

Redesigning COPD Services

A clinical debate on what's needed, who's needed and where they're needed



health care intelligence

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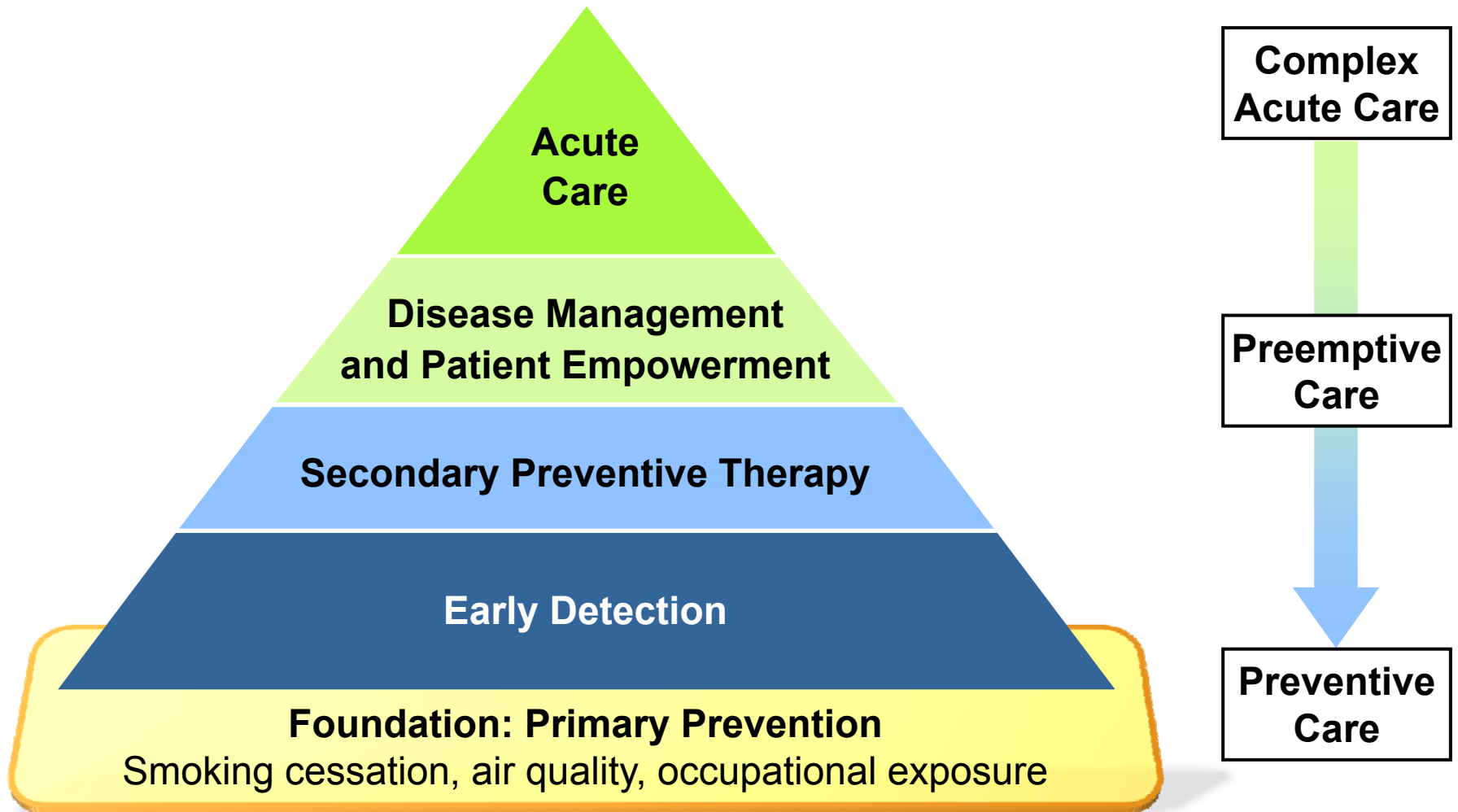
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The Case for Change

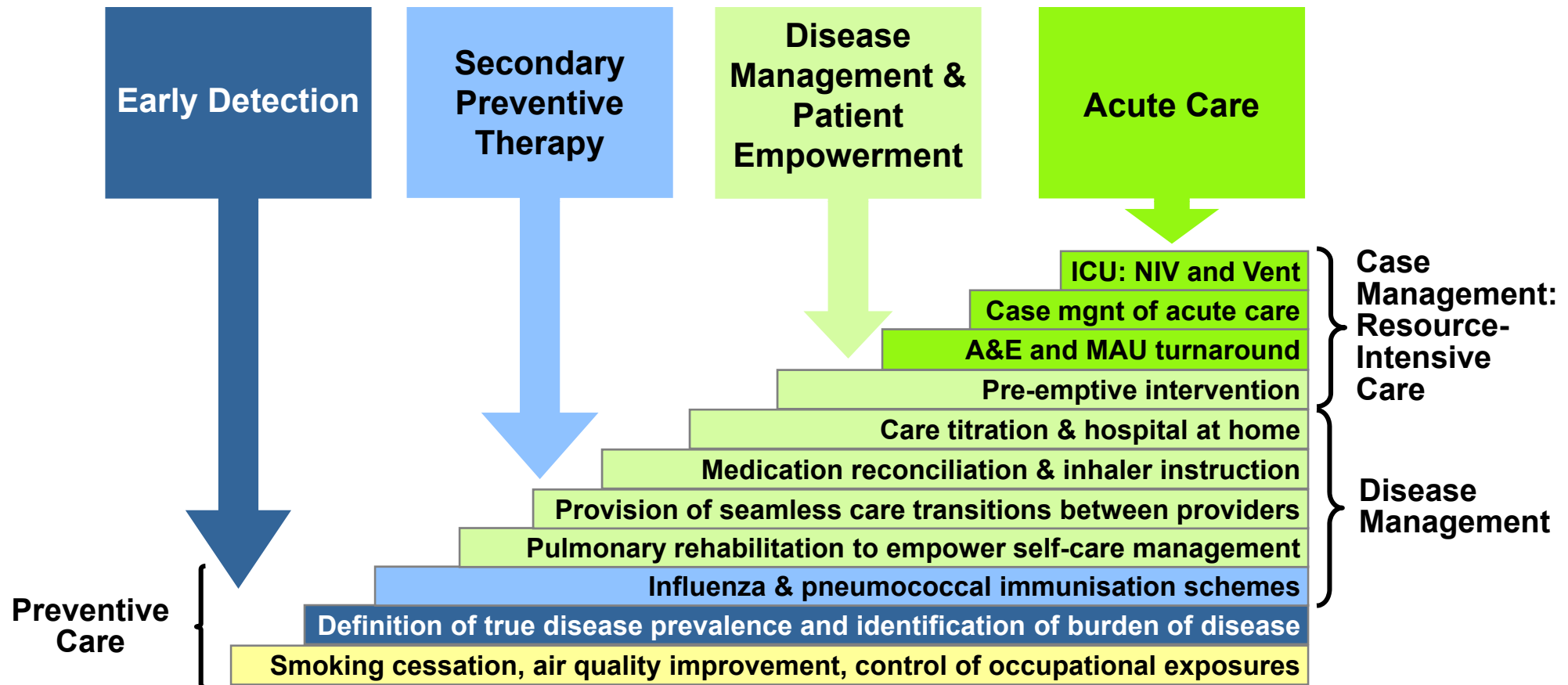
- Hospitalisation due to acute exacerbations of COPD is costly:
 - >3 million people in England have COPD
 - 2nd most common cause of emergency admission to hospital
 - One of the most costly disease for acute hospital care
- Redesigning COPD care pathways has the potential to:
 - Prevent many COPD inpatient episodes
 - Help the NHS manage the increasing demand for COPD care in the future
- Successful programmes are dependent on the use of appropriate preventive strategies, and on integrated services that are planned and delivered around individual need, whether that be maintaining health and wellbeing, accurate diagnosis, comprehensive and accessible treatment, or end of life care.

COPD care delivery needs to move from current reactive models to proactive management

A Population Based Problem: Attacking the Pyramid of Care

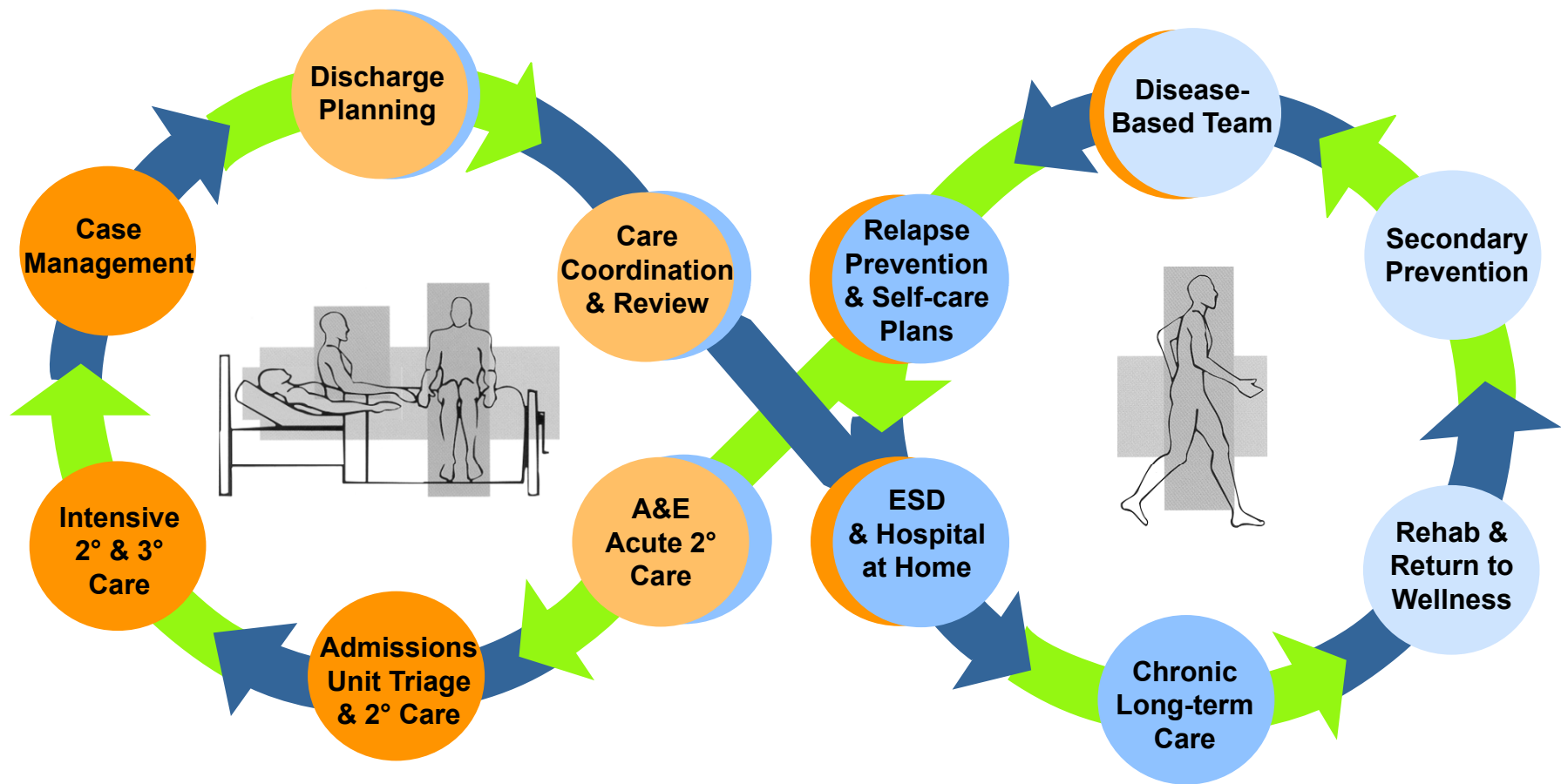


1° & 2° Prevention: Provide Greatest Benefit at Lowest Cost



1° = primary; 2° = secondary; ICU = intensive care unit; NIV = non-invasive ventilation.

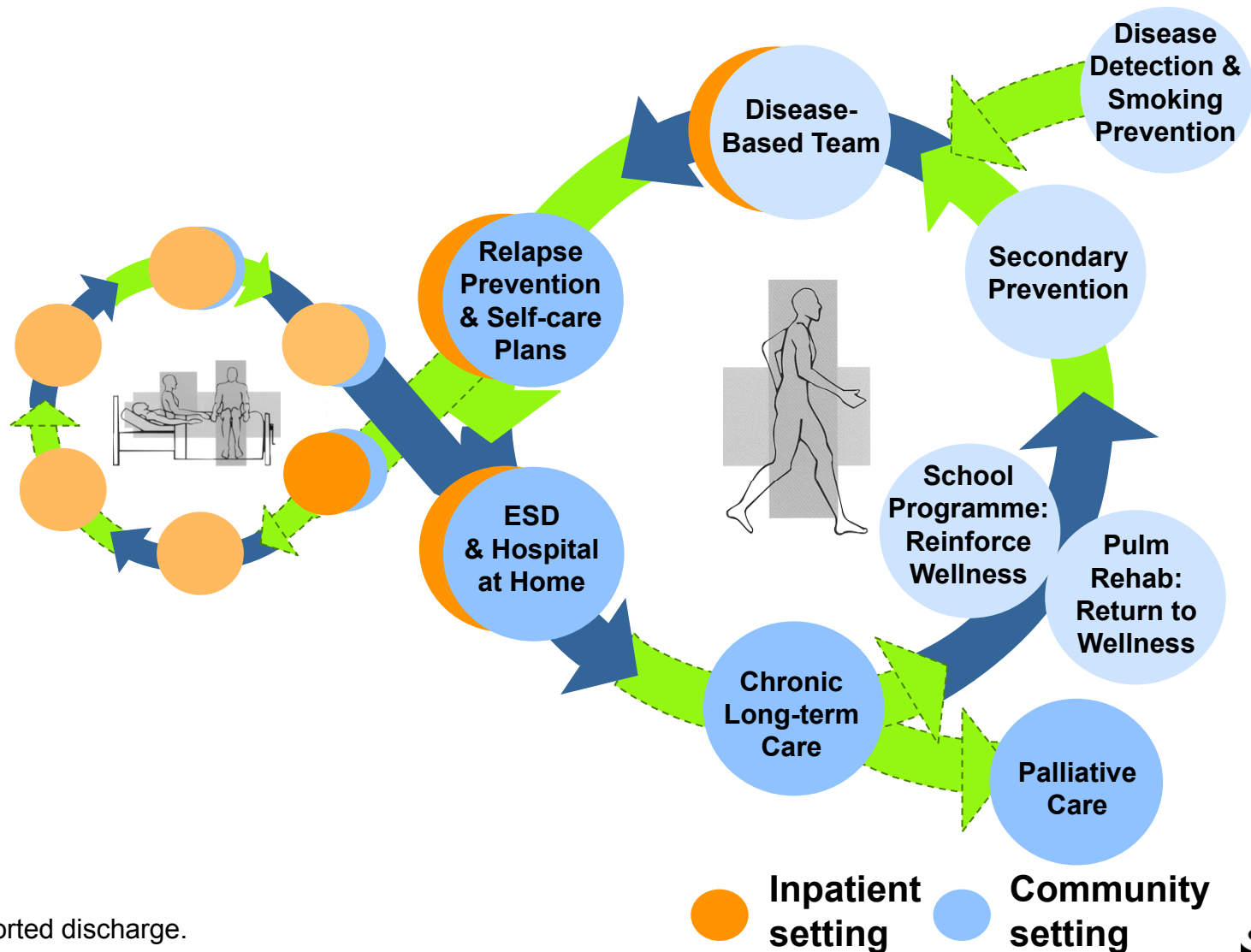
Bridge Gaps in Care and Redesign Clinical Pathways



2° = secondary care; 3° = tertiary care; ESD = early supported discharge.

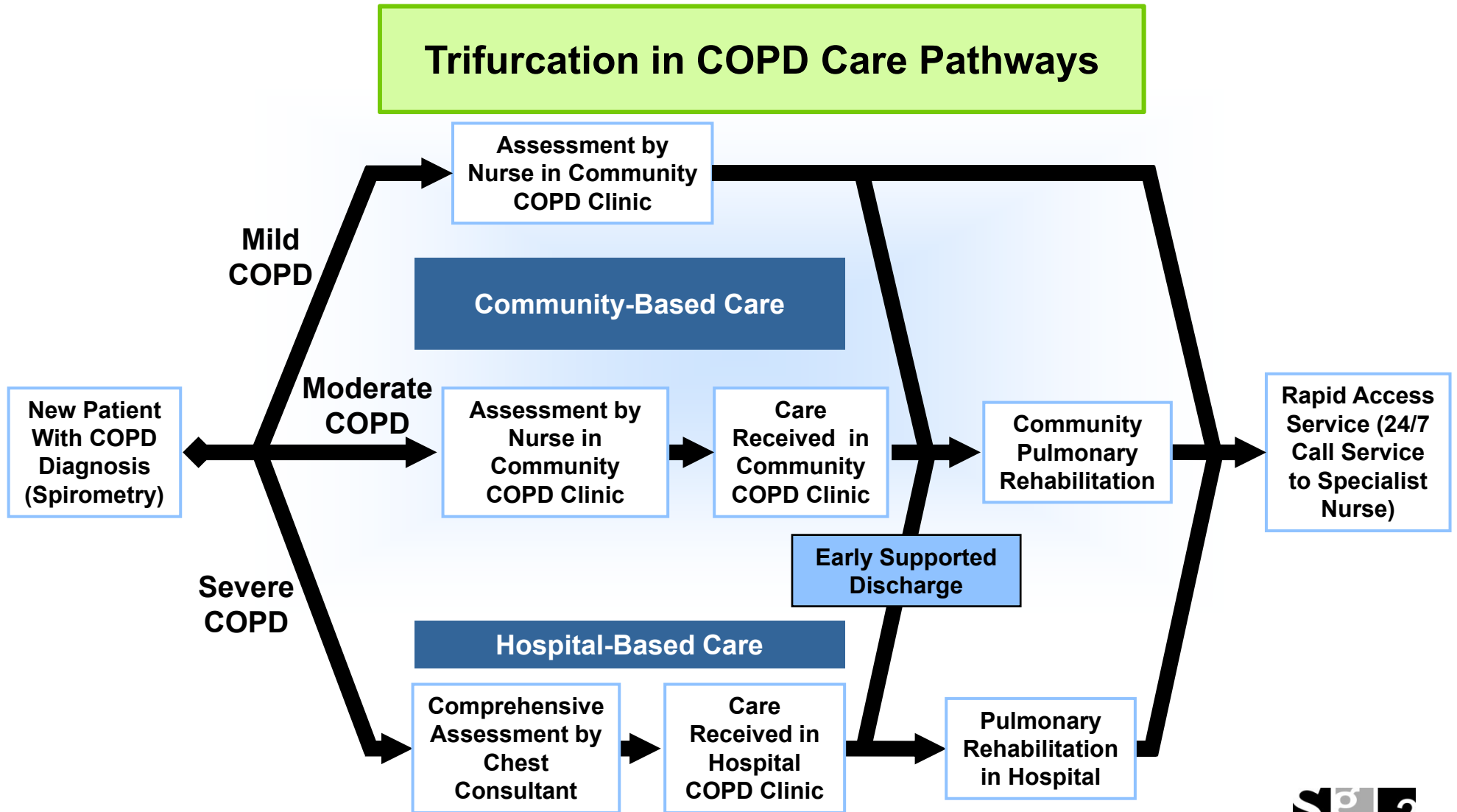
● Inpatient setting
 ● Community setting

Prevention, Pre-emption & Care Integration Shift Care to the Community



ESD = early supported discharge.

Tailor Care to Condition Severity & Support Transition Continuity



An Example of COPD Care Pathway Redesign in a PCT

Specific Challenges:

- Heavy local disease burden and high standardised mortality for COPD
- High rate of unplanned admissions to local district general hospital

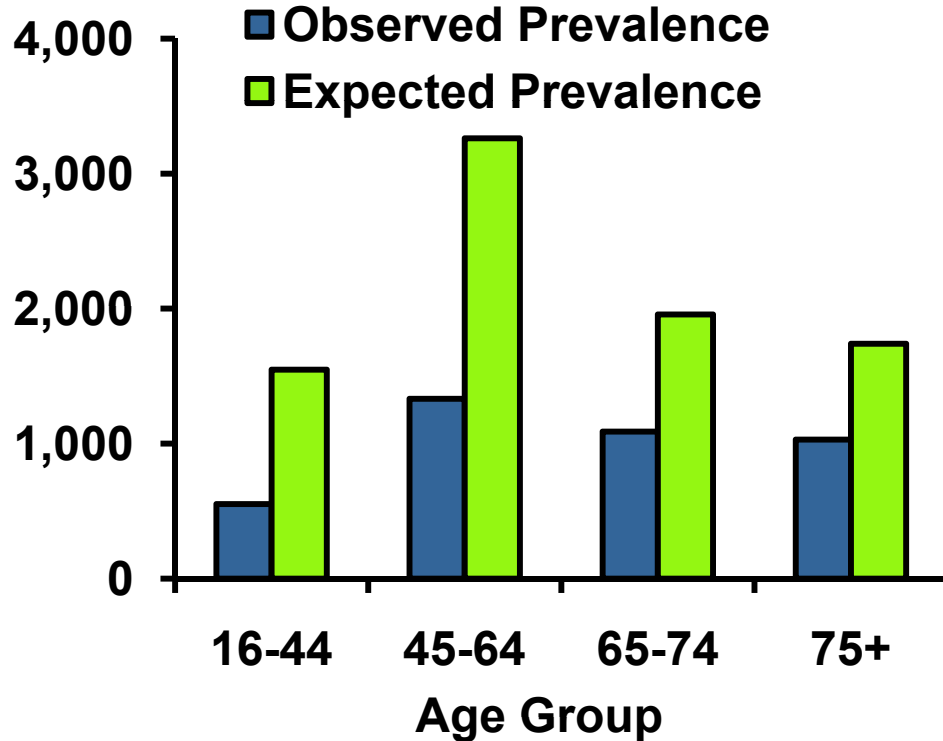
Approach:

- Conducted a health needs assessment
- Characterise current care pathways across the continuum
- Developed high-level service specifications for an integrated care delivery model
- Conducted a return on investment (ROI) analysis for implementing the new care model
- Engage stakeholders in the planning for the proposed new care pathways

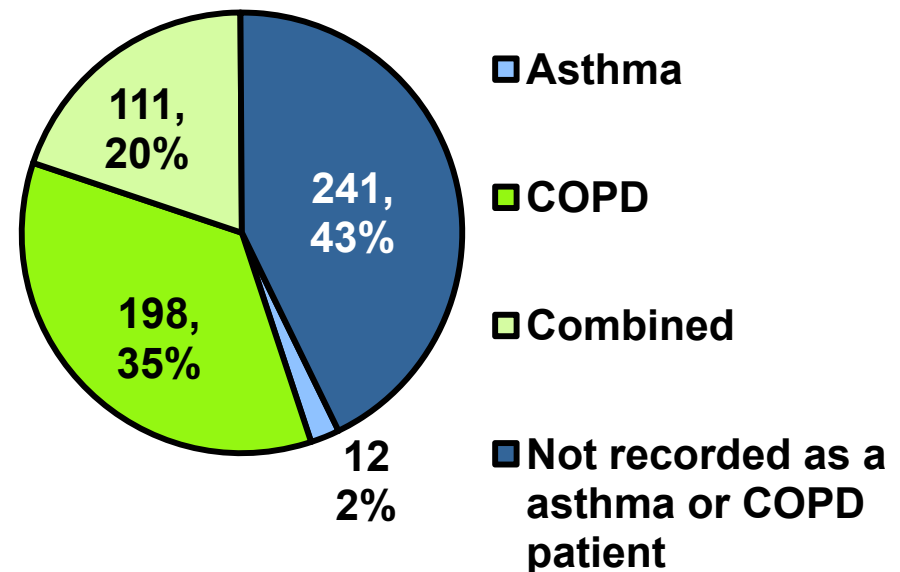
Primary Care Documentation of COPD Diagnosis Underestimates Disease Burden

COPD Prevalence Estimates vs. Registration

Persons



Status of Patients with COPD Discharge(s) in 2007/08 & 2008/09 in GP Records



Sources: PCT-provided QOF data (2007/08) and GP records data; Modelled estimates of prevalence of COPD for PCTs in England, Eastern Region Public Health Observatory, November 2008; Sg2 Analysis, 2009.

Direct Cost Savings of an Expanded Influenza Vaccination Scheme

Calculation of potential savings (reduced medical costs*) by expanding the provision of influenza vaccination to the unregistered COPD population within the PCT catchment area

	£2009 Cost Savings			Investment for Vaccines (£)	£2009 NET COST SAVINGS
	Self-Care	Office Visit	Hospitalisations		
COPD	61	28,201	40,806	(13,761)	55,307

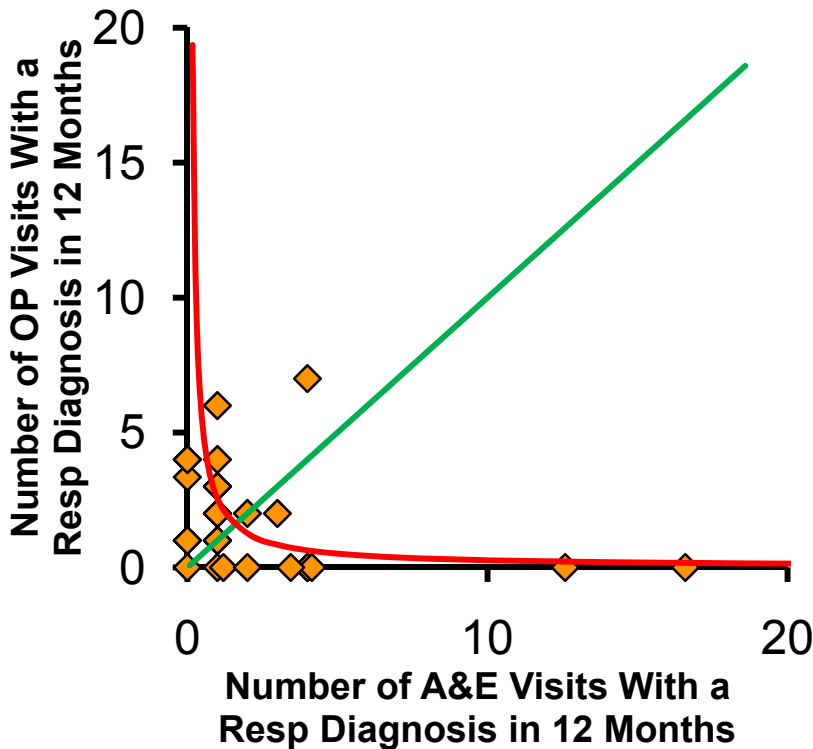
Net Present Value (2009 – 2019) = £533,915

*Medical cost = cost of over-the-counter medication, GP visits and hospitalisations.

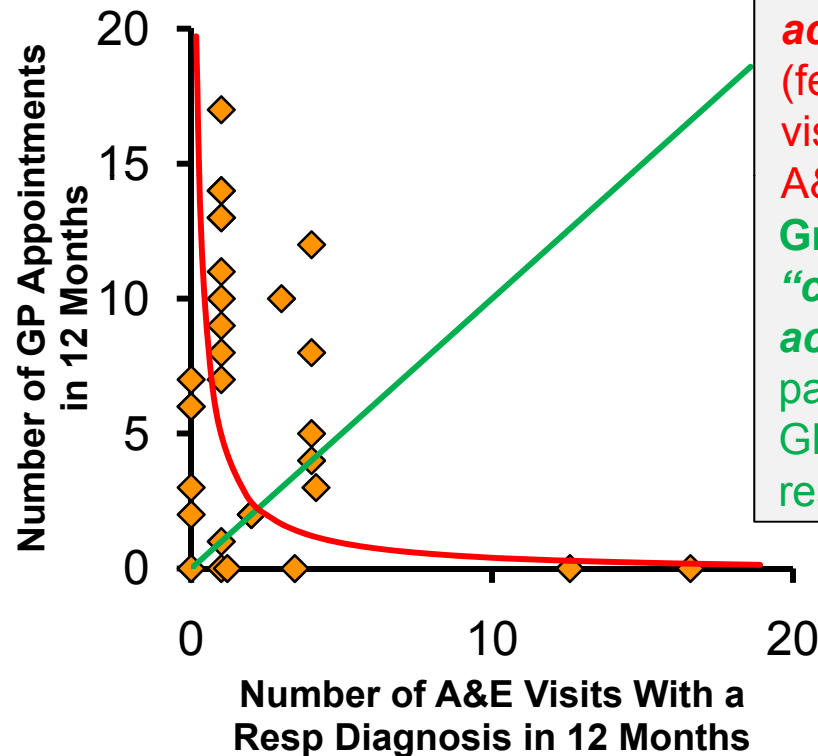
Source: N.-A.M. Molinari et al. *Vaccine* 2007;25:5086-5096; QOF results for the PCT, www.qof.ic.nhs.uk, Accessed September 2009; Sg2 Analysis 2009.

Inverse Relation Between Number of GP and Outpatient Visits With A&E Usage

Number of Outpatient Appointments vs. A&E Utilisation at the Patient Level



Number of GP Appointments vs. A&E Utilisation at the Patient Level



Key:
Red line = "substitute activities" (fewer GP or OP visits result in more A&E visits)
Green line = "complementary activities" (sicker patients use more GP and A&E resources)

Could an increase in planned outpatient and GP appointments pre-empt an A&E visit?

Creating a New Care Delivery Model Will Bridge Gaps in the Current System

Gaps in the Current State
1. No specialist leadership in the community for COPD
2. Weak link between ward discharge planning, care transition follow-up & patient education/self-care
3. Pre-emptive intervention, care titration & out-of-hours care only available to extremely sick patients
4. Very limited capacity for inpatient rehabilitation/ education programme
5. Registers, prevention, primary care provided by GP and practice nurses

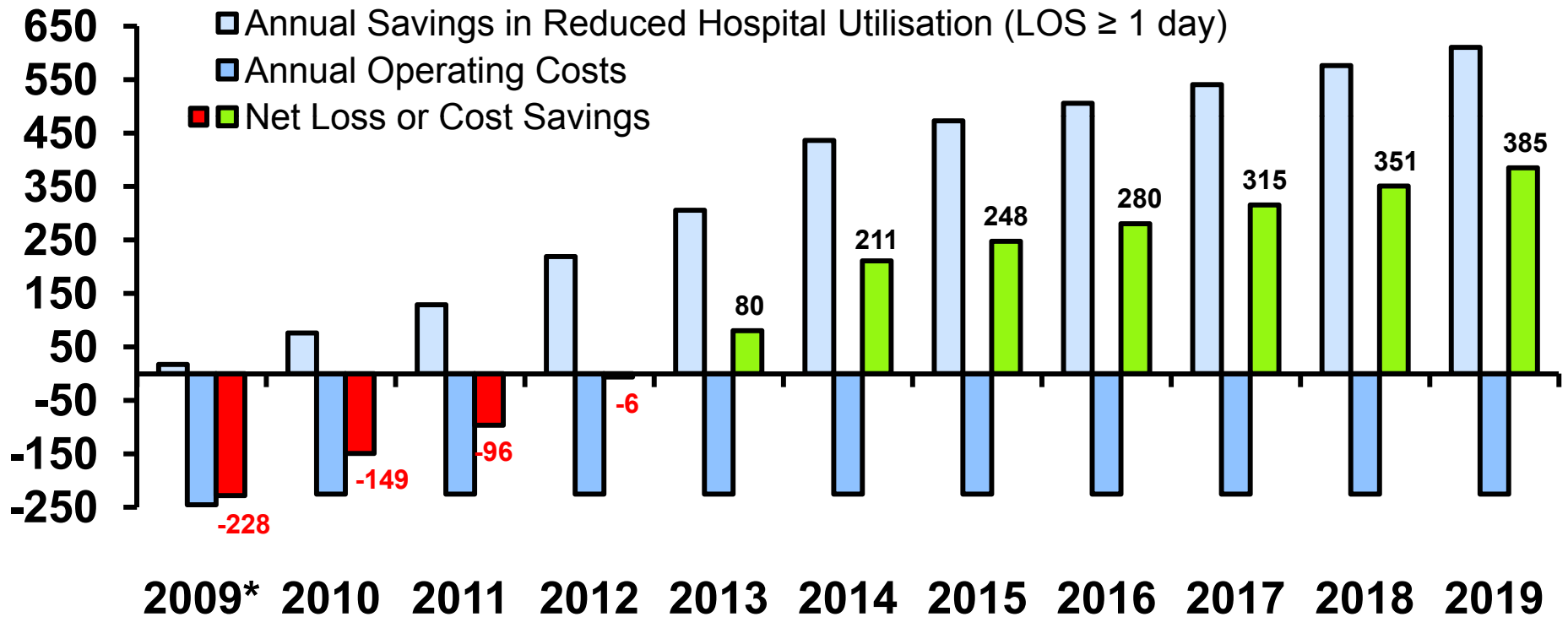


New Care Model	Investment (pa)
1. Chest Physician	£26,000
2. Secondary Care COPD Nurse	£39,000
3. Community Nursing Team	Existing resource
4. Community Rehab Programme	£160,000
5. Practice Nurses	Existing resource

New Care Delivery Model Breaks Even After Year 4

Financial Analysis of 10-Year Return on Investment in a COPD Community Programme and New COPD Care Delivery Model

Thousand GBP



Net Present Value (2009-2019): £971,122

* The 2009 costs include the initial £20,000 investment.
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Questions for Discussion:

1. What chronic diseases besides COPD impose significant care burdens?
2. Where are there other opportunities in care pathways to improve care?
3. Are there governance models for “Community Health Care Trusts” which coordinate the ambulatory continuum of care ?
4. Can our current information systems measure the effectiveness of care and the improvements that we wish to make?
5. What are the appropriate incentives required to motivate better care?
6. Which institutions are best positioned to coordinate the interrelationship between social, mental health and general medical care: local authority, DGH, GP commissioners, mental health trust, borough council, etc?
7. Are there other innovations being piloted for management of heart failure, COPD, asthma, diabetes, chronic renal disease, peripheral vascular disease and neurovascular disease?