DRAFT*:* <u>Implementation Plan for National Clinical Guideline (NCG) on: COPD</u>

Guideline recomm-endation or number(s)	Implementation barriers / enablers	Action / intervention / task to implement recommendation	Lead responsibility for delivery of the action	Timeframe for completion			Expected outcome and verification
				Year 1	Year 2	Year 3	
Strategy for implementation	**Enablers**: • Stakeholder engagement • Patient engagement and involvement • Champions • Building and resourcing CHNs • GP contract agreement • Specialist teams chronic disease • Telehealth **Barriers:** • Requires effective change management, resourcing, & clinical leadership	Develop and roll-out a communication and dissemination strategy, including public engagement Engagement to explore development of clinical champions Seek mandate from COPD programme sponsors for full implementation and resourcing – currently in process with HSE with development of enhanced community care for chronic disease across learning sites and networks	DPIP team	X			**Outcomes**: 1.Improved awareness and knowledge of guideline 2.More promotion and support for guideline implementation 3.Mandate and resources for implementation secured **Verification**: **1.**Records of dissemination activities 2.Champion network 3.Budget
Pharmacological Management of COPD							
Recommendation 1	**Short acting bronchodilators** **1.1 Inhaled short acting beta 2 agonists (SABAs) should be prescribed to patients with confirmed COPD where rescue therapy is needed. (Grade A) (GOLD)**						

	Enablers: • Stakeholder engagement • Patient engagement and involvement **Barrier**s • Cost of medication for patients who are not eligible for General Medical Scheme	Develop and roll-out a communication and dissemination strategy, including public engagement	DPIP team Medical Doctors involved in the care of people with COPD Nurse Prescribers	X			**Outcomes** 1. Improved awareness and knowledge of guideline 2. Improved recognition and response when therapy is required **Verification:** 1.NCP oversight in place to see implementation and KPIs and audits 2.Records of disseminated activities
Recommendation 2	**Long acting bronchodilators** **2.1. We recommend offering long acting bronchodilators to patients with confirmed stable COPD who continue to have respiratory symptoms (e.g. dyspnoea or cough). (Grade A)** **2.2. We recommend offering inhaled long acting muscarinic agents (LAMAs) as first line maintenance therapy in patients with confirmed stable COPD who have continued respiratory symptoms (e.g. dyspnoea, cough) or who have a history of exacerbations with COPD. (Grade A)** **2.3. In patients with confirmed stable COPD who are on inhaled LAMAs or inhaled LABAs alone and have persistent dyspnoea on mono therapy we would recommend combination therapy with both LAMAs and LABAs. (Grade A)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement **Barriers** • Cost of medication for patients who are not eligible for General Medical Scheme	Develop and roll-out a communication and dissemination strategy, including public engagement	• Medical Doctors involved in the care of people with COPD • Nurse Prescribers • Pharmacists	X			**Outcomes** 1. Improved awareness and knowledge of guideline 2. Improved recognition and response when therapy is required 3. Local governance in place for implementation **Verification:** 1. NCP oversight in place to see implementation and KPIs 2. Records of disseminated activities communication materials
Recommendation 3	**Inhaled corticosteroids** **3.1. Offering an inhaled cortical steroid (ICS) in symptomatic patients with confirmed stable COPD as first line therapy is not recommended. (Grade A) (Department of Veteran Affairs) (Implied in GOLD)** **3.2. In patients with confirmed COPD who are on combination therapy with LAMAs and LABAs and have persistent dyspnoea or frequent COPD exacerbations, it is suggested that the addition of an ICS may be reasonable. (Grade B) (GOLD)** **3.3 An ICS combined with a LABA is more effective than individual components in improving function and health status and reducing exacerbations in patients with exacerbations moderate to very severe COPD (Grade A)** **3.4** In **patients with confirmed COPD who are on combination therapy with LAMAs and LABAs and have persistent dyspnoea or frequent COPD exacerbations, it is**						

	suggested that the addition of an ICS may be reasonable. **Blood eosinophil count may be used as a biomarker for estimating the efficacy of inhaled corticosteroids (ICS) for the prevention of exacerbations. It has been recognised that there is a continual relationship between the effects of an ICS and eosinophil counts. (Grade B)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement **Barriers:** • Cost of medication for patients who are not eligible for General Medical Scheme	Develop and roll-out a communication and dissemination strategy, including public engagement	• Medical Doctors involved in the care of people with COPD • Nurse Prescribers • Pharmacists	X			**Outcomes** 1.Improved awareness and knowledge of guideline 2. Improved recognition and response when therapy is required **Verification:** 1. NCP oversight in place to see implementation and KPIs 2. Improved knowledge and competencies of HCP
Recommendation 4	**Inhaler technique** **4.1. It is recommended that each patient commenced on an inhaler device would be provided with instructions and a demonstration of proper inhalation technique prior to using the device and that such technique is checked on a regular basis subsequently. Inhaler technique and adherence to therapy should be assessed before concluding that current therapy is insufficient and a change in therapy considered. (Expert Opinion) (GOLD)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement Provision of consideration to initiatives such as Inhaler Technique Check • HSE's Living Well with a Chronic Condition: Framework for Self-Management Support **Barriers** • Lack of awareness among healthcare professionals regarding their role in demonstrating and	•Develop and roll-out a communication and dissemination strategy, including public engagement • Provision of access for pharmacists to an inhaler technique education module. • In the acute setting, Respiratory Nurses and Physiotherapists to ensure patients can use their inhaler properly through supervised inhaler use. In the community, Community Pharmacists to demonstrate inhaler technique when a patient is prescribed a new inhaler. Where in place, Respiratory Integrated Care Clinical Nurse Specialists to educate Practice Nurses on how to demonstrate inhaler technique to patients	• HSE • Community Pharmacists • Medical Doctors involved in the care of people with COPD • Respiratory Nurses • Respiratory Physiotherapists • Respiratory Physiologists • Practice Nurses • COPD Support Ireland • Irish Institute	X	X		**Outcomes** 1. Improved awareness and knowledge of guideline 2. Awareness raising in relation to the role of healthcare professionals in demonstrating and assessing inhaler technique 3. Engage with Irish Institute of Pharmacy on developing inhaler technique module for pharmacists which can be accessed through IIOP website. Next steps to be confirmed following engagement. **Verification** 1.Staff training records available for audit 2.improved knowledge and competencies for HCP

	assessing inhaler technique • Lack of funding and capacity for staff training • Time constraints on staff during patient review • Limited access to placebos in order to demonstrate inhaler technique with patients	• Create awareness of the availability of inhaler technique videos on COPD Support Ireland website. HSE to consider providing access through HSELand so CPD points can be assigned to healthcare professionals. • Pharmaceutical companies should be encouraged to supply placebo inhaler devices to assist with demonstrations to patients Consider expanding "Inhaler Technique Check" initiative to all hospitals	of Pharmacy • Pharmaceutical Society of Ireland • Irish Association of Respiratory Scientists • Pharmaceutical companies				
Recommendation 5	**Roflumilast** **5.1. In selected patients with the chronic bronchitic phenotype of COPD with severe to very severe air flow obstruction and history of exacerbations, a phosphodiesterase-4 (PDE-4) inhibitor may be reasonable add on to therapy with a LAMA and LABA and possibly ICS. This recommendation is not reimbursed by the HSE. (Grade B) (GOLD)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement Funding for roflumilast **Barriers:** • Access to Roflumilast as not currently reimbursed by HSE	• Develop and roll-out a communication and dissemination strategy, including public engagement • Engagement with HSE in relation to reimbursement for Roflumilast	• HSE approves reimbursement of medications • Medical Doctors involved in the care of people with COPD • Nurse Prescriber Pharmacists	X			**Outcomes** 1. Improved awareness and knowledge of guideline 2. Engage with HSE stakeholders to discuss possibility of reimbursement for Roflumilast **Verification**: 1. Improved knowledge and competencies for HCP
Recommendation 6	**Theophylline's** **6.1. In certain selected patients, the addition of a theophylline may be reasonable. (Grade B) (GOLD)**						

	Enablers: • Stakeholder engagement • Patient engagement and involvement **Barrier**s: Nil expected as current practice	Develop and roll-out a communication and dissemination strategy, including public engagement	• Medical Doctors involved in the care of people with COPD • Nurse Prescribers • Pharmacists	x			**Outcomes** 1. Improved awareness and knowledge of guideline 2. Improved recognition and response when therapy is required **Verification**: 1. Improved knowledge and competencies for HCP
Recommendation 7	**Prophylactic use of Macrolide Antibiotics** **7.1 7.1 In patients who have severe COPD with two treated exacerbations and are non-smokers, the addition of azithromycin may be considered for one year (Grade A). (GOLD) This needs to be done in conjunction with Respiratory Specialist advice with surveillance for bacterial resistance and side effects such as impaired hearing and cardiac arrhythmias.**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement **Barrier**s Nil expected as current practice	Develop and roll-out a communication and dissemination strategy, including public engagement	• Medical Doctors involved in the care of people with COPD • Nurse Prescribers • Pharmacists	X			**Outcomes** 1. Improved awareness and knowledge of guideline 2. Improved recognition and response when therapy is required **Verification** 1. Improved knowledge and competencies for HCP
Recommendation 8	**Antioxidants and mucolytic** **8.1. The use of mucolytic and antioxidants in routine practice for management of patients with COPD is not recommended. (GOLD**						

	Enablers: • Stakeholder engagement • Patient engagement and involvement **Barriers:** Nil expected as not widely used	Develop and roll-out a communication and dissemination strategy, including public engagement	• Medical Doctors involved in the care of people with COPD • Nurse Prescribers • Pharmacists	X			**Outcomes** 1. Improved awareness and knowledge of guideline 2. Improved recognition and response when therapy is required **Verification** 1. Improved knowledge and competencies for HCP
Recommendation 9	**Leukotriene antagonists** **9.1. A role for leukotriene receptor antagonists in the management of patients with COPD is not recommended. (GOLD)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement **Barriers** Nil expected as current practice	Develop and roll-out a communication and dissemination strategy, including public engagement	• Medical Doctors involved in the care of people with COPD • Nurse Prescribers • Pharmacists	X			**Outcomes** 1. Improved awareness and knowledge of guideline 2. Improved recognition and response when therapy is required **Verification** 1. Improved knowledge and competencies for HCP
Recommendation 10	**Alpha One Anti-trypsin (AATD) Augmentation Therapy** **10. 1. It is recommended that AATD augmentation therapy might be considered in young patients who are never or ex-smokers with an FEV 1 of 35-60% predicted with continued and progressive disease. This recommendation is dependent on reimbursement approval by HSE. (Grade B) (GOLD)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement • Funding for AATD Therapy **Barriers** • Access to AATD Therapy as not currently funded by HSE	Develop and roll-out a communication and dissemination strategy, including public engagement Engagement with HSE in relation to reimbursement for AATD	• Medical Doctors involved in the care of people with COPD • Nurse Prescribers				**Outcomes** 1. Improved awareness and knowledge of guideline 2. Improved recognition and response when therapy is required 3. Engage with HSE stakeholders to discuss possibility of reimbursement for AATD **Verification**

			• Pharmacists				1. improved knowledge and competencies for HCP
	Non-Pharmacological Management of COPD						
Recommendation 11	**Smoking cessation** **11.1 Smoking cessation measures are recommended for the prevention of COPD, to include advice on smoking cessation, nicotine replacement therapy and pharmacotherapy. (Grade A) (GOLD)** **At the moment, the effectiveness and safety of E. cigarettes as a smoking cessation aid is uncertain.**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement • HSE's Making Every Contact Count initiative • HIQA Health Technology Assessment of Smoking Cessation Interventions • HSE QUIT Team • Tobacco Cessation Support Programme • COPD Support Ireland • COPD Advice line Development of Health and well-being community networks **Barriers:** • Cost of treatment • Lack of recognition that smoking is an addiction	Develop and roll-out a communication and dissemination strategy, including public engagement	• Department of Health • HSE • All healthcare professionals • COPD Support Ireland	X	X	X	**Outcomes** 1. Improved awareness and knowledge of guideline 2. Awareness rising around importance of smoking cessation and the role of the healthcare professional 3. Established patient-centred smoking cessation services in CHNs. **Verification:** 1. Patient satisfaction 2. improved knowledge and competencies of HCP

	• Failure to tailor treatment to the individual • Lack of services and time to undertake the intervention						
Recommendation 12	**Influenza vaccination** **12.1 The provision of annual influenza vaccination is recommended. (Grade A)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement National Immunisation Office • COPD Support Ireland • COPD Advice line **Barriers** • Lack of awareness among patients, policy-makers, healthcare professionals and general public around the importance of the vaccination for people with COPD • Lack of clarity on the role of healthcare professionals in delivering the vaccine • Existence of misconceptions regarding possible side effects of the vaccine • People with COPD not featuring prominently as a	• Undertake a targeted information educational campaign for Respiratory Professionals, including consultants, through the Irish Thoracic Society. • Undertake a targeted education campaign of all Consultants via the Irish Hospital Consultants Association • Undertake a targeted educational campaign for all healthcare workers caring for patients with COPD • Offer vaccination prior to discharge from hospital for anyone with COPD. At every OPD visit for those with COPD, ask about and encourage vaccination • Broaden access to the vaccination through Community Pharmacists • COPD Support Ireland to promote importance of vaccination for people with COPD •Develop and roll-out a communication and dissemination strategy, including public engagement	• All healthcare professionals caring for people with COPD (primary care, community including pharmacies, Long Stay, Hospitals) • COPD Support Ireland • Hospital Group/Hospital Managers/ Hospital Flu/CHO flu Leads • Nurse Prescribers	X	X	X	**Outcomes** 1. Improved awareness and knowledge of guideline 2. Awareness raising around importance of the vaccination and role of healthcare professionals 3. Explore feasibility of undertaking an audit of vaccination uptake or survey of barriers in various settings. **Verification**: 1. KPIs for uptake of vaccination 2.Reporting by local Hospital management and Hospital Group management.

	high-risk group in annual campaigns • Lack of focus on people with COPD not featuring prominently as a high-risk group in annual campaigns despite recommendation by the National Immunisation Advisory • Access for some individuals to vaccination because of restrictions of COPD						
Recommendation 13 [Priority Recommendation]	**Pneumococcal Vaccination** **13.1. The provision of the pneumococcal vaccination is recommended. (Grade B) (GOLD)**						
	• As above for Recommendation 12						
Recommendation 14	**Pulmonary rehabilitation** **14.1 The provision of pulmonary rehabilitation to stable patients with exercise limitation despite pharmacological treatment is recommended. (Grade A) (GOLD)** **14.2 The provision of pulmonary rehabilitation to patients who have recently been hospitalised for an acute exacerbation of COPD is recommended. (Grade B) (GOLD)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement • Local champions • Funding • Space • Staffing • NCP Model of care PR HSE's National Needs Assessment for Pulmonary	• Increase awareness of decision-makers around importance and benefits of Pulmonary Rehabilitation for people with COPD • Secure funding for Respiratory Consultants in hospitals that are currently without a Respiratory Consultant •Secure funding to increase medical respiratory physiotherapists in the acute setting and explore the expansion of Respiratory Integrated Care Physiotherapists	• HSE • Medical Doctors involved in the care of people with COPD • Respiratory Physiotherapist	X	X	X	**Outcomes** 1. Improved awareness and knowledge of guideline 2. Awareness raising of benefits of PR and include in discharge planning and integrated care planning 3. It is estimated that 32 additional PR Teams are required to meet need for PR for people who have been hospitalised and are at risk of re-admission. Support for funding for the recruitment

	Rehabilitation Services • HSE's Living Well with a Chronic Condition: Framework for Self-Management Support Develop a full time pulmonary rehabilitation team across 3 networks in line with Community Enhancement fund plan. **Barriers** • Lack of existing capacity nationally • Availability of physiotherapists • Funding for Pulmonary Rehabilitation Programmes (PRP) • Physical capacity challenges- lack of space • Transportation of patients to and from location of PRP	for the community •The inclusion of the role of medical respiratory physiotherapist in Pulmonary Rehabilitation to be included in their job description • Develop and roll-out a communication and dissemination strategy, including public engagement	• Respiratory Nurses • Hospital Group/Hospital or CHO Management				of additional PR Teams will be sought over 2 years (11 in Year 1; 21 in Year 2) through annual estimates process. If funding secured the Team would be appointed in the year following the request for funding. 4. Selected sites engaged with in relation to roll-out of service once resources have been secured to expand PR service **Verificatio**n 1. Inclusion in service plan, reporting of KPIs. Budget, 2. Learning from other sites
Recommendation 15	**Oxygen Therapy** **15.1 The provision of long-term oxygen therapy to patients with chronic stable hypoxemia with a PaO2 less than 7.3 Kpa or a Pa02 between 7.3 and 8Kpa with signs of tissue hypoxia (haematocrit greater than 55%, pulmonary hypertension or cor pulmonale) is recommended. (Grade A) (GOLD)** **15.2. The provision of oxygen for patients with moderate hypoxemia, nocturnal de-saturation, or exercise induced de-saturation in patients with COPD is not recommended. (Grade A) (GOLD)**						

	Enablers: • Stakeholder engagement • Patient engagement and involvement Integrate oxygen clinics into new roles of RIC team and Outreach team in Community enhancement fund plan **Barrier**s • Lack of awareness • Absence of education around correct prescribing • Cost of therapy Change of practice in sites Resource requirements	Develop and roll-out a communication and dissemination strategy, including public engagement	• HSE •Hospitals/Hospital Group Management • CHO Management • Medical Doctors involved in the care of people with COPD • Nurse Prescribers	X	X	X	**Outcomes** 1. Consultation with stakeholders and dissemination of National Clinical Guideline for the Management of COPD 2. Awareness raising of benefits of LTOT and role of HCP 3. Involve in discharge planning 4. Oxygen clinic set up to be incorporated into new job descriptions for RIC teams and outreach teams in the Community network plans **Verification** Steering group on LTOT, evidence planning and pathways for oxygen clinics
Recommendation 16	**Nutritional Support** **16.1.Nutritional support should be considered in all malnourished patients with COPD (Grade B) (GOLD)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement **Barrier**s • Lack of awareness of the importance of dieticians in the management of COPD • Absence of specialist dietetic input/posts in the care of people with COPD •Inconsistent use of nutritional screening tools to detect malnutrition in	Develop and roll-out a communication and dissemination strategy, including public engagement Dissemination of HSE Standard Oral Nutritional Supplements Prescribing List for Adults Living in the Community (guide to prescribers re ONS)	• Dieticians • Medical Doctors involved in the care of people with COPD • HCP involved in the care of people with COPD	X	X	X	**Outcomes** 1. Improved awareness and knowledge of guideline 2. Awareness rising of benefits of nutrition for staff and patients 3. Improved recognition and response when therapy is required **Verification** Local audit

	people with COPD						
Recommendation 17	**Lung volume reduction surgery** **17.1 Lung volume reduction surgery is recommended for carefully selected patients with upper lobe emphysema and low post rehabilitation exercise capacity. (Grade A) (GOLD)** **17.2 In selected patients, bullectomy can also be recommended. (Grade C) (GOLD)** **17.3 In selected patients with advanced emphysema, bronchoscopic interventions can reduce end-expiratory lung volume and improve exercise tolerance; health status and lung function at 6 to 12 months following**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement **Barriers** • The small volume of suitable patients has led to a lack of awareness of the importance of lung volume reduction surgery in some cases	Develop and roll-out a communication and dissemination strategy, including public engagement	• Medical Doctors involved in the care of people with COPD • Thoracic Surgeons	X	X	X	**Outcomes** 1. Improved awareness and knowledge of guideline 2. Improved recognition and response when therapy is required 3. Awareness raising 4. Access to surgery **Verification** 1. Reporting by local Hospital management and Hospital Group management.
Recommendation 18	**Lung transplantation** **18.1. It is recommended that appropriately selected patients with very severe COPD be considered for lung transplantation surgery. (Grade C) (GOLD)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement • Organ donor campaign **Barriers** • Limited availability of organ donors • Lack of awareness of lung	Develop and roll-out a communication and dissemination strategy, including public engagement	• HSE • Department of Health • Medical Doctors involved in the care of people with COPD	X	X	X	**Outcomes** 1.Improved awareness and knowledge of guideline 2. Improved recognition and response when therapy is required **Verification** 1. Reporting by local Hospital management and Hospital Group management.

	transplantation for select COPD patients		• Thoracic Surgeons				
Recommendation 19	**Monitoring of Spirometry** **19.1. In stable diagnosed COPD patients, FEV 1 can be tracked by spirometry every two years. (Expert Opinion) (Guideline Development Group)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement • Practice Nurses • Spirometry Training Course provided by the Irish Association of Respiratory Scientists Expanding diagnostics into the community through the community enhancement fund **Barriers** Lack of awareness of role of spirometry in management of COPD	• Increase awareness of performing spirometry on stable COPD patients at appropriate time interval • Continue to raise awareness in relation to availability of Spirometry Training Course for healthcare professionals • Develop and roll-out a communication and dissemination strategy, including public engagement	•Hospital Group Management • All healthcare professionals providing care to people with COPD • Irish Association of Respiratory Scientists	X	X	X	**Outcomes** 1.Improved awareness and knowledge of guideline 2. Training for HCP 3. Posts for spirometry for community to support community enhancement fund plan **Verification:** 1. Attendance records at training QI projects based on training
Recommendation 20	**Role of Palliative Care** **20.1. For advanced COPD care, patients should be referred to a palliative care specialist as appropriate. (Expert Opinion) (Guideline Development Group)**						

	Enablers: • Stakeholder engagement • Patient engagement and involvement Specialist Palliative Care Teams • Patient material e.g. Planning for the Future with COPD • Guidance documents developed by the National Clinical Programme for COPD (Palliative Care Needs Assessment, Role Delineation Framework, Competency Framework, Palliative Care Model of Care) **Barrier**s: • Existing misconceptions in relation to the role of palliative care in the management of COPD among healthcare professionals, patients and their families/carers. • Lack of awareness of services available through Specialist Palliative Care Teams	• Increase awareness of the role of Palliative Care in non-malignant conditions • Promotion of Palliative Care Needs Assessment Education Module for healthcare professionals • Education for Respiratory Teams on symptom management by Specialist Palliative Care Team • Develop and roll-out a communication and dissemination strategy, including public engagement	• Palliative Care Specialists and Team • Medical Doctors involved in the care of people with COPD • Respiratory Nurses • Respiratory Physiotherapists • HSE - National Clinical Programme for Palliative Care	X	X	X	**Outcomes** 1. Improved awareness and knowledge of guideline 2. Protocol for management of care agreed 3. Improved recognition and response when therapy is required **Verification** 1. Reporting by local Hospital management and Hospital Group management.
	Management of Exacerbations in COPD						

Recommendation 21	**Bronchodilator therapy** **21.1 The initiation of short acting acute bronchodilator therapy (salbutamol plus or minus ipratropium) is recommended for patients with an exacerbation of COPD (Grade C) (GOLD)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement **Barriers** Nil expected as funding is available	Develop and roll-out a communication and dissemination strategy, including public engagement	• Medical Doctors involved in the care of people with COPD • Nurse Prescribers Pharmacists	X			**Outcomes** 1. Improved awareness and knowledge of guideline 2. Improved recognition and response when therapy is required **Verification** Local audit
Recommendation 22	**Steroids** **22.1 A course of systemic steroids (prednisone equivalent of 40mgs for five days) to be administered orally to all patients is recommended. Therapy should not routinely be administrated for longer than this. (Grade A) (GOLD)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement **Barriers** Nil expected as funding is available	Develop and roll-out a communication and dissemination strategy, including public engagement	• Medical Doctors involved in the care of people with COPD • Nurse Prescribers • Pharmacists'	X			**Outcome**s 1. Improved awareness and knowledge of guideline 2. Improved recognition and response when therapy is required

Recommendation 23	**Antibiotics** **23.1. 1 Oral antibiotic use for patients with exacerbations of COPD associated with increased dyspnoea and associated increased sputum purulent or volume is recommended. First line antibiotic choices should include doxycycline, amoxicillin or a macrolide. Reserving broader spectrum antibiotics such as quinolones for specific indications is recommended. The choice of antibiotics may be modified due to local bacterial resistance patterns or an individual's sputum microbiology. (Grade B) (GOLD/Expert Opinion)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement **Barriers** Nil expected as funding is available	Develop and roll-out a communication and dissemination strategy, including public engagement	• Medical Doctors involved in the care of people with COPD • Nurse Prescribers • Respiratory Physiotherapists • Nurse Prescribers • Pharmacists	X			**Outcomes** 1. Improved awareness and knowledge of guideline 2. Improved recognition and response when therapy is required **Verification**
Recommendation 24	**Non-invasive ventilation** **24.1 The use of non-invasive ventilation in patients with acute exacerbations of COPD who develop acute respiratory failure associated with respiratory acidosis is recommended i.e. a PaCO2 greater than 6KPa and an arterial PH less than 7.35 which is persistent following rationalization of delivered oxygen therapy (Grade A) (GOLD)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement • Education - Centre for Nurse and Midwifery Education provides NIV training **Barrier**s • Lack of resources (funding	• Increase NIV protocol awareness • Increase awareness of NIV training • Develop and roll-out a communication and dissemination strategy, including public engagement	• Medical Doctors involved in the care of people with COPD • Respiratory Nurses • HSE	X	X	X	**Outcomes** 1. Improved awareness and knowledge of guideline 2. Improved recognition and response when therapy is required 3. Pathways criteria in place **Verification** 1. Pathways in place

	not available) • Lack of familiarity/use of NIV • Lack of training to deliver NIV						2. local service audit
Recommendation 25 [Priority Recommendation]	**COPD Outreach Service** **25.1 The involvement of the COPD outreach team as early as possible for patients admitted to hospital with an exacerbation of COPD. (Expert Opinion) (Guideline Development Group)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement • Local champions • NCP Outreach Implementation guide **Barrier**s • Lack of availability of trained staff to provide the service • Lack of awareness of benefits of Outreach Service for people with COPD • Lack of funding to expand service to new sites		• HSE • Hospital Group Management • Respiratory Medical Doctors involved in the care of people with COPD • Respiratory Clinical Nurse Specialists • Respiratory Physiotherapists COPD Support Ireland	X	X	X	**Outcomes** 1.Improved awareness and knowledge of guideline 2. Improved recognition and response when Outreach is indicated 3. It is estimated that 15 sites require a COPD Outreach Service. Support for funding for expansion of sites through recruitment of staff will be sought over 3 years (4 sites in Year 1; 11 sites in Year 2) through annual estimates process. If funding is secured, appointments would be made in the year following funding submission. 4. Selected sites engaged with in relation to roll-out of service once resources have been secured to provide an Outreach service **Verification** 1. Inclusion in service plan, reporting of KPIs. Budget, 2. System in place to share implementation experiences and

							learning between sites. 3. local reporting
Recommendation 26	**Respiratory Health Care Professionals** **26.1. It is recommended that respiratory specialist physiotherapists and nurses are key in delivering COPD outreach, NIV, oxygen assessment and pulmonary rehabilitation to patients who have exacerbations of COPD and stable COPD (Expert Opinion) (Guideline Development Group)**						
	Enablers • Advanced and on-going workforce planning and CPD support for HCP **Barrier**s • Costs • Lack of specialist respiratory physiotherapists & CNSsp • Lack of awareness of importance of role of HCP in the management of COPD • Failure to recognise the value of HCP in the management of COPD	• Raising awareness of role of physiotherapists and CNSp amongst medical practitioners • Development of physiotherapist & CNSp led clinics • Increasing the profile of physiotherapists and CNSp within a service e.g. presenting at Grand Rounds, engagement with GPs	• Respiratory Consultants • Physiotherapists • Physiotherapy Managers • Allied Healthcare Professional Managers •Hospital Group and CHO Management •CNSp •Nurse Managers Physiotherapy & Nursing Managers • Irish Society of Chartered Physiotherapists • HSE National Health & Social Care Professions	X	X	X	**Outcomes** 1.Consultation with stakeholders and dissemination of National Clinical Guideline for the Management of COPD 2. Improved recognition and awareness of roles of respiratory health professionals **Verification** 1. MDT meetings and case management

			Office • INMO				
Recommendation 27	**Theophylline's** **27.1. The use of theophylline in acute exacerbations of COPD is not recommended. (Grade B) (GOLD)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement **Barriers** • Resistance to change • Nil expected as funding is available	Develop and roll-out a communication and dissemination strategy, including public engagement	• Medical Doctors involved in the care of people with COPD • Nurse Prescribers	X			**Outcomes** 1. Improved awareness and knowledge of guideline 2. Improved recognition and response when therapy is required **Verification** 1. Increased knowledge and competencies of HCP
Recommendation 28 [Priority Recommendation]	**Oxygen therapy prescribing and monitoring in COPD** **28.1. Patients discharged home from hospitalisation on oxygen therapy should be evaluated for the need for long term oxygen therapy 30-90 days after discharge. Long term oxygen therapy should not be continued if patients do not meet the criteria. (Expert Opinion) (Guideline Development Group)** **28.2. Routinely offering ambulatory ambulatory LTOT for patients with chronic stable isolated exercise hypoxemia is not recommended. (Grade A) (GOLD)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement • Incorporate oxygen clinics into roles of RIC team and Outreach teams for Community enhancement fund plans **Barriers**	• The development of regional centres providing oxygen assessment and review (OAR) clinics which have capacity to provide home visits and link with community respiratory teams should be funded and prioritised. • Hospital/Hospital Groups to seek funding from HSE for expansion of oxygen clinics • Develop and roll-out a communication and dissemination strategy, including public engagement Irish Guidelines on Long Term Oxygen	• HSE • Hospital Group Management • CHO Management • Medical Doctors involved in the care of people with COPD • Respiratory	X	X	X	**Outcomes** 1. Improved awareness and knowledge of guideline 2. Improved education and competency of Oxygen therapy for HCP Improved recognition and response when therapy is required 3. It is estimated that 32 sites require an Oxygen Assessment Clinic. Support for funding for expansion of sites through recruitment of staff will be sought over 2 years (11 sites in Year 1; 21 sites in

	• Lack of formal follow up for many patients prescribed domiciliary oxygen • Lack of dedicated oxygen assessment and review services •Lack of awareness around benefits of oxygen assessment	Therapy in Adults 2015 • Irish Guidelines on the Administration of Oxygen Therapy in the Acute Clinical Setting in Adults 2017	Nurses • Respiratory Physiotherapists • Nurse Prescribers • Oxygen companies				Year 2 through annual estimates process. If funding is approved, appointments will be made in the year following the submission for funding 4. Selected sites engaged with in relation to the establishment of clinics once resources have been secured **Verification** 1. Local Oxygen steering group 2. Pathways in place for clinics and prescription and follow up 3. Education material staff and patients 4. Patient satisfaction survey 5. Service audit
Recommendation 29 [Priority Recommendation]	**Pathways, Bundles and Checklists for Managing Acute Exacerbation** **29.1 It is recommended that an admission and discharge bundle be applied to all patients admitted acutely with an exacerbation of COPD. (Expert Opinion) (Guideline Development Group)**						
	Enablers: • Stakeholder engagement • Patient engagement and involvement • Bundles developed by the National Clinical Programme for COPD **Barriers** • Resistance to change in practice • Lack of awareness of benefits of implementing pathways, bundles and checklists • Resourcing and time constraints for Medical Doctors involved in the care	Increase awareness through dissemination of materials relating to pathways, bundles and checklists and promotion of the value of implementing the materials. Materials to be circulated electronically so no large scale printing or postage costs incurred.	• COPD Clinical Advisory Group Medical Doctors involved in the care of people with COPD • Respiratory Nurses • Respiratory Physiotherapists • Hospital Group Management	X	X	X	**Outcomes** 1. Improved awareness and knowledge of guideline 2. Improved education and competencies for HCP 3. Improved recognition of pathways and bundles of care **Verification:** 1.Pathways and bundles of care available and in use in hospitals and primary care 2. Education material patients and staff

	of people with COPD to apply pathways, bundles and checklists						

Implementation of overall guideline

While the implementation plan is specific to the individual recommendations in the guideline, some actions will assist with guideline implementation as a whole. These include establishing an implementation team; developing a dissemination and communication plan and developing specific implementation tools and resources. In the boxes below, please give a high-level description of how these actions will be incorporated into the implementation of your guideline:

Implementation team: Describe the structure and governance of your implementation team, list your implementation team members and specify meeting frequency. Outline planned training and capacity building for team members.

- Central Respiratory National Team – DPIP (NCP) / PMO / Chronic Disease Team
- Local Level - Local Implementation Governance Groups (LIGG) to include Practice Development and QI Team. Example of membership would be executive manager, clinical lead /consultant, senior nurse manager, frontline staff, education facilitator, self-management support, respiratory leads, risk management

Dissemination and communication plan: Describe your communications strategy and dissemination plan for distributing, sharing, promoting and applying guideline recommendations e.g. publications/articles, presentations, awareness-raising activities, media, knowledge transfer, collaboration and networking.

- HRB CICER Publication
- Communication / Marketing: DPIP Website / DPIP Email Account / Twitter / Flyers / Infographics/ local hospital newsletters/intranets/ National conferences e.g. Patient Safety Conference
- Organise an inaugural Respiratory Integrated Care international conference for Ireland
- Case scenarios to be used in undergraduate/CPD education
- Communicate with hospitals on their key responsibilities and expectations e.g. all staff to have protected time to participate in education, review and improvement of governance, embed in existing forums/meetings, journal clubs, ground rounds etc.

Key communication messages:

- Shift to integrated care
- Supports implementation of Sláintecare

Implementation tools: List the supporting tools and resources developed to support this guideline/PPPG and where these tools can be accessed, e.g. materials on website, patient information leaflets, training linked to CPD, e-learning, podcasts, study days, research, checklists, audit tools, seminars, conference, patient pathways, toolkits, algorithms, teaching aids, presentations.

- Education Programme: Blended Learning Programme - e- learning / face to face training/ simulation training/ study days/ education forums / case scenarios to use for undergraduate and postgraduate training
- Communication / Marketing: DPIP Website / DPIP Email Account / Twitter / Flyers / Infographics/ local hospital newsletters/intranets/ National conferences eg Patient Safety Conference
- Clinical Audit Tools / Data Collection Tools /Reporting Tools / Clinical Outcome Monitoring Tools.
- Research Proposals