



Data Collection Worksheet

Please Note: The Data Collection Worksheet (DCW) is a tool to aid integration of a PhenX protocol into a study. The PhenX DCW is not designed to be a data collection instrument. Investigators will need to decide the best way to collect data for the PhenX protocol in their study. Variables captured in the DCW, along with variable names and unique PhenX variable identifiers, are included in the PhenX Data Dictionary (DD) files.

Test Procedure

Peak Expiratory Flow Rate (PEFR) is dependent on effort and lung volume, with subject cooperation being essential. PEFR must be achieved as rapidly as possible and at as high a lung volume as possible, in order to obtain the maximum value. The subject must be encouraged to blow as vigorously as possible. The neck should be in a neutral position, not flexed or extended, and the subject must not cough. A nose clip is not necessary.

After the point of full lung inflation, the subject must deliver the blow without any delay. Hesitating for as little as 2s [seconds] or flexing the neck allows the tracheal visco-elastic properties to relax and PEFR to drop by as much as 10%. Tonguing, spitting or coughing at the start of the blow may falsely raise the recorded PEFR in some devices.

The subject must perform a minimum of three PEFR maneuvers. When PEFR is a self-administered recording used to monitor disease status, it is important that the subject has been adequately taught how to perform the test, when to perform it, and what action to take depending on the resulting value obtained.

Within-maneuver evaluation

The subject must be observed to ensure a good seal at the mouth, no hesitation occurred, and there was no abnormal start to the maneuver.

Between-maneuver evaluation

The PEFR values and their order must be recorded so that maneuver-induced bronchospasm can be detected. If the largest two out of three acceptable blows are not reproducible within 0.67 L s^{-1} (40 L min^{-1}), up to two additional blows can be performed. Ninety-five percent of untrained healthy subjects and patients can reproduce PEFR to within 0.67 L s^{-1} (40 L min^{-1}), and ninety percent to within 0.5 L s^{-1} (30 L min^{-1}). If satisfactory repeatability has not been achieved in five attempts, more are not likely to be helpful.

Test result selection

The largest value from at least three acceptable blows is recorded.

Protocol source: <https://www.phenxtoolkit.org/protocols/view/90801>