

## **How to make a referral to Cardiology for a new diagnosis of shortness of breath or dyspnea**

Shortness of breath or dyspnea can have multiple causes including but not limited to cardiac issues. To ensure that the shortness of breath is felt to be cardiac, we require the following documentation for all new referrals:

- Clinical history and medication list
- Physical exam including listening for any heart murmurs
- Bloodwork including a CBC, renal function and NT pro BNP (\*Please recall that a mildly elevated NT pro BNP may not be contributing significantly to symptoms, and may also be elevated in the context of renal disease. An elevated NT pro BNP alone will not always be indicative of a cardiac cause of shortness of breath)
- Baseline 12 lead ECG (12 lead ECG can be requested at Pulse Complete Cardiac Care)
- Any other information that makes the referral likely cardiac in nature (ie echocardiogram, evidence of ischemia on treadmill or other testing, Holter monitor showing arrhythmia that is related to shortness of breath)

\*\* Patients who have been **previously seen** by Cardiology and have a **known diagnosis** and are being sent for repeat reassessment do not necessarily need all of the above as part of the referral. They should have updated investigations as felt appropriate by the referring physician instead.\*\*

If this patient has shortness of breath that is undifferentiated and may not be cardiac in nature, further initial work up by you is required to demonstrate a likely cardiac issue. If you are not clear on what type of work-up is required, you may consider calling the RACE line for further assistance. If there are multiple medical issues contributing to the shortness of breath, you may consider referring the patient to the Internal Medicine group at Pulse.

The patient will not be accepted for referral or booking of an appointment with Cardiology if the shortness of breath or dyspnea is undifferentiated.

<b>Examples of Urgent, Semi-Urgent and Elective Referrals to Cardiology for Stable Outpatients with Cardiac Shortness of Breath or Dyspnea</b>		
<b>Urgent (to be seen &lt; 2 weeks)</b>	<b>Semi-Urgent (to be seen &lt; 6 weeks)</b>	<b>Elective</b>
New diagnosis of heart failure, not improving on therapy (decompensated)*	New diagnosis of heart failure with LVEF < 50% that is stable, compensated*	Stable history of heart failure with reduced or mid range ejection fraction*
Severe valvular disease	Heart failure exacerbation in patient with known heart failure with LVEF * < 50%	Heart failure with preserved ejection fraction (>50%)*
Uncontrolled tachyarrhythmia such as atrial fibrillation or atrial flutter with heart rate > 100 bpm	Symptomatic arrhythmia causing shortness of breath	Multifactorial shortness of breath with a suspected cardiac contributor, for optimization of the cardiac issue
Persistent bradycardia < 40 bpm	Cardiac amyloid diagnosis in patient under the age of 90	
Left main disease > 50% or proximal LAD disease > 70% on CTCA	> 70% stenosis on CTCA that does not involve the left main or proximal LAD	
Large or worsening pericardial effusion		
* For patients with shortness of breath due to heart failure, please refer to the Heart Failure Pathway for further information		

## Considerations for Investigation of Stable Outpatients with Shortness of Breath or Dyspnea

For severe dyspnea, dyspnea at rest, or with new onset chest pain, the patient should be directed to the nearest Emergency Department.

The causes of shortness of breath can be varied and may include the below etiologies.

<b>Potential Causes of Shortness of Breath</b>				
<b>Cardiac</b>	<b>Pulmonary</b>	<b>Gastrointestinal</b>	<b>Musculoskeletal</b>	<b>Miscellaneous</b>
Congestive Heart Failure	Asthma	GERD	Neuromuscular Disease (Myasthenia gravis, ALS)	Severe Anemia
Coronary Artery Disease	COPD	Liver Cirrhosis	Chest Wall Deformities	Metabolic Acidosis or Uremia
Arrhythmias	Infection			Psychogenic Causes (Panic Attacks, Anxiety)
Valvular Heart Disease	Interstitial Lung Disease			Deconditioning
Pericardial Disease	Pleural Effusion			Obesity
	Malignancy			
	Pulmonary Embolism			

Therefore the initial work up for undifferentiated shortness of breath or dyspnea will be initially broad. A suggested primary care work up is as below:

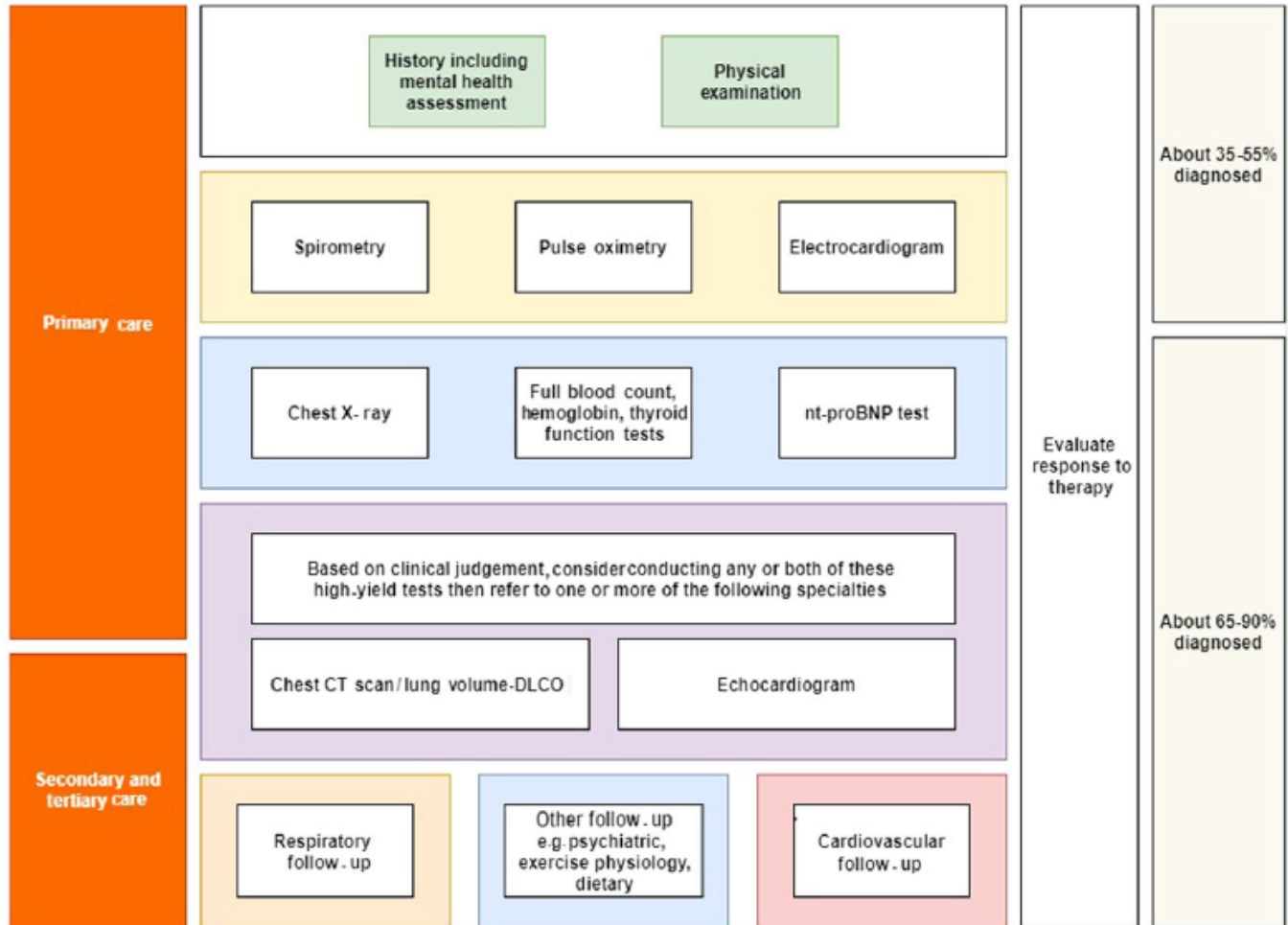


Fig. 2. A summary of the stepwise approach for dyspnoea assessment and the probability of elucidating the causal diagnosis based on the included studies.

DLCO diffusing capacity of the lungs for carbon monoxide  
 Primary Care Respiratory Medicine (2022)32:10; <https://doi.org/10.1038/s41533-022-00271-1>

Please note: although not all sites will have the same access to testing in the above algorithm (such as spirometry, CT scanning or echocardiography), **all patients** should undergo the history and physical examination before specialist referral. There is widespread availability of ECG, CXR and bloodwork testing including nt-proBNP and these should be utilized appropriately.

If the patient is felt to have a cardiac reason for their shortness of breath or dyspnea, initial medical therapy should also be attempted. This will vary depending on the underlying cause.



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If there are questions about further investigations or management strategies, please consider contacting the RACE line. If there are multiple medical issues, not just cardiac, that require management, you may consider referral to the Internal Medicine group at Pulse.