Appendix F: Peak Flow Monitoring Tips

1. Monitoring Peak Expiratory Flow (PEF) may be useful in some children, particularly those children/caregivers who have difficulty perceiving airway obstruction.
2. Caution should be exercised in interpreting PEF results, as they are extremely effort dependent, and should be used in conjunction with other clinical findings. Most children cannot accurately perform this maneuver until 6 years of age due to the required physical coordination and the ability to follow instructions.
3. The child's PEF technique should be observed until the practitioner is satisfied that the technique produces accurate/reliable readings.
4. Home PEF should be linked to the level of symptoms in the action plan.
5. Children who are using a PEF meter should be instructed, with their caregivers, on how to establish their personal best PEF and use this value as the basis for their personalized action plan.
6. PEF devices must be checked regularly for accuracy and reproducibility of results. The child's peak flow meter should be inspected by a health care professional at least once a year, or any time there is a question about the validity of the readings. Values from the PEF meter should be compared with the values obtained from a spirometer.
7. Baseline morning and evening monitoring should be carried out over a number of weeks to assist with determining personal best values. Monitoring of PEF values should continue, however the frequency of measurements is adjusted to the needs of the child and the severity of the disease.
8. Children and their caregivers should be alerted to the significance of increased diurnal variation (evening to morning changes) in PEF. Variation in PEF values greater than 15 – 20% between evening and morning readings indicates poor asthma control.