



Title	Exhaled Nitric Oxide Measurement Using Niox or Niox Mino
Agency	MaHTAS, Health Technology Assessment Section, Ministry of Health Malaysia Level 4, Block E1, Parcel E, Presint 1, Federal Government Administrative Center, 62590 Putrajaya, Malaysia; Tel: +603 88 83 12 29, Fax: +603 88 83 12 30; htamalaysia@moh.gov.my, www.moh.gov.my
Reference	Health Technology Assessment Report, MOH/P/PAK/178.09 (TR). www.moh.gov.my/MohPortal/htaDetail.jsp?action=view&id=57

Aim

To assess the safety, effectiveness, and cost effectiveness of exhaled nitric oxide (FE_{NO}) measurement using NIOX or NIOX MINO in managing respiratory diseases, especially asthma.

Conclusions and results

The evidence shows that FE_{NO} measurement is safe and noninvasive. A good level of evidence shows good correlation between FE_{NO} values as measured by using the two devices (NIOX and NIOX MINO). FE_{NO} measurement provides superior diagnostic accuracy compared to conventional tests for diagnosing asthma. It can be used as a predictor of steroid response and loss of control in asthma following steroid withdrawal. There was limited evidence to establish the relationship between FE_{NO} and compliance with inhaled corticosteroids and its role in diagnosing and monitoring other respiratory diseases. The evidence shows that the use of FE_{NO} in treatment decisions is less costly than asthma management based on standard guidelines.

Recommendations

Based on the review mentioned above, FE_{NO} measurement can be recommended for use in Ministry of Health facilities having chest physicians (adult and pediatric), particularly for diagnosing asthma.

Methods

PubMed, Ovid, ProQuest, Cochrane, Food and Drug Administration (FDA), and HTA databases were searched, among others. Additional articles were identified from reviewing the bibliographies of retrieved articles. No limitations were placed on language. We used the Critical Appraisal Skills Program (CASP) to appraise relevant articles. Using the Oxford Centre for Evidence-based Medicine Levels of Evidence (May 2001) we graded evidence according to the levels of evidence for assessing diagnosis.

Further research/reviews required

Effectiveness in management of other respiratory diseases.