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In NSW, Value Based Healthcare (VBHC) is defined by four domains

Health outcomes that matter to patients

Experiences of **receiving care**

Effectiveness and efficiency of care

Experiences of **providing care**

NSW GOVERNMENT

In NSW VBHC means continually striving to deliver care that improves outcomes and experience while ensuring the future sustainability of the health system

Patient: changes focus from "what's being done to me?" TO "***what matters to me.***"

Shifts the focus from what we can measure (volume - inputs and activity) to what we need to measure (value - outcomes)

Involves aligning drivers to refocus activity on outcomes
– this is long-term transformation and system change

VBHC Framework outlines foundations and enablers to deliver what matters to patients

2

2

| **Case study:** Chronic Obstructive Pulmonary Disease

Chronic Obstructive Pulmonary Disease (COPD) - improve patient experience by developing optimal care after discharge (reducing 28-day readmission) and at end of life.

Evidence: in 2014/15, COPD in NSW accounted for 15,311 hospital admissions at a cost of $330M. Variations to patient management not optimal; with many patients admitted through ED on multiple occasions.

Implementation: a coordinated approach focussing on improvements to diagnosis, exacerbation management, optimising health through on-going care and palliative management of end-stage symptoms.

Measurement: In 2019/20 it is expected to see a more effective and efficient use of resources.

Patient story

Mary* was diagnosed with COPD. She was having anxiety attacks, getting panicky and couldn't breath.

"I have one day a week instruction about managing my disease and there is nothing but encouragement all the way. I know what to do with the action plan, and if I get into trouble I know exactly the next four steps I have to take before I contact my doctor"

For Elke and other people with COPD, knowing how to manage exacerbations of their condition means avoiding a visit to the ED.

Acknowledgement: Port Macquarie Base Hospital Respiratory CNC – Sarah Buckley

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Measure what we should not what we can

Measure value – from a patient, clinician, service & system perspective

Economic Assessment	Quarterly Monitoring	Patient reported measures	Activity Benefit	Costing Studies	Registry of Outcomes, Value & Experience (ROVE)	Evaluations
Sustainability, economic justification, cost avoided, inform purchasing	To monitor and influence change	Outcomes & experience Clinical interface, analyses & evaluate	Repurposing, inform purchasing	Assess actual NAP service delivery costs, ensure accurate funding	Link LBVC data (administrative PRMs, clinical audit & EMR)	To measure impact and compare to predicted estimates

Aims

"The rigour of the program appeals to people. The evidence of the data and models have reduced the squeaky wheels. This makes LBVC look a bit different to other programs or strategies that have come before". *Executive Sponsor, LHD*

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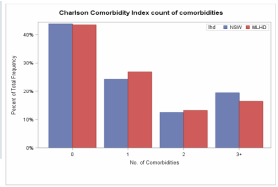
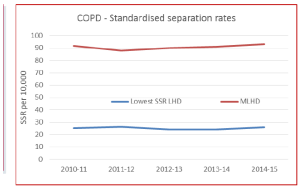
Setting the Scene…COPD in MLHD and NSW 2010/11 to 2014/15



COPD cohort is complex

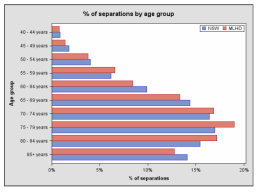
Around 56% of COPD patients had **one or more comorbidity** (MLHD &NSW)

Slightly fewer patients in MLHD with 3 or more co-morbidities



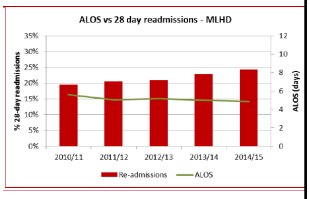
MLHD had the highest rate of separation for COPD in the state

Standardised Separation Rate (adjusted for age and sex) per 10,000 was 25.2 in the lowest LHD and 90.8 in MLHD



MLHD COPD patients tend to be older

Higher proportion of separations for primary COPD for the age groups 70-74, 75-79 and 80-84 compared to NSW



Readmission rate was rising as ALOS fell

Overall higher rate of readmission in MLHD (19.6% to 24.4% compared to NSW 19.2% to 20.8% over the period)

Slightly shorter ALOS in MLHD (MLHD 4.9 days in 2014/15 compared to 5.5 days for NSW)

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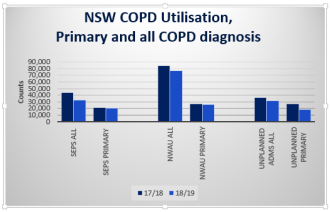
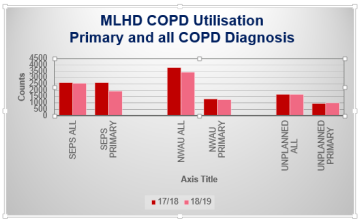
COPD in MLHD and NSW – first 2 years of LBVC (17/18 & 18/19)



Overall utilization for COPD as a Primary Diagnosis is relatively stable but:

Slight fall in unplanned (emergency) admissions where COPD is the PD

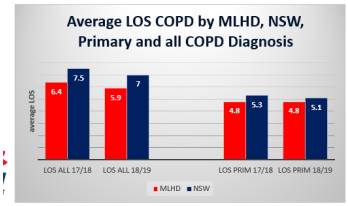
Slight fall in separations and NWAU where COPD is a comorbidity



MLHD unlike NSW fall in separations where COPD is the Primary Diagnosis

Everything else is relatively stable

Complexity is stable



ALOS relatively stable where COPD is the Primary Diagnosis

ALOS continues to fall where COPD is a comorbidity

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COPD @ Young District Hospital, Murrumbidgee LHD

Context

- Young District Hospital was the first of the MLHD LBVC projects, following launch of the program in July 2017.
- This project was developed as **the first non-ABF funded site** and was initiated as a pilot project running from September to December 2017.
- Clinical audit demonstrated significant variations in the areas of:
  - Medication management, including oxygen prescription
  - Variation in availability of COPD action plans
  - Discharge Planning

Strategy

Ensure a patient journey approach to the management of patients with COPD

- Review all patient medications
- Ensure oxygen saturations were within recommended target range [88-92%]
- Reduce admissions and readmission of patients with COPD

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COPD @ Young District Hospital, Murrumbidgee LHD

Stepwise Management of Acute Exacerbation of COPD
Based on COPD-X Guidelines

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Outpatient Management of COPD

Confirm Diagnosis | Optimise function | Prevent deterioration | Develop support network and self-management plan

Manage Acute EXacerbations

Clinical treatment	Nursing	Physiotherapy	Discharge Planning – *Commence from admission*	Pharmacy
Oxygen correct interface; flow rate; SpO2 target (88-92%) Steroids what, how much, duration Bronchodilators what, how much, nebs or MDI Antibiotics what, route, duration Regular Meds Chart regular inhaled therapies	Altered BTF as required (MO directed); Flow rate; interface as per COPD-X; Care Plan O2 during ADLs; Dietary considerations – increased calories and protein intake; small regular meals	Pulmonary Rehabilitation Documented assessment for Pulmonary Rehabilitation for all COPD patients	Instructions *Clear* discharge instructions for GP/Specialist Referral GP; Respiratory NP; Pulmonary rehabilitation Physiotherapy; Respiratory Specialist COPD Action Plan (+/- Ambulance plans/ACD) prior to discharge Spirometry Arranged during discharge or outpatient Outpatient management of COPD	Medication reconciliation On admission Inpatient Discharge – ensure regular inhaled therapies are present

Yang IA, Dabscheck E, George J, Jenkins S, Mc Donald CF, McDonald V, Smith B, Zwar N. The COPD-X Plan: Australian and New Zealand Guidelines for the management of Chronic Obstructive Pulmonary Disease 'All.T. Version 2.51, September 2017.

Stepwise Management of Acute Exacerbation of COPD
Based on COPD-X Guidelines

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Clinical Management of Acute EXacerbations

Antibiotics

Expert opinion is that antibiotic treatment should **not** be used unless the patient has clinical signs of infection.

If antibiotics are indicated, use:
Amoxycillin 500 mg orally, 8-hourly for 5 days
OR
Doxycycline 200 mg orally for first dose, then 100 mg daily for a total treatment duration of 5 days

IV antibiotic therapy is not required unless oral therapy is not possible or patient has confirmed pneumonia on CXR

Bronchodilators

Initial treatment:
Salbutamol 100mcg, up to 10 separate actuations by inhalation via pMDI with spacer, repeated as needed;
OR

Terbutaline 500mcg, 1 or 2 actuations by inhalation via DPI, repeated as needed; **OR**

Ipratropium 21mcg, up to 6 separate actuations by inhalation via pMDI with spacer, repeated as needed

If a nebuliser is used, it should be driven by compressed air.
Salbutamol 2.5-5mg as needed OR
Ipratropium 250-500mcg as needed.

Regular Meds
Chart regular inhaled therapies

Systemic corticosteroids

Prednisolone 30-50 mg orally, once daily in the morning for 5 days

If oral medication cannot be tolerated, use:
Hydrocortisone 100 mg IV, 6-hourly

Note: conversion to oral corticosteroid should occur as soon as is practical.
If the course of therapy is < 2 weeks, the prednisolone may be stopped without routine tapering.

Yang IA, Dabscheck E, George J, Jenkins S, McDonald CF, McDonald V, Smith B, Zwar N. The COPD-X Plan: Australian and New Zealand Guidelines for the management of Chronic Obstructive Pulmonary Disease 2017. Version 2.51, September 2017; Therapeutic Guidelines Ltd (eTG November 2017 edition)

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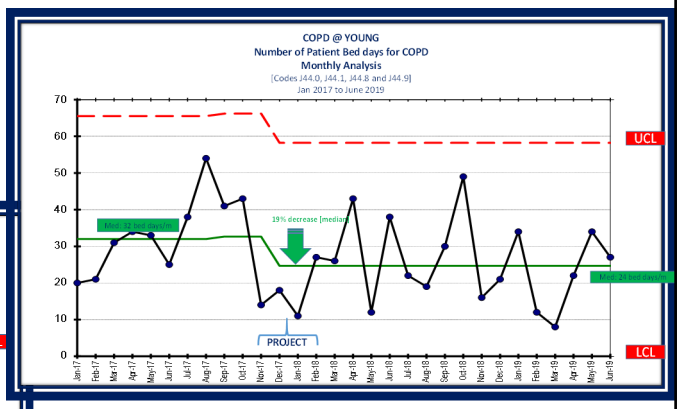
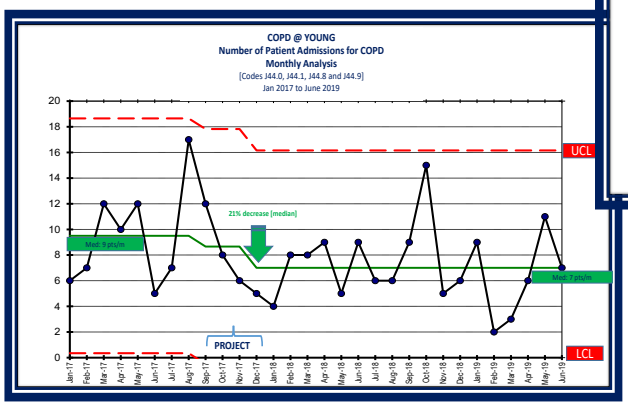
COPD @ Young District Hospital, Murrumbidgee LHD

Outcomes:

- ✓ **A 21% reduction in COPD admissions**
- ✓ **A 19% reduction in COPD bed days**
- ✓ **A 16% reduction in 28 day readmissions**





Note:

- ❖ **Winter seasonal activity – not a key driver of admission numbers**

Data Definition: COPD, either as a primary reason for presentation, or as a comorbidity [Codes J44.0, J44.1, J44.8 and J44.9]

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COPD @ Young District Hospital, Murrumbidgee LHD

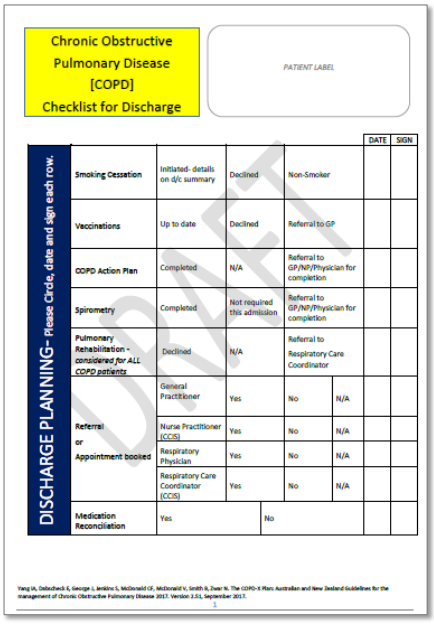
Conclusion

- Effective management of COPD across the patient journey is a primary driver for reducing re-admissions.
- Translating COPD-X guidelines into evidence-based model of care, supported by tailored patient and clinical resources.
- Demonstrated significant and sustained reduction in admissions and re-admissions.

Next Steps:

A patient journey approach to the management of patients with COPD

- Scaling across Murrumbidgee (32 facilities)
- Monitoring status with on-line reporting tool


Chronic Obstructive Pulmonary Disease [COPD] Checklist for Discharge

PATIENT LABEL

DISCHARGE PLANNING– Please Circle, date and sign each row.

					DATE	SIGN
Smoking Cessation	Initiated- details on d/c summary	Declined	Non-Smoker			
Vaccinations	Up to date	Declined	Referral to GP			
COPD Action Plan	Completed	N/A	Referral to GP/NP/Physician for completion			
Spirometry	Completed	Not required this admission	Referral to GP/NP/Physician for completion			
Pulmonary Rehabilitation - *considered for ALL COPD patients*	Declined	N/A	Referral to Respiratory Care Coordinator			
Referral or Appointment booked	General Practitioner	Yes	No	N/A		
	Nurse Practitioner (CCIS)	Yes	No	N/A		
	Respiratory Physician	Yes	No	N/A		
	Respiratory Care Coordinator (CCIS)	Yes	No	N/A		
Medication Reconciliation	Yes		No			

DRAFT

Yang IA, Dabscheck E, George J, Jenkins S, McDonald CF, McDonald V, Smith B, Zwar N. The COPD-X Plan: Australian and New Zealand Guidelines for the management of chronic Obstructive Pulmonary Disease 2017. Version 2.01, September 2017.

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