UVM HEALTH PULMONARY FUNCTION TESTING REFERRAL GUIDANCE

Spirometry: (Flow-volume loop, FVC, FEV1, FEV1/FVC, PEFR)
To determine the presence of airflow limitation and the possibility of restriction, pre-op evaluation.

Lung Volumes: (TLC, RV, FRC/TGV, SVC, Raw)
To determine lung volume size and the presence of restriction or hyperinflation, airway resistance.

Diffusion Capacity: (DLCO)
To determine how well oxygen transfers from air to blood; commonly used to assess disease severity and monitor disease activity; also used in pre-op evaluation.

Maximal Inspiratory/Expiratory Pressures (MIP/MEP): To determine Inspiratory/Expiratory strength.

Maximal Voluntary Ventilation (MVV): May be helpful in estimating the level of ventilation that can be expected during exercise testing.

Bronchial Challenge Testing (Methacholine or Exercise): To determine the presence and degree of airway hyperresponsiveness, which may be helpful in making a diagnosis of asthma. *Usually, spirometry with and without bronchodilator is checked before deciding to order a methacholine or exercise challenge test.* For Exercise testing, indicate if the test is needed for scuba or military clearance.

Six-minute Walk Test (6MWT): To assess the need and titration for supplemental oxygen, or to determine exercise capacity (a formal "6-minute walk test" for distance). Indicate if the test is to be done on room air or on current home oxygen setting.

Cardiopulmonary Exercise Test (CPET): **Available at UVM Medical Center only**
To determine maximal exercise capacity and performance. Testing includes ABGs at rest and VO2max, continuous ECG monitoring. Testing is performed on a bicycle; if a patient cannot exercise vigorously on a bicycle, then the test is not appropriate. Spirometry, lung volumes and DLCO have been checked before deciding to order a CPET. Also, cardiac evaluation (i.e., stress test) is done before a CPET. *Please do not order to check VO2 max only* – the PFT lab does not have enough flexibility to do these measurements without a clinical indication for a full CPET.

FeNO (fractional excretion of nitric oxide – in exhaled breath): To diagnose eosinophilic airway inflammation, which may be helpful in making a diagnosis of asthma or monitoring asthma therapy.

Oscillometry: To diagnose increased airway resistance, increased respiratory system stiffness, or heterogeneity (unevenness) of ventilation, and distinguish peripheral vs. central lung disease. May be useful in patients who cannot perform spirometry.