenchymal destruction – emphysema
- Systemic inflammation affecting lung AND other organs (cytokines, acute phase proteins)
- Skeletal muscle weakness , muscle dysfunction
- Cachexia , malnutrition
- IHD, osteoporosis

Australasian COPD X GL

2003 and now 2011

- **C** confirm diagnosis & assess severity
- **O** optimise function
- **P** prevent deterioration
- **D** develop support network and self-Mx
- **X** prevent and manage exacerbations

COPD outcomes – (where) Can we do better?

- Delayed diagnosis
- Dx /Mx specific phenotype
- Mx for severity
- Anxiety dyspnoea – loss of control
- Depression – social isolation - deconditioning
- Poor quality of life
- Poor quality of death

Frequent Uncertainties in Mx

- COPD or asthma – or often both
- Frequent RTI : sputum testing , mucolytics, ICS, longterm antibiotic (macrolide)
- Home O2 : not if O2Sat>92% (or if still smoking)
- Candidate for Pulm Rehabilitation : Yes ! (unless contra-indication, MRC3, FEV1≤50%), NB only <5% get PR
- Other pathology: CAD, CHF, ILD, OSA, Ca
- Safety of Rx (LABA, LAAC, B-blockers...)
- Very severe COPD: transplantation or use of palliative measures (anxiolytics, opiates)
- End-of-Life : ACP

Frequent Issues Encountered:

2°

- Frequent RTI :Role of sputum testing
- Multitude of different inhaler devices “Triple Rx”
- Lack of confident self Mx (exercise, inhalers, exacerbations)
- “Candidate for Home oxygen?” : not if O2Sat>92% (or if still smoking)
- Weight: cachexia or obesity needing management
- Prednisone “dependant“, “long-term”
- Under-utilisation of palliative measures (anxiolytics, opiates)

What is new ?

- GP referrals for Pulm Rehabilitation
- Drugs: Roflumilast, Aclidinium, Indacaterol-not here
- Education: LTC / Self Mx: (to prevent 1 AECOPD) NNT=10 if RR 50%, NNT=24 if RR=13% (but no change in ED visit, use of P/Ab)
- “Triple therapy”
- Statins ? HMG CoA reductase inhibitors: anti-inflammatory, anti-oxidant effects
- Azithromycin (but shown for erythromycin 15y ago)
- Beta-blockers are safe
- More awareness of co-existence of cardiac disease (& other)
- Palliative Care referrals

What is new ? Genetics

- CHRNA 3/5 (15q25)
- RAB4B , MIA, EGLN2 , CYP2A6 (19q13)
- SERPINE 1 (α AT), SERPINE 2
- EPHX1, GST, TGF β 1
- BICD1 (12p11)
- Determination of phenotype, progression, associated other conditions (lung cancer...)

Thorax 2009; 64:939-943 doi:10.1136/thx.2009.113662

Adherence to inhaled therapy, mortality and hospital admission in COPD

J Vesbo, JA Anderson, PMA Calverley, B Celli et al

- TORCH trial
- Good adherence
- defined >80% of study medication taken
- 4,880 (yes) vs 1232 (no) patients
- 11.3% vs 26.4% died
- 0.15 vs 0.27 annual admission rates
- **The association between increased adherence and improved mortality and reduction in hospital admissions was independent of study treatment**

ICS

- ❑ Not in all!
- ❑ Severe + frequent AECOPD
- ❑ Documented response
- ❑ long-term adverse effects of ICS unknown
- ❑ NB caution if ceasing ICS: abrupt withdrawal may increase Sx
- ❑ Pneumonia NNH34-48
- ❑ Candidiasis NNH38, Dysphonia NNH 35

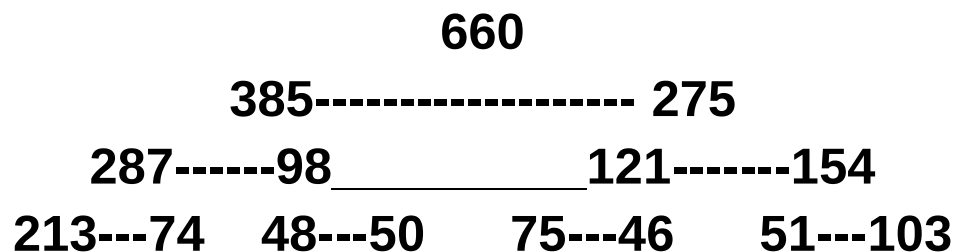
“Mucolytics may reduce the frequency and duration of exacerbations”

Poole and Black 2010 (evidence level 11)

- If not on ICS
- NNT =6
- N-acetylcysteine , ambroxol , sobrerol, carbocysteine, sobrerol, letosteine, cithiolone, iodinated glycerol, N-isobutyrylcysteine (NIC), myrtol and erdosteine
- Multiple possible actions :decreasing sputum viscosity, antioxidant, anti-inflammatory or antibacterial activity

BD Reversibility in COPD

Calverley PM, Burge PS, Spencer S et al Thorax 2003;58:659-664



Not reversible / Reversible

- 52.1% of pts changed responder status between visits (ATS), 38.2% using ERS criteria
- Not related to smoking status , atopy, ICS withdrawal
- Not predictive for decline of FEV1, exacerbation rate

660 pt with “irreversible” airflow obstruction ERS Definition (Isolde pt pop. 40-75y, smoking Hx, FEV1/FVC<0.7, EV1>0.8L, <85%pred, FEV1 post BD +<10% pred FEV1, no β blocker, no steroid) : 3 x spiro & BD over 2M ATS / GOLD criteria:>12% and >200mL, ERS >9% of predicted FEV1 Change post V and A is +/- normal distribution

Limits to Exercise in COPD

- Ventilatory limitation – obstruction, air trapping
- Gas exchange limitations
- Cardiac dysfunction
- Skeletal muscle dysfunction
- Respiratory muscle dysfunction

P Rehabilitation

CV fitness

M-function

Endurance

Self-confidence

Coping strategies

Adherence

Mood

Less isolation



COPDX 2011

D1.1 General Practitioner

- ***Smoking cessation:*** A doctor's advice is an important motivator for smoking cessation. The GP can help initiate the cycle of change by repeated brief interventions. GPs should make enquiries about smoking status routinely at each visit..... The GP.... to recommend or prescribe NRT and pharmacological treatment of nicotine addiction
- ***Early diagnosis:*** Most people visit a GP about once a year. Simple questions relating to smoking history, daily cough and degree of breathlessness should lead to lung function testing.
- ***Coordinate investigation and management:*** GPs will manage patients with mild to moderate COPD. Referral to a respiratory physician may be indicated to confirm the diagnosis, exclude complications and aggravating factors, and to help develop a self-management plan
- ***Coordinate care in advanced disease:*** GPs play a crucial role coordinating services provided by a range of healthcare professionals & care agencies (MDTeam)

COPDX 2011

D1.3 GP Practice Nurse (nurse practitioner, respiratory nurse/educator)

- Respiratory assessment, including spirometry and pulse oximetry
- Smoking cessation
- Skills training with inhalation devices
- Education to promote better self-management (medications, nutrition, exercise, exacerbation Mx, vaccinations)
- Care-plan development
- Assessment of the home environment.

Underdiagnosis of COPD

Diagnosed
COPD
2.4 - 7 million

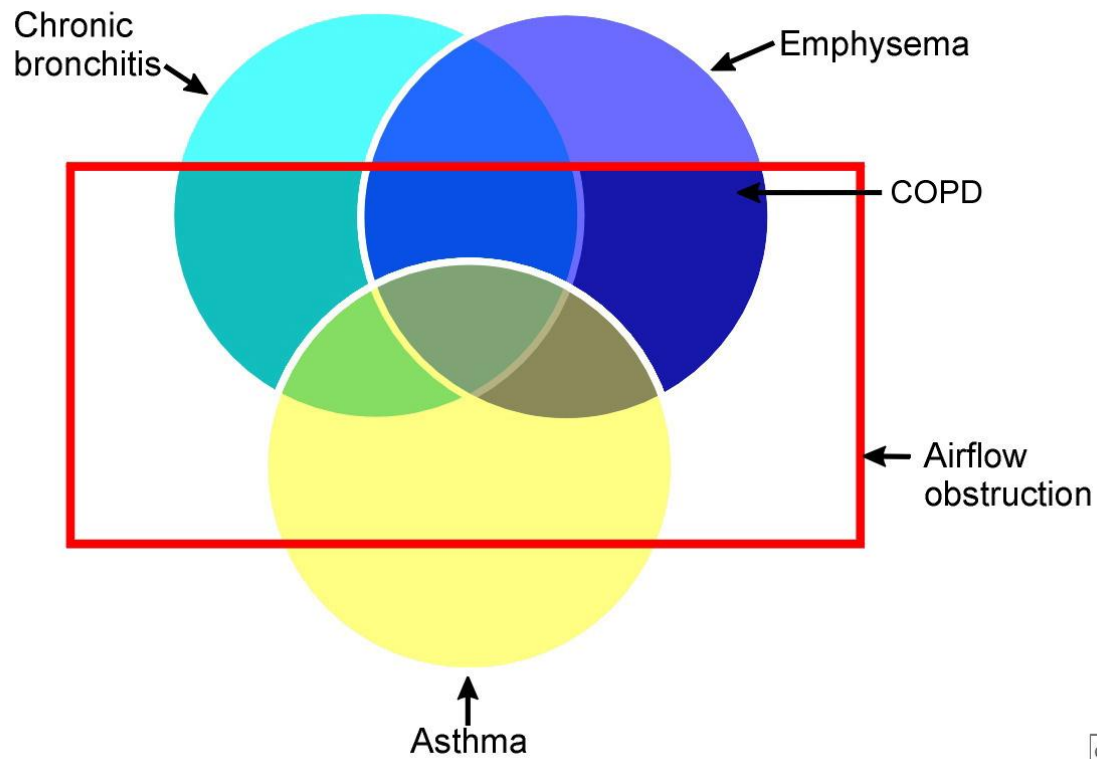
Estimated total
COPD
16 million

56 - 85%
Undiagnosed/misdiagnosed

Have a simple breathing test, called spirometry - World COPD Day 2010

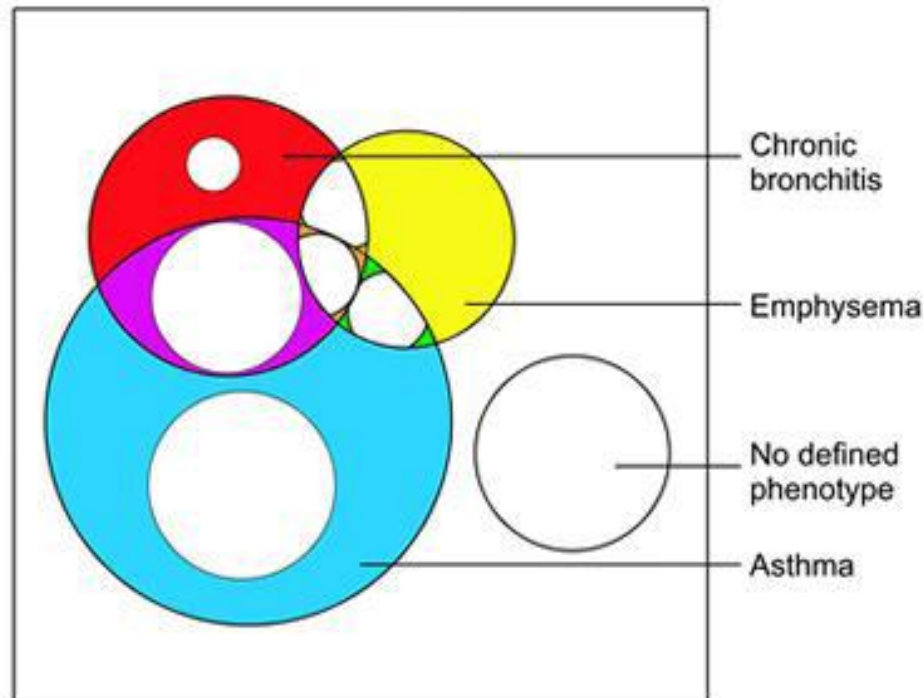
- If you answer YES to three or more of these questions, you may have COPD.
- Do you cough several times most days?
- Do you bring up phlegm or mucus most days?
- Do you get out of breath more easily than others your age?
- Are you over 45 years old?
- Are you a smoker or ex-smoker?
- Note: NZ 1° Care Handbook 2012: NOTHING
- *(CVD risk Mx & diabetes screening, CV risk factor Mx, Type 2 diabetes Mx, also smoking cessation, weight Mx, CVA / TIA, CHD, HF, Endocarditis, RF)*

COPD Overlap



COPD not one disease/phenotype (+/- genotype?)

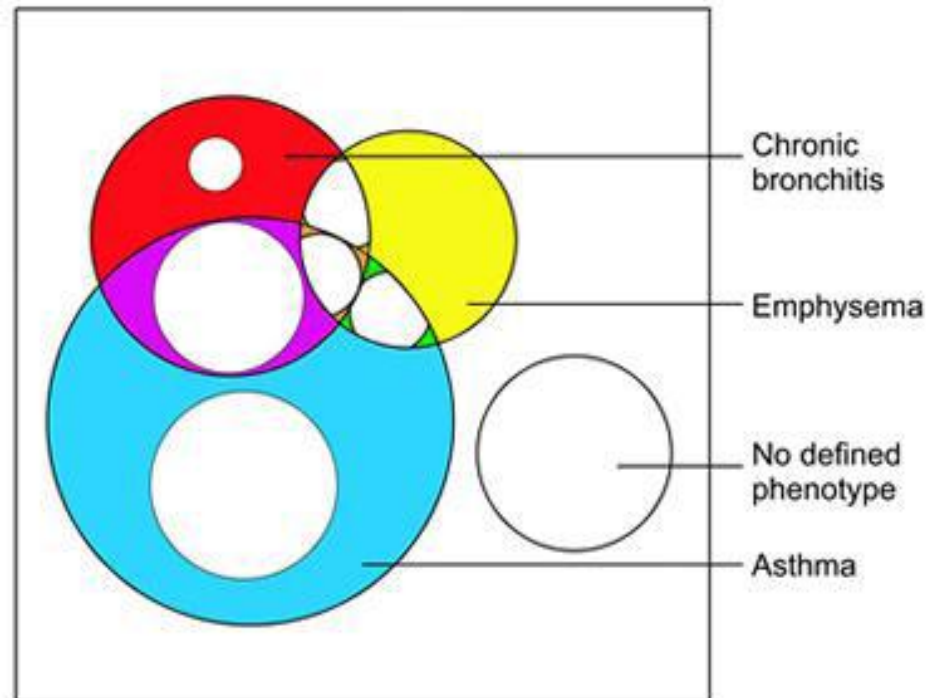
N=469 > 50y population based survey PFT, CT [Marsh SE et al Thorax 2008; 63:761-7] 96/ 469 (20%) with COPD (FEV1/FVC post BD <0.7) 1/3 less if LLN used instead
18/ 96 “classical phenotype” chronic bronchitis / emphysema but no asthma 53/ 96 did have asthma



COPD not one disease/phenotype (+/- genotype?)

COPDgene, ECLIPSE, ..

**GWA studies, biomarkers giving ever more insights
into disease progression**



COPD when did we find out or could it have been earlier ?

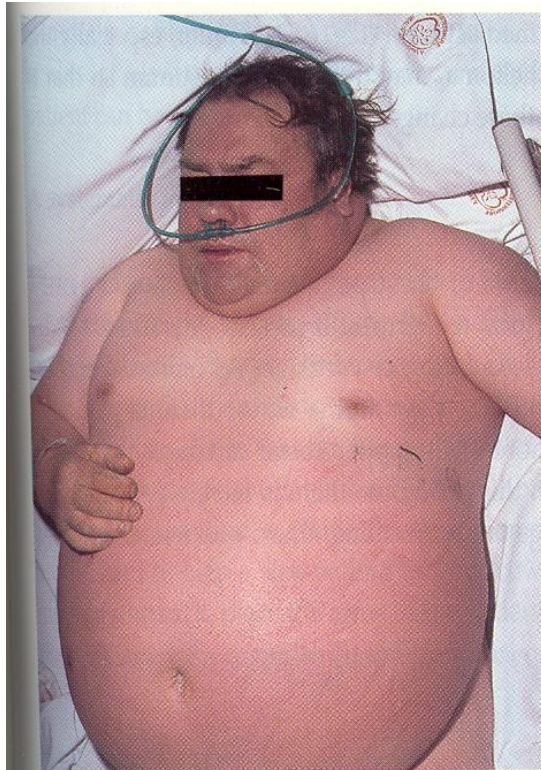


Fig. 6.48 A 'blue bloater' showing ascites from marked cor pulmonale.

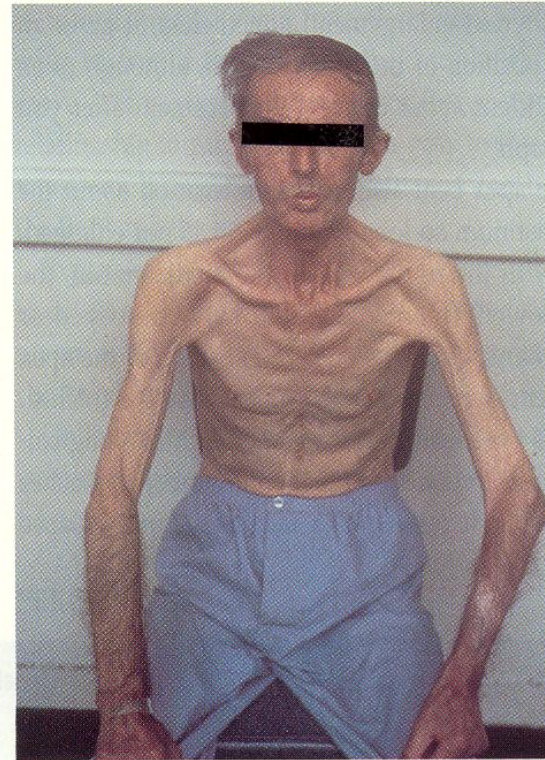
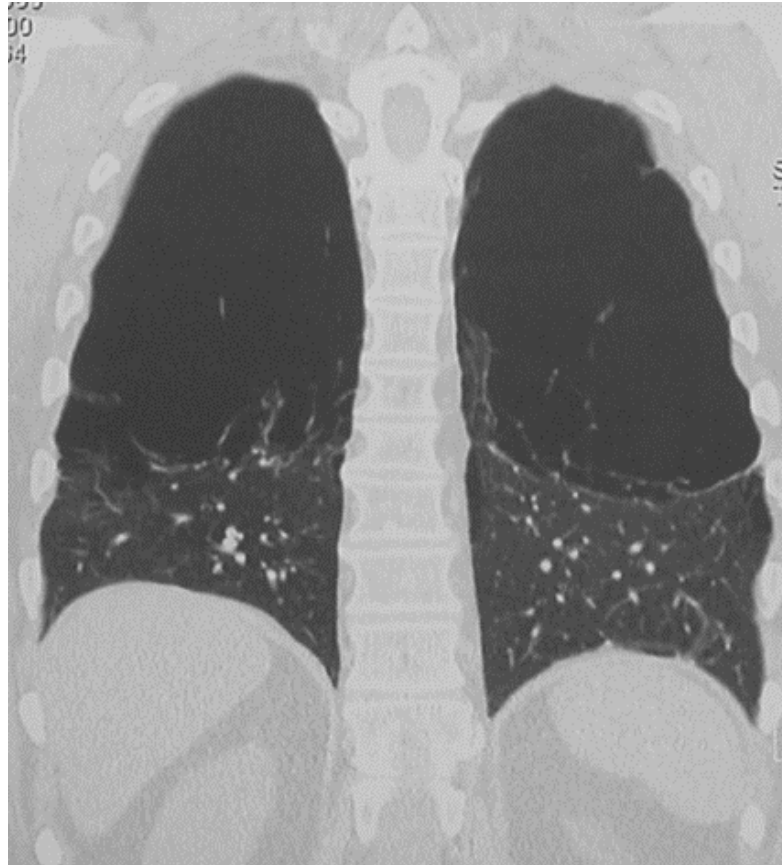
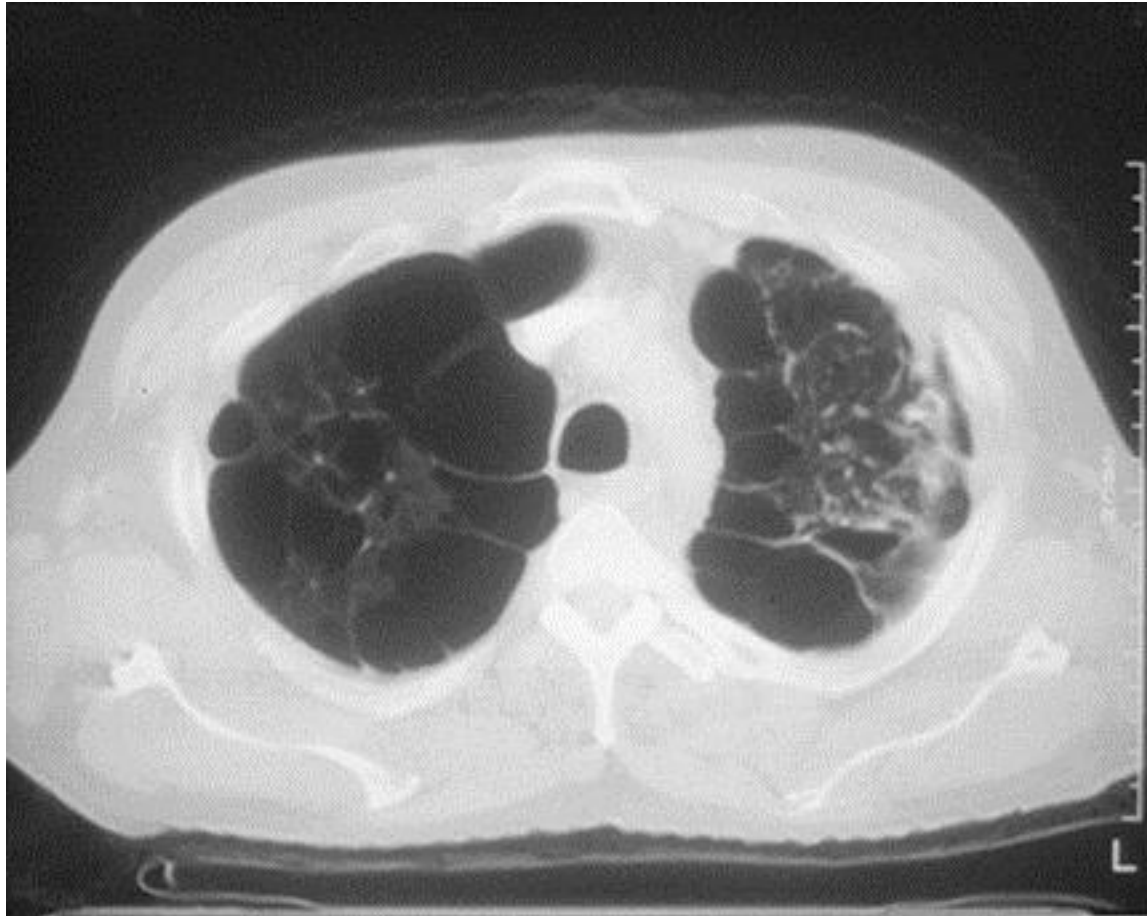


Fig. 6.49 The 'pink puffer'. Note the pursed-lip breathing.

COPD emphysema



COPD bullous emphysema



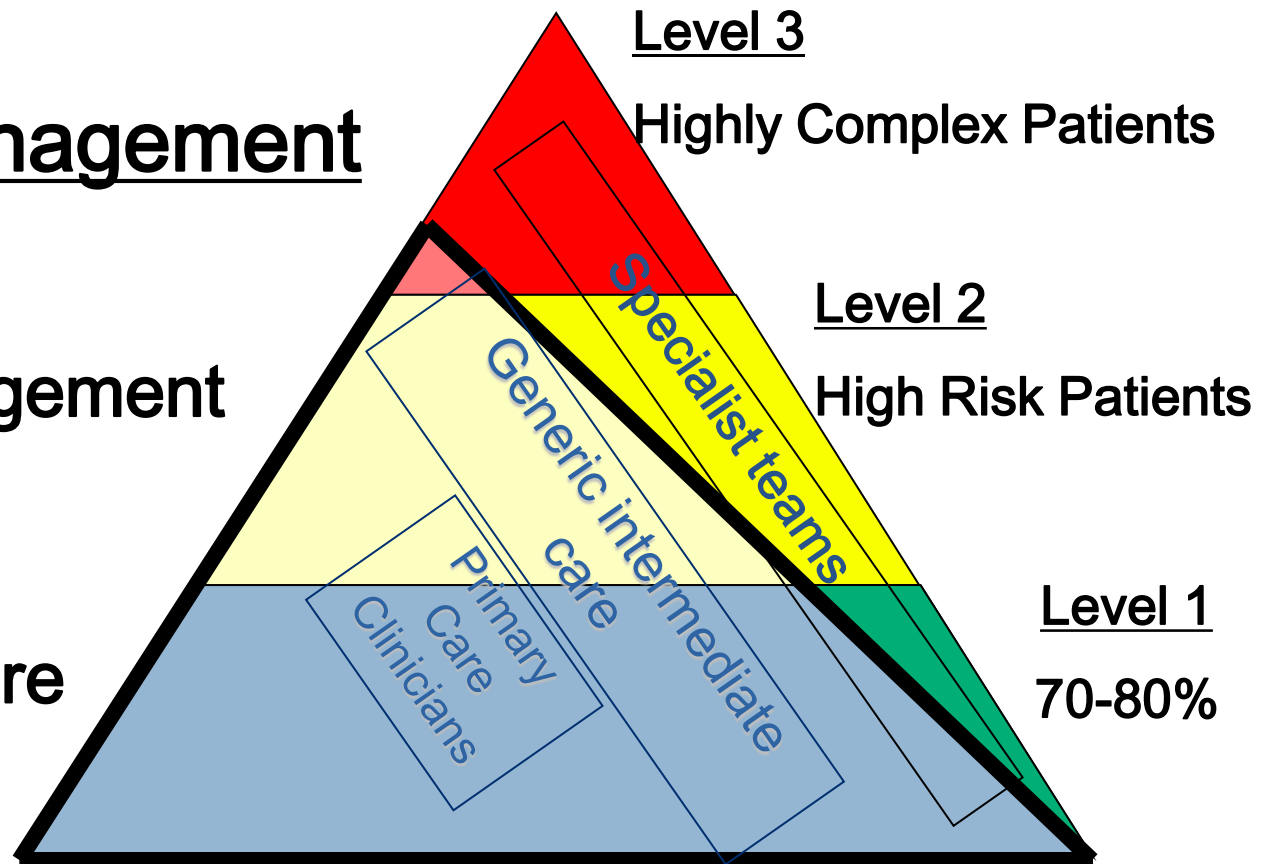


Severe COPD

Case Management

Disease Management

Supported Self Care



COPD Frequent Admissions

“Frequent respiratory admissions” list in NZ tertiary hospital
Mr A in one year:

- 4 Resp IP episodes (1-15d LOS, total 35d)
- 4 Gen Med IP (1-4 d, total 7d)
- Community hospital 5d
- Resp OPD x 3; ; Clin Psychol OPD x 4
- CNS visits x5 + 1 Dom O2 home visit
- Often poor coordination , poor communication, different conflicting messages , 1° left out

COPD 2° care “journey”.

Missed opportunities ?

- 1998 surgical: hernia repair, “smoker”
- 2004 ED chest pain, cough, “smoker”, ?ABC, no FU, no referral, no spiro
- 2007 GenMed ward “pneumonia, smoker”, ?ABC, no FU ,no referral, no spiro –NB 50% 5y survival
- 2010 GenMed Acute exacerbation of COPD, smoker , pH=7.29, pCO₂=56 in ED, NRT patch, “advice to quit”, “see GP”, no FU, no Spiro NB 50% 1y survival
- 2011 (1) GenMed pH=7.22, pCO₂=68, BMI=15
- 2011 (2) Gen Med severe respiratory failure and IP death

Very Severe Obstruction = decades later

Age (yr): 51 Height (cm) 168 Mass (kg): 84.6 Body Mass Index: 29.97 Gender: Female

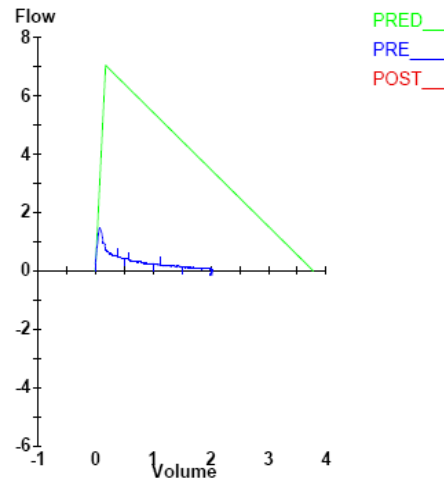


Spirometry

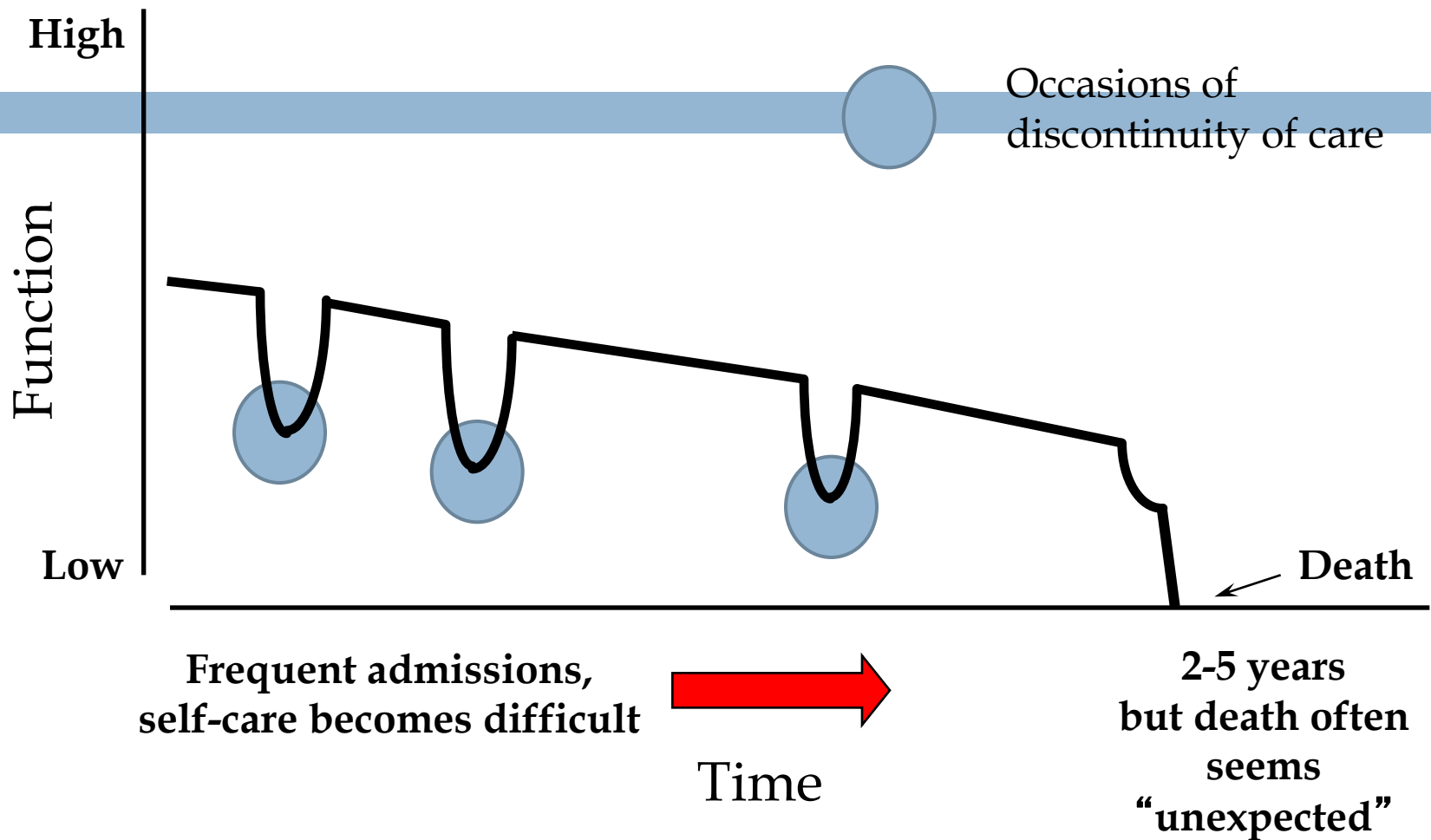
(Ref: Hankinson)

	Measured	Units	Ref Range	%Ref	Post	% Change
FEV1	** 0.61	Litres	2.39 - 3.59	** 20		
FVC	** 2.04	Litres	3.05 - 4.52	** 54		
FEV1/FVC	** 30	%	70 - 90			
FEF25-75%	** 0.22	L/sec	1.53 - 4.17	** 8		
PEF	** 1.60	L/sec	5.21 - 8.86	** 23		
FET100%	11.82	Sec	> 6 Sec			
FEV6	** 1.60	Litres	2.96 - 4.36	** 44		
FEV1/FEV6	** 38	%	73 - 91			
StdFEF25-75	** 0.29	L/sec	1.66 - 4.39	** 10		

Results reported at BTPS

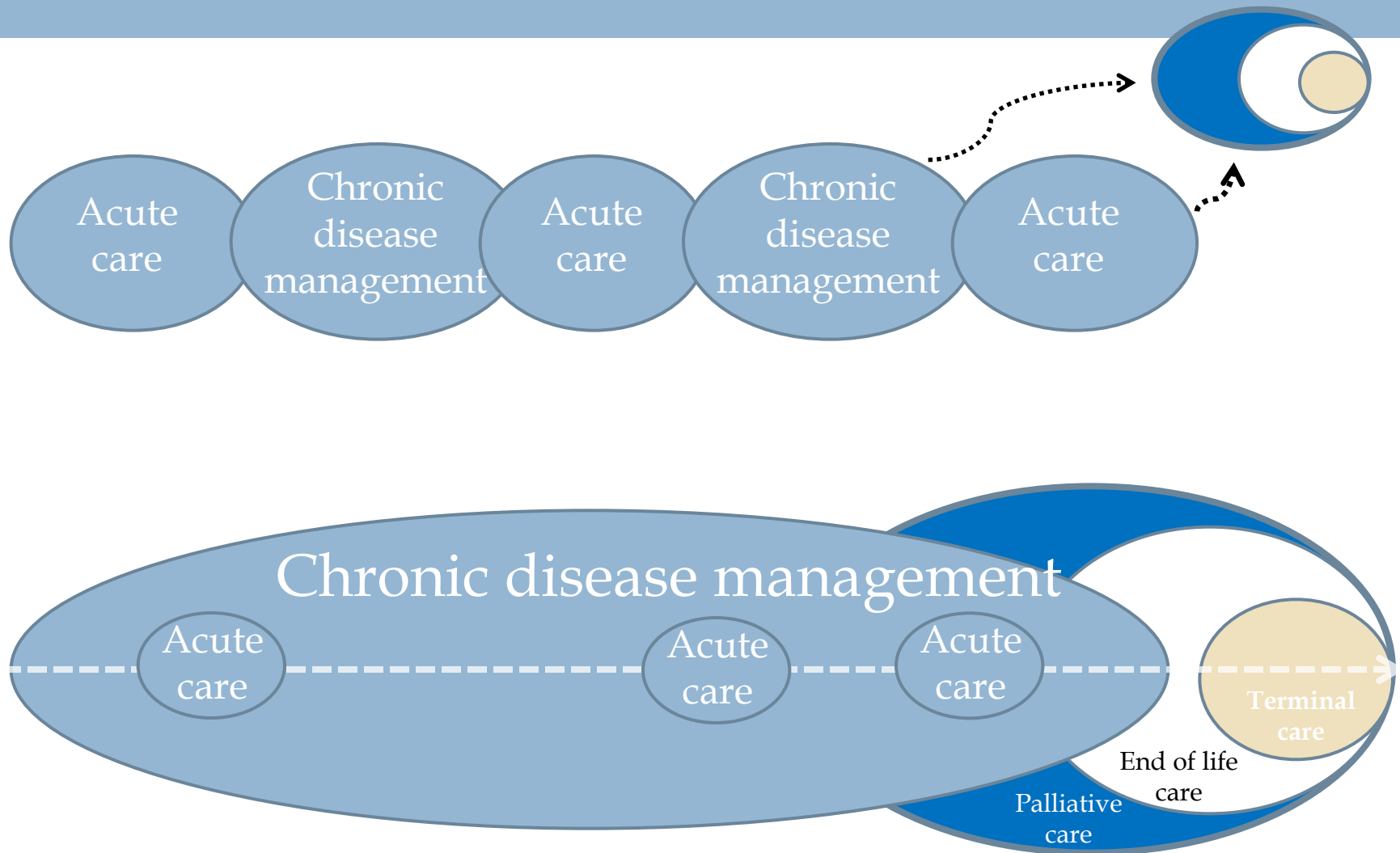


Organ system failure: end-of-life trajectory

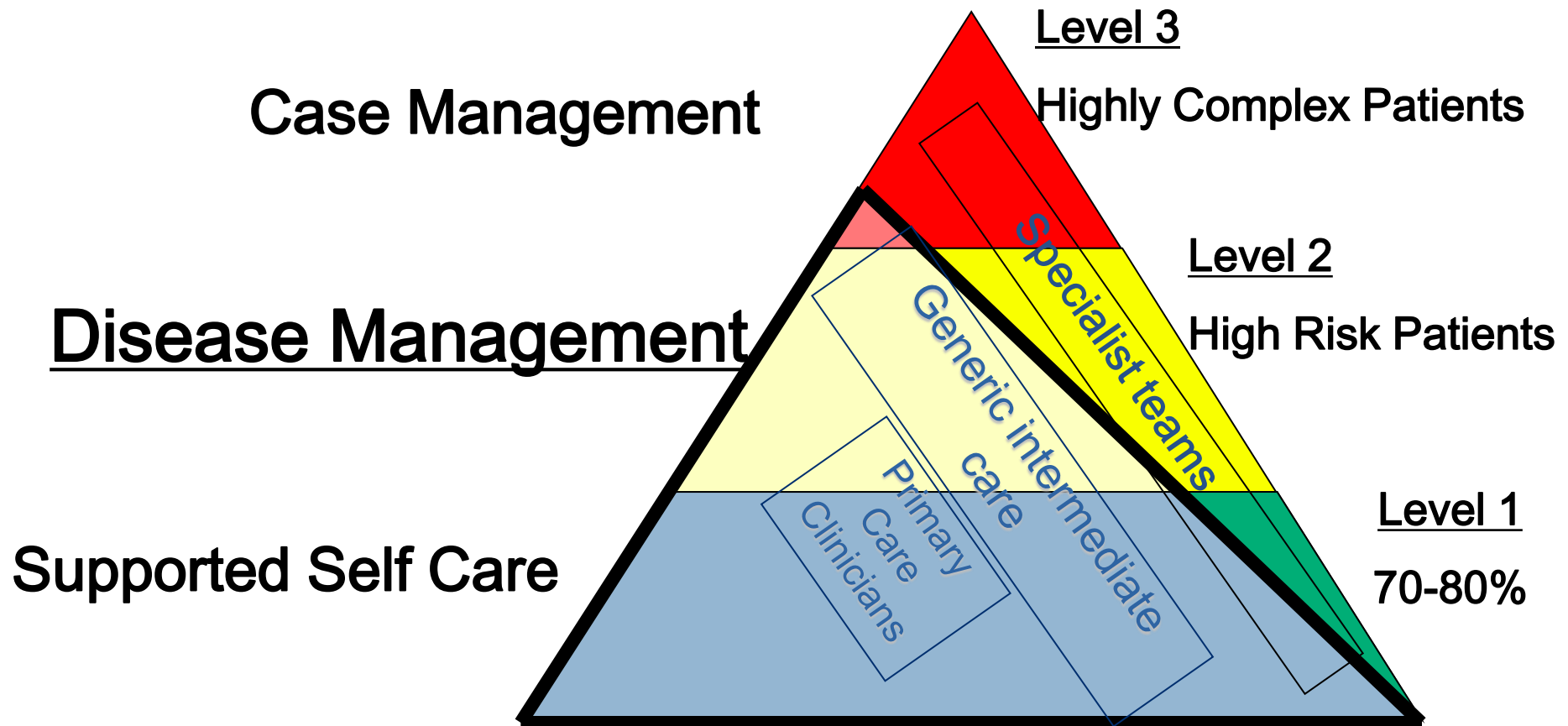


No clinical service is designed to routinely meet the needs of this pattern of decline

Chronic disease management: the 21st century medical model



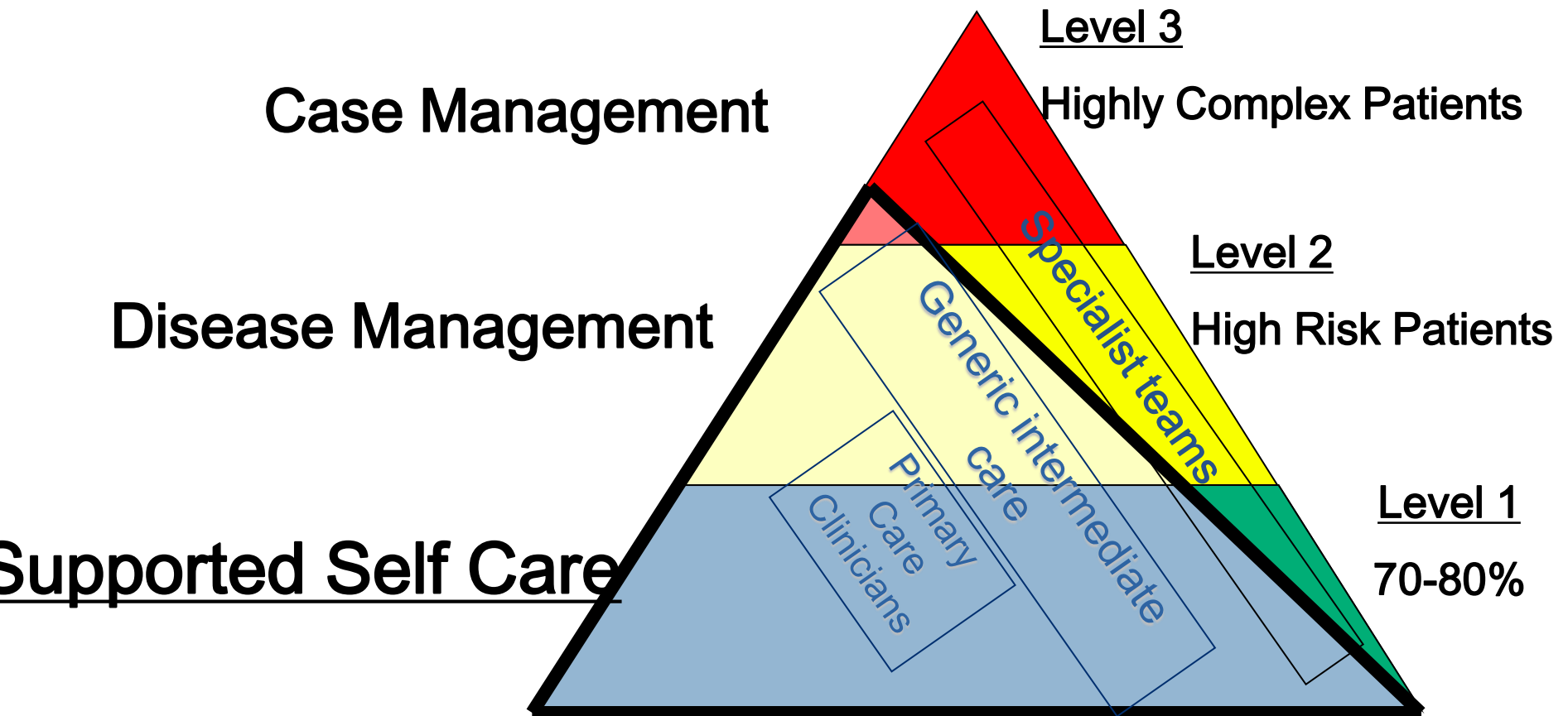
Moderately severe







Not severe



Mild COPD

- “Smoker’s cough”
- Regular winter RTI / “Flu”/ “cold” requesting antibiotic +/- associated wheeze
- Some SOBE (“age”, too heavy”)

COPD?



COPD-X Checklist

Diagnosis and Management of COPD

C – Confirm diagnosis

Presence and history of symptoms:

- ☐ Shortness of breath
- ☐ Cough
- ☐ Sputum production

Smoking – history and willingness to quit:

- ☐ Smoker ☐ Packyears ☐ high ☐ medium ☐ low
- Willingness to quit ☐ high ☐ medium ☐ low
- ☐ Previous smoker
- ☐ Non-smoker
- ☐ Other smoking-related disease

Spirometry - measure FEV₁ and FEV₁/FVC and assess reversibility of airflow limitation

Spirometry is essential for case-finding, to differentiate between asthma and COPD, and to determine the degree of disease severity.

Anyone who smokes and/or has shortness of breath and sputum production could have COPD

Grade COPD severity

Based on spirometry results – FEV₁ % of predicted post-bronchodilation

60–80% = Mild
40–59% = Moderate
≤39% = Severe

	Pre-bronchodilator	% pred	Post-bronchodilator	Reversibility* (%)
FEV ₁				
FVC				
FEV ₁ /FVC				

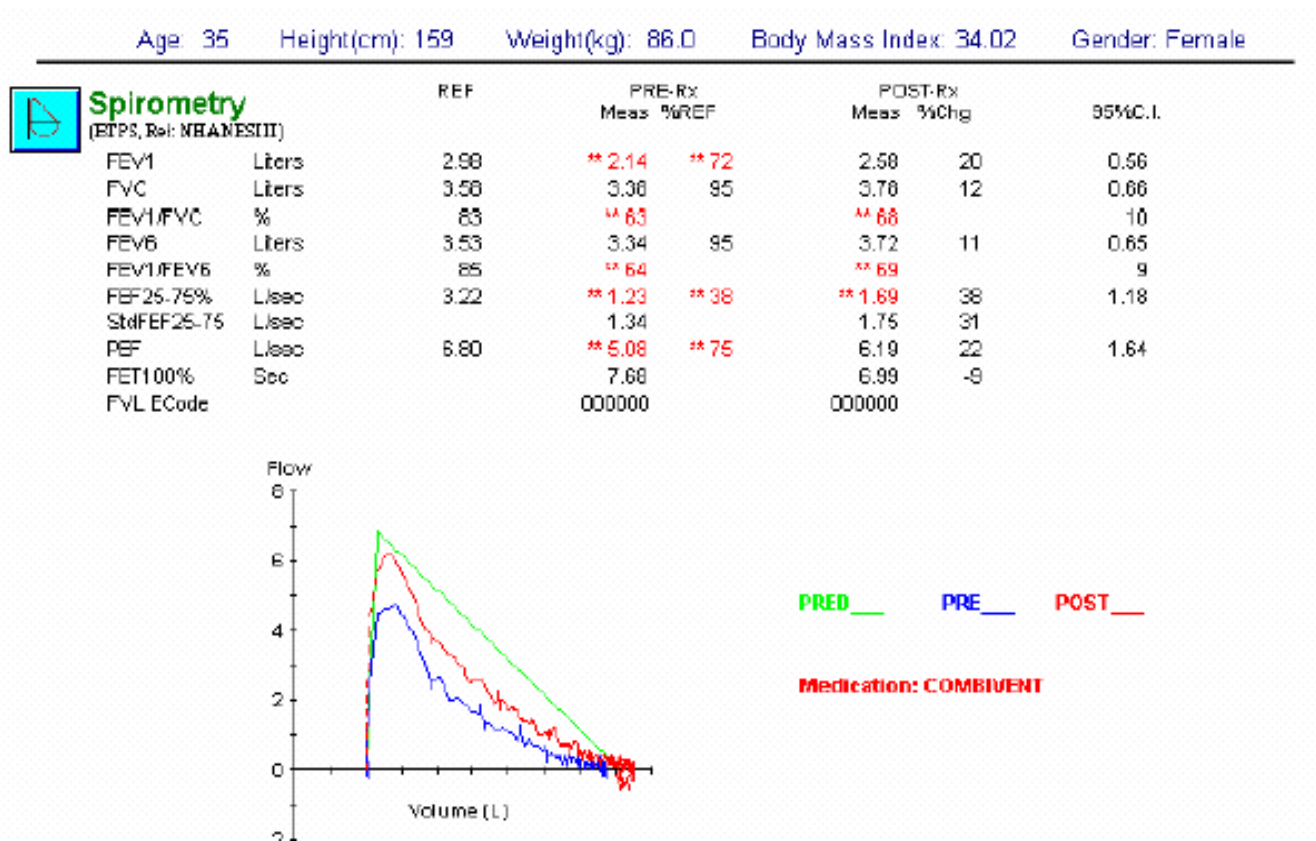
COPD is defined as post-bronchodilator FEV₁/FVC <0.70 and FEV₁ <80% predicted.

COPD Dx

- A CXR should be normal in early COPD (i.e. this is not “reassuring”)
- Spirometry is needed
- Severity assessment , definition of phenotype= likely disease trajectory , co-morbidities
- In Future: gene-tests, biomarkers

Spirometry testing

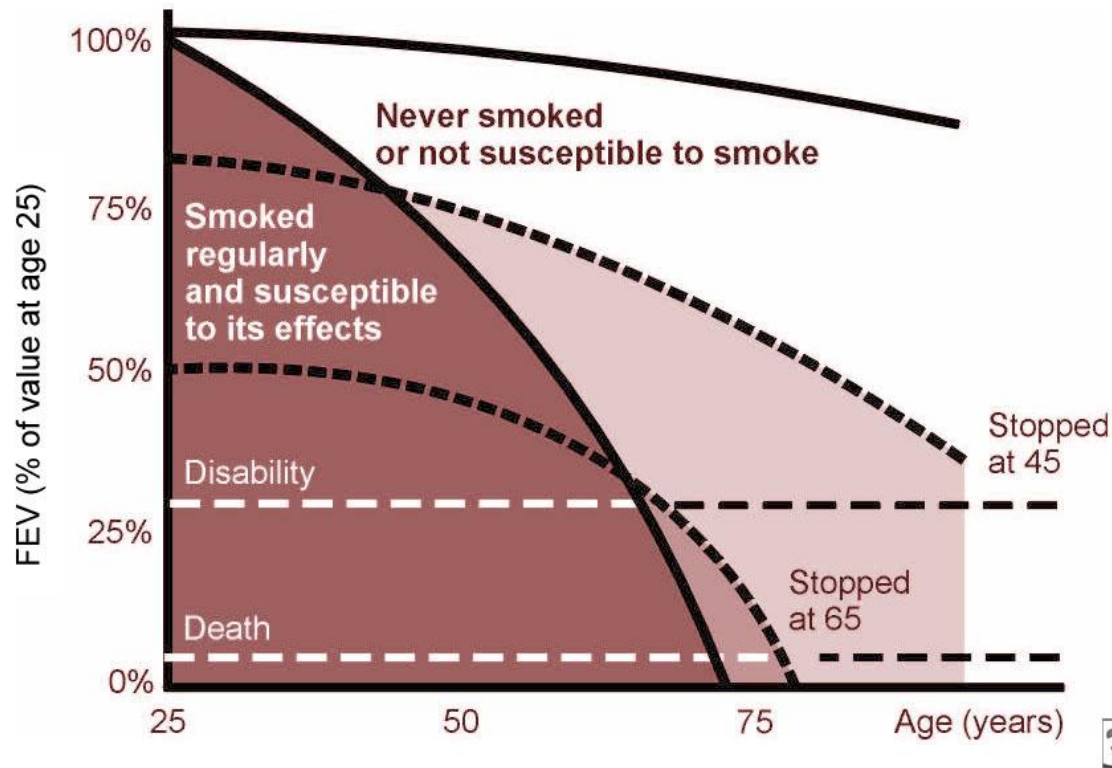
e.g. PC regular winter colds +/- hayfever



Susceptibility & time course

May lose ½ of FEV1 without Sx

(Fletcher & Peto BMJ 1977, Framingham data 2009)



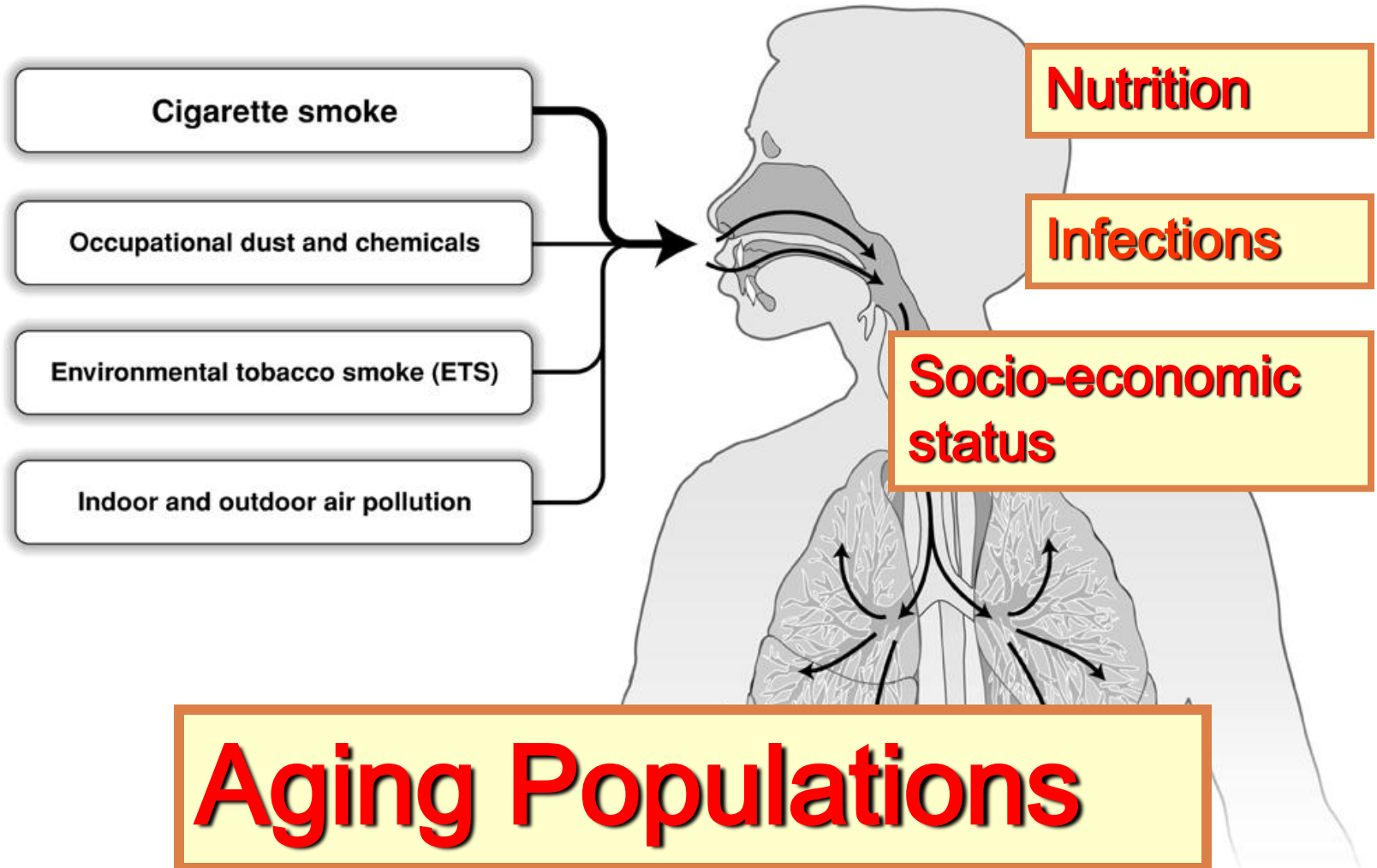
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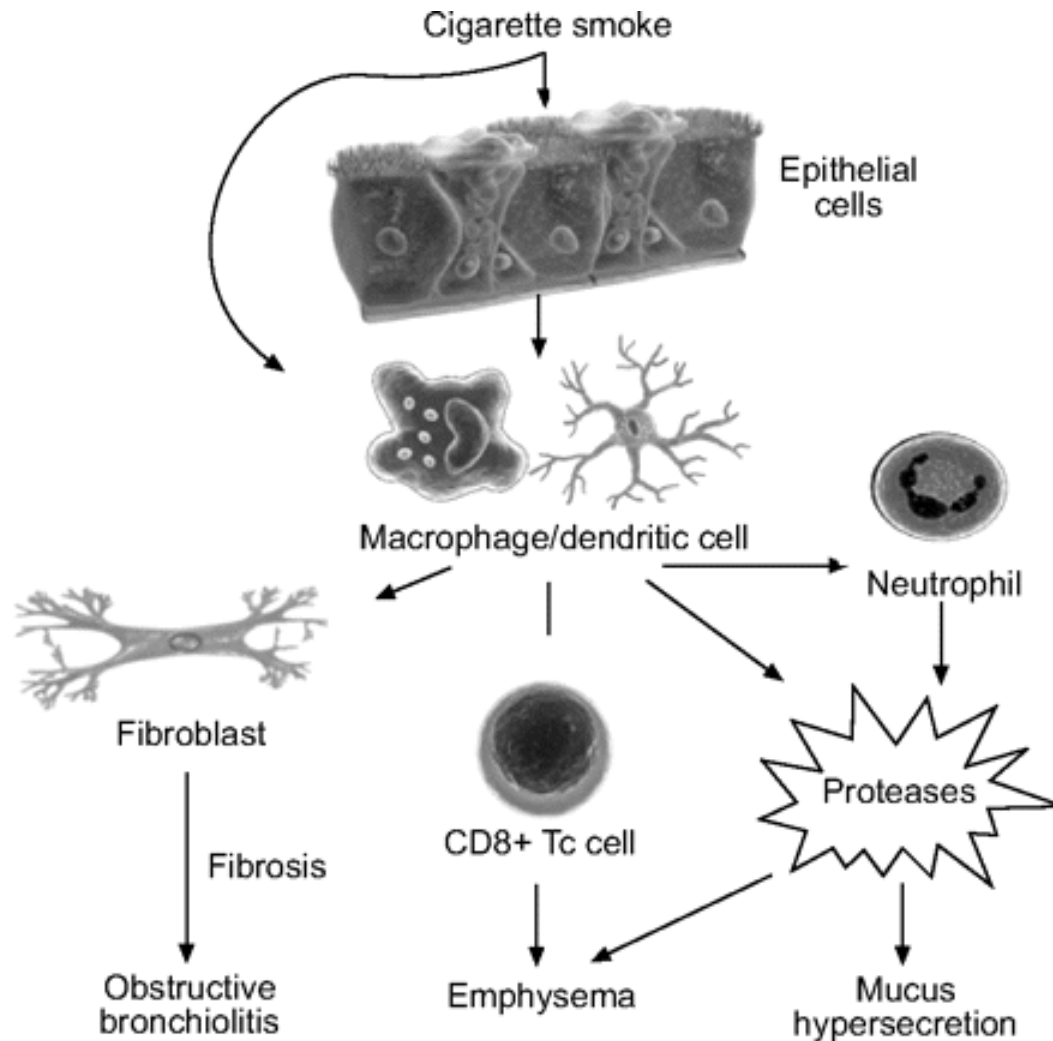
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Risk Factors for COPD- not just tobacco



Pathophysiology: susceptibility + "insult"



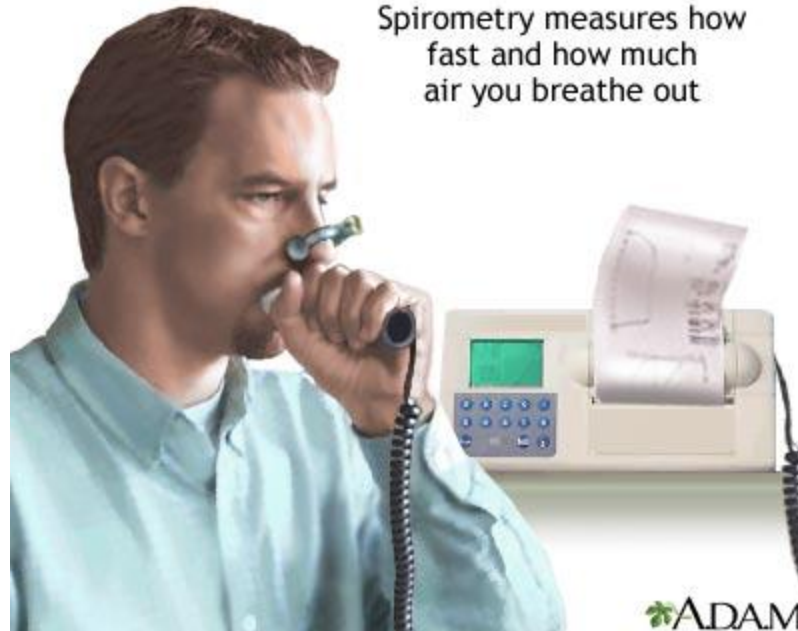
COPD Screening “Mini-spirometry”



Not common enough: Spirometry tests



Spirometry measures how fast and how much air you breathe out





Severity Assessment

- MRC Dyspnea scale 1-5
- Symptoms
- Morbidity: ED / hospital admissions

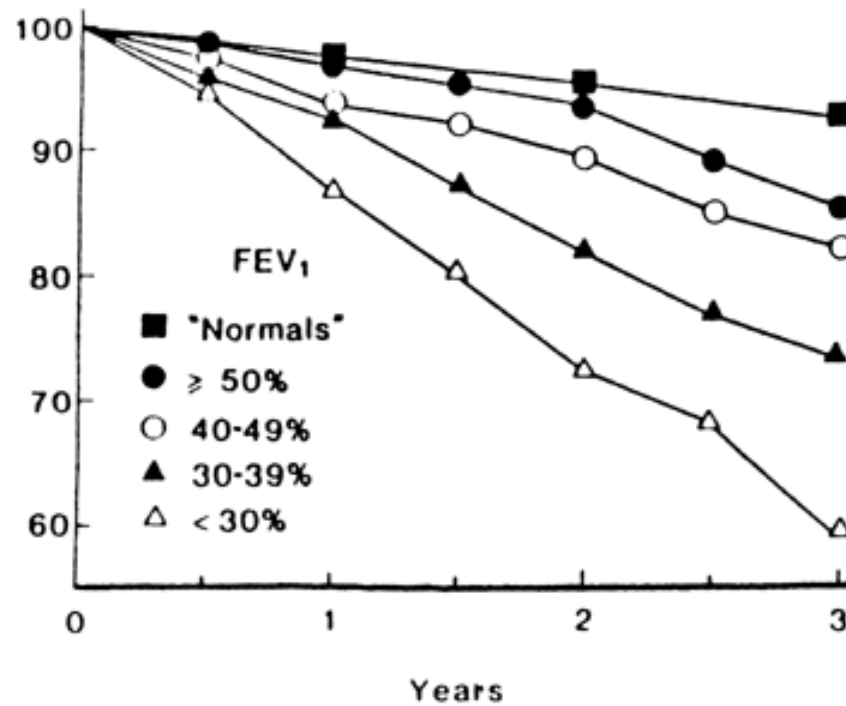
Spirometry: FEV1/FVC ratio <LLN and

- Mild :FEV1 $\geq 70\%$ predicted
- Moderate :FEV1=50-69%
- Severe :FEV1= 35-49%
- Very Severe: FEV1< 35% or FEV1 < 50% and PaO₂ < 60

COPD Prognosis

Medscape® www.medscape.com

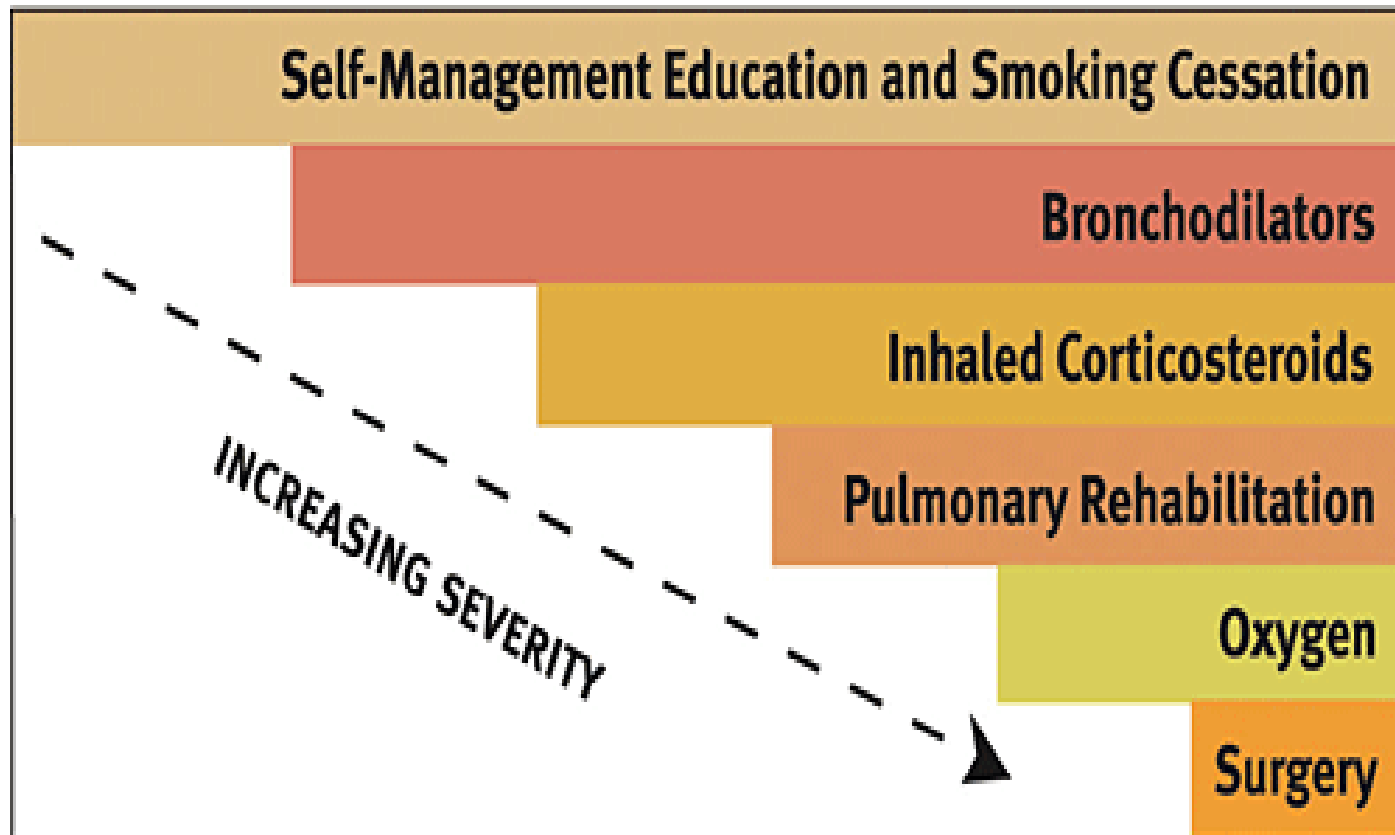
% Surviving



How can one assess the patient's prognosis ?

- In “end-stage” disease the best gauge may be “would you be surprised if this patient dies within the next 3 (6) months ?”
- FEV1 i.e lung function is not very sensitive ! If FEV1<35% 4y mortality is 55%
- BODE score (BMI <21=1 , 6MWT 250-349m=1, 150-249=2,<149=3, MRC 2=1, 3=2,4+=3,FEV1 50-64%=1, 36-49=2,<35=3– if score>=7 1y mortality is 5%, 2y=31%,4y=80%
- After 1.ever acute admission 10y survival is 44% , median survival 6y (Geelhoed Internal Med J 2007;37:87) , mortality 22% in 1. y , 73% in 5y (Kinnunen Resp Med 2007;101:294)

TREATMENT OPTIONS FOR COPD



COPD – Effect of Interventions

- Smoking cessation: lung decline and mortality
- SABA/ Ipratropium:Sx, FEV1 response
- LABA/Tiotropium:QoL, exacerbations
- ICS: QoL, exacerbations, ?lung decline
- Theophylline, PDE4 inhibitors (Roflumilast):
exacerbations
- Macrolides : exacerbations
- Rehabilitation: QoL, hospitalisations, health care
utilisation
- Oxygen: mortality

COPD Rx needs to be personalised

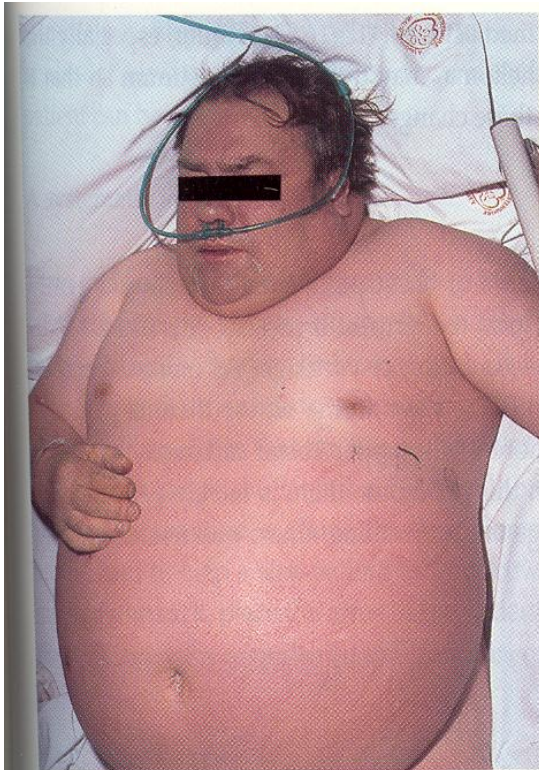


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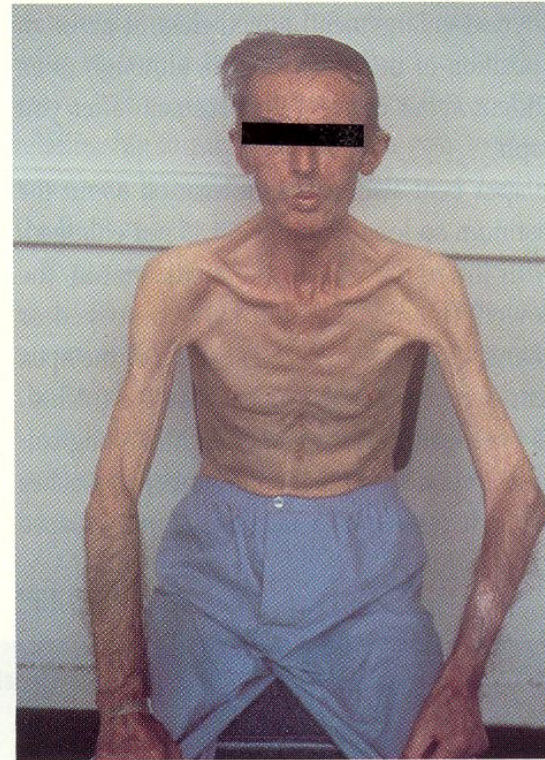


Fig. 6.49 The 'pink puffer'. Note the pursed-lip breathing.

Assessment of Rx Response

- ❑ SOB & functional limitations (MRC Dyspnoea Scale)
- ❑ CAT score
- ❑ If there is no improvement:
- ❑ check inhaler technique & adherence
- ❑ consider psychosocial issues and deconditioning
- ❑ exclude other causes of exercise impairment (consider specialist referral)

CAT -COPD Assessment Test

How is your COPD? Take the COPD Assessment Test (CAT)

This questionnaire will help you and your healthcare professional measure the impact COPD (Chronic Obstructive Pulmonary Disease) is having on your wellbeing and daily life. Your answers and test score, can be used by you and your healthcare professional to help improve the management of your COPD and get the greatest benefit from treatment.

If you wish to complete the questionnaire by hand on paper, [please click here](#) and then print the questionnaire.

If you complete the questionnaire on-line, for each question below, click your mouse to place a mark (X) in the box that best describes you currently.

Example: I am very happy ☐ 0 ☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 I am sad

			SCORE
I never cough	☐ 0 ☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5	I cough all the time	4
I have no phlegm (mucus) in my chest at all	☐ 0 ☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5	My chest is full of phlegm (mucus)	4
My chest does not feel tight at all	☐ 0 ☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5	My chest feels very tight	4
When I walk up a hill or one flight of stairs I am not breathless	☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5	When I walk up a hill or one flight of stairs I am very breathless	5
I am not limited doing any activities at home	☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5	I am very limited doing activities at home	5
I am confident leaving my home despite my lung condition	☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5	I am not at all confident leaving my home because of my lung condition	5
I sleep soundly	☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5	I don't sleep soundly because of my lung condition	5
I have lots of energy	☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☒ 5	I have no energy at all	5
CLICK TO GET YOUR TOTAL SCORE!			37

D4. Treat Anxiety and Depression

Anxious and depressive symptoms and disorders are common comorbidities in people with COPD and have a range of negative impacts [evidence level I]

- Anxiety symptoms in COPD are associated with worse
- QoL (Giardino et al., 2010)
- self-management (Dowson et al., 2004)
- exercise performance (Eisner et al., 2010), and with increased
- medical symptom reporting (Katon et al., 2007)
- exacerbations (Eisner et al., 2010)
- hospitalisations (Yellowlees et al., 1987, Gudmundsson et al., 2005, Livermore et al., 2010)
- length of hospitalisations (Xu et al., 2008)
- medical costs (Katon et al., 2007, Livermore et al., 2010)
- mortality (Celli et al., 2008a)

ADVANCED CARE PLANNING – WHY?

Question or issue	Stage III/IV lung cancer (n=939)	AECOPD (n=1008)
Severe dyspnoea	32%	56%
Continuous pain	28%	21%
Unwilling to have invasive ventilation	81%	78%
Prefer comfort focussed care	60%	60%

“Most patients prefer treatment focussed on comfort rather than prolonging life. COPD patients are equally as likely as lung cancer patients to prefer not to be intubated or receive cardiopulmonary resuscitation “

“The vast majority of COPD patients (98% if asked) believe advance care planning is important and wish to undertake these discussions”

Advance Care Planning

A guide for the New Zealand health care workforce



End of Life—the balance between 'do no harm' & achieve patient comfort

- Palliative care for patients with non-cancer respiratory (or other) conditions regularly is less well developed /coordinated
- Practitioners may feel less certain re prognosis (vs Cancer)
- Prognosis of very severe COPD is as poor as for lung cancer
- Fears of adverse effects , under-use of treatments which otherwise may be indicated and would be used in non-COPD patients (eg withholding O2, opiates, anxiolytics)
- Patient' s and family' s/ carer' s understanding is crucial, patient autonomy must be respected

Managing Breathlessness

- Bronchodilator –use of spacer
- Breathing techniques- pursed lip ~
- Opioids (e.g, morphine 2.5 - 5 mg elixir or tablet prn)
- Anxiolytics (e.g, alprazolam 0.25 mg tablet tds prn, midazolam SL prn) for the palliation of intractable dyspnea
- NB: adverse effects may occur :worsening ventilatory impairment, confusion, delirium
- A controlled trial of the initial dose is recommended. Patients should be advised not to drive
- Oxygen if hypoxaemic

Wrong Beliefs

- ❑ Rest is the best
- ❑ Too late to change
- ❑ Too old to change
- ❑ Need to check how I feel before I start to do something
- ❑ Antibiotics weaken my immunity
- ❑ The flu shot prevents all infections
- ❑ The flu shot will make me ill

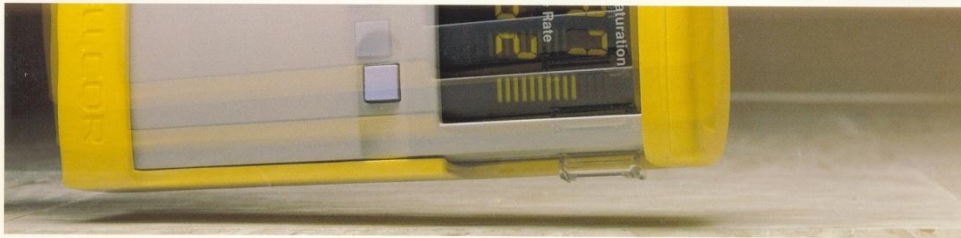
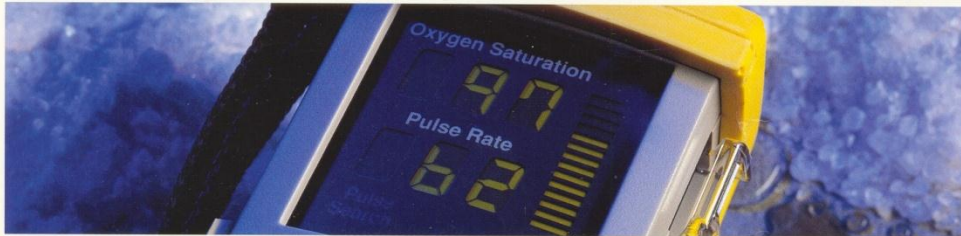
Effects of Pulmonary Rehab

- Improve QOL
- Reduce emotional morbidity
- Improve exercise performance
- Improve functionality and confidence
- Reduce both primary admissions and readmissions to hospital.

7 important aims in helping patients self manage....Bob Lewin.

- **BELIEFS** –correct faulty health beliefs.
- **COPING MECHANISMS**- facilitate better coping actions & check for unhelpful self management.
- **MOTIVATION**-motivational interviewing.
- **CONFIDENCE/SELF EFFICACY**
- **CONTROL**-increase perceived control over the illness.
- **ANXIETY & DEPRESSION**-relaxation/breathing/self help/referral.
- **SELF MANAGEMENT SKILLS**-concordance with medication.

Before we introduced our new
spot-check oximeter,
we triple-checked it for durability.



We shock-tested it. Vibration-tested it. And subjected it to extreme temperatures.

The *N-20* portable pulse oximeter met our tough standards. And we're so confident that it's rugged enough to stand up to yours, we've backed it with an exclusive three-year warranty.

In addition, the *N-20* is compatible with the full line of *NELLCOR* sensors, which assures you the ultimate in convenience and versatility.

- One-touch measurement
- Portable, hand-held operation
- Rugged, durable construction
- Quick assessment of patient O₂ saturation
- Dual modes for spot-check measurement and extended measurement of SpO₂ and pulse rate for up to 30 minutes
- Hard-copy documentation with integral printer in model *N-20P*

NELLCOR®

Oxygen :COPDX 2011

- Long-term oxygen therapy (>15 h/day) prolongs life in hypoxaemic patients ($\text{Pao}_2 < 55 \text{ mmHg}$) (MRC Working Party, 1981), (Nocturnal Oxygen Therapy Trial Group, 1980), (Weitzenblum et al., 1985, Gorecka et al., 1997, Zielinski et al., 1998), (American Thoracic Society, 1995), (Siafakas et al., 1995, Tarpy and Celli, 1995) [evidence level I]
- Breathless patients, including those who desaturate on exercise, who are not shown to be hypoxic at rest do not benefit in terms of SOB , QoL & function from ambulatory oxygen therapy (Moore et al., 2011) [evidence level II];
- O₂ is unlikely to be required if resting O₂ Sat >94%, and likely to be required if oxygen saturation is <88%

Oxygen Therapy- Targets

- ❑ O2Sat=100% is NOT normal or physiological or required
- ❑ O2Sat>90% is adequate
- ❑ Tissue hypoxia occurs after 4min without O2-delivery
- ❑ Individuals can adapt to chronic /recurrent hypoxia (chronic respiratory failure, high altitude)

Oxygen Therapy

- Long term O₂ treatment “LTOT”
- Stable condition & PaO₂ ≤55mmHg or ≤60 if evidence of cor pulmonale, heart failure, polycythaemia
- LTOT >15h/day prolongs life in hypoxaemic patients (not in those who are not!)
- Ambulatory / “portable” O₂ may improve exercise tolerance in those with exertional “desaturations”
- In susceptible patients O₂ may depress ventilation, increase physiological dead space, increase PaCO₂
- O₂ is flammable – do not smoke , avoid open fire...
- Caution with narcotics, opiates – risk of further impairment of central regulation of breathing

Oxygen Therapy During An Acute Illness

- Controlled O₂ in a pre-hospital setting is indicated for hypoxaemia: the aim is O₂saturation $\geq 90\%$, use nasal cannulae 0.5-2L/min or Ventimask 24-28%
- Minimise excessive O₂ administration which can worsen hypercapnia- there is no benefit trying to obtain O₂Sat $>92\%$
- NIV for acute Type 2 respiratory failure

NIV for AECOPD



Cochrane Group Statement

“Non-invasive positive pressure ventilation should be the first line intervention in addition to the usual medical care to manage respiratory failure secondary to an acute exacerbation of chronic obstructive pulmonary disease, in suitable patients”

Lung Function

- Ante-natal factors
- Maturation (infancy , childhood, teenage years)
- Rate of decline – see Fletcher Peto

Discussion/Management Points Advanced Disease

- Current wellbeing
- ADL, dressing, toileting
- Dyspnoea management e.g. opiates, benzodiazepines (SL nasally)
- Rate of decline – see Fletcher Peto
- Dyspnoea related anxiety
- Specific exercise related issues : pulmonary rehabilitation
- Nutritional status: calorie supplements
- Inhaled drug therapy
- Continuous antibiotics?
- Oxygen therapy
- Management of cor pulmonale
- Anticipating the future – forward planning

“not a death sentence”, “you are not alone”

- **The most important factors contributing to a longer and healthier lifestyle include, but are not limited to:**
- Early detection
- A knowledgeable physician who is proactive in disease management
- Following your medication regimen faithfully
- Healthy eating habits
- Stopping smoking
- Exercise program
- Education about any and all aspects of your disease
- Infection prevention to limit exacerbations

COPD-X 2011

“Indication for referral to specialist”

Also see ‘HealthPathways’ Canterbury

- Dx uncertain, ? Asthma ? Other
- ? degree of reversibility of airflow obstruction
- Unusual Sx, e.g. haemoptysis
- Rapid decline in FEV1
- Moderate or severe COPD
- Cor pulmonale
- ? Need for Home oxygen therapy
- ? Need for Pulmonary Rehabilitation
- Bullous lung disease
- COPD <40 years of age
- Assessment for lung transplantation or LVRS
- Rule out co-existing bronchiectasis
- Dysfunctional breathing

SHORTNESS OF BREATH SCALE

This shortness of breath scale may help you to recognise when your breathing becomes difficult.

- 1 MILD**
noticeable to you but not others
- 2 MILD, SOME DIFFICULTY**
noticeable to others
- 3 MODERATE DIFFICULTY**
but can continue activities
- 4 SEVERE DIFFICULTY**
you cannot continue activities

KEEP ACTIVE

- People with COPD can feel short of breath with activity even when well
- Regular exercise makes breathing easier and helps keep you well
- Learn to walk/move at a slower pace to avoid regular stops to catch your breath

TIPS TO HELP WITH BREATHING

- Breathe in through the nose
- Breathe out with pursed or puckered lips (as if you are whistling)
- Try to keep your shoulders relaxed and lean forward with your arms supported on a hard surface

USING A SPACER



If you use a metered dose inhaler, a spacer will help get medication into the lungs. Ask your doctor about a spacer if you don't already have one.

- 1 Shake the inhaler well (holding it upright)
- 2 Fit the inhaler into the opening at the end of the spacer
- 3 Seal lips firmly round the mouthpiece
- 4 Press the inhaler once only
- 5 Take 5-8 slow breaths in and out through your mouth. Do not remove the spacer from your mouth between breaths
- 6 Remove spacer from your mouth
- 7 Repeat these steps (1 - 6) for further doses
- 8 Wash the spacer once a week with warm water and dishwashing liquid



Do not rinse. Drip dry.

This reduces the electrostatic charge so that the medicine does not stick to the spacer sides

COPD

(A chronic lung disease)

Management Plan

Every March see your doctor
for an influenza vaccine

Supported by



This COPD Management Plan belongs to:

Helping people to breathe easier



The Asthma and
Coping Foundation
of New Zealand (Inc.)
14 Taranaki Wharui,
P.O. Box 100, Auckland

COPD Management Plan

No Symptoms

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Severe

SYMPTOMS

WHEN YOU ARE WELL - KNOW

- How much you can do each day
- How your breathing is at rest and during activity
- What makes your breathing worse
- What your appetite is like
- How well you sleep
- How much sputum you have, and its colour

ACTION

LIFESTYLE TIPS

- Stop smoking and avoid smoky environments
- Have something to look forward to each day
- Exercise every day
- Plan ahead and allow enough time to do things
- Eat a balanced diet
- Drink plenty of fluids
- Avoid things that make you worse
- **Never** run out of medicines
- Regular medication and wellbeing check at GP

MEDICATIONS

Reliever @ puffs times a day
 @ puffs
 Other @ puffs times a day
 @ puffs times a day
 @ times a day

WORSENING SYMPTOMS

- More breathless or wheezy than usual
- Change in amount and/or colour of sputum
- Fever
- Need to use inhalers/nebuliser more than usual
- Reduced energy for daily activities
- Loss of appetite
- Increasing tiredness and/or poor sleep
- Cough – new or increased

WHAT TO DO

- If you have an infection (fever and/or yellow/green sputum), start antibiotics
- Increase your medications
- Reschedule your day to allow more time for rest
- Use relaxation techniques
- Clear sputum with huff and cough techniques
- Eat small amounts regularly
- Drink extra fluids

Continue your usual medications.
 Increase or start the following medications:

@ puffs times a day
 @ puffs times a day
 @ times a day

SEVERE SYMPTOMS

If no better in days

Contact the doctor for an urgent review

Daytime tel:

After hours tel:

Continue your usual medications. Start the following medications:

times a day

EMERGENCY

- Very short of breath at rest
- Chest pains
- A feeling of agitation, fear, drowsiness or confusion
- High fever

**Dial 111
for an ambulance**

Patient Name:

Doctor: Tel:

Date plan prepared: By:

Review Date: By: