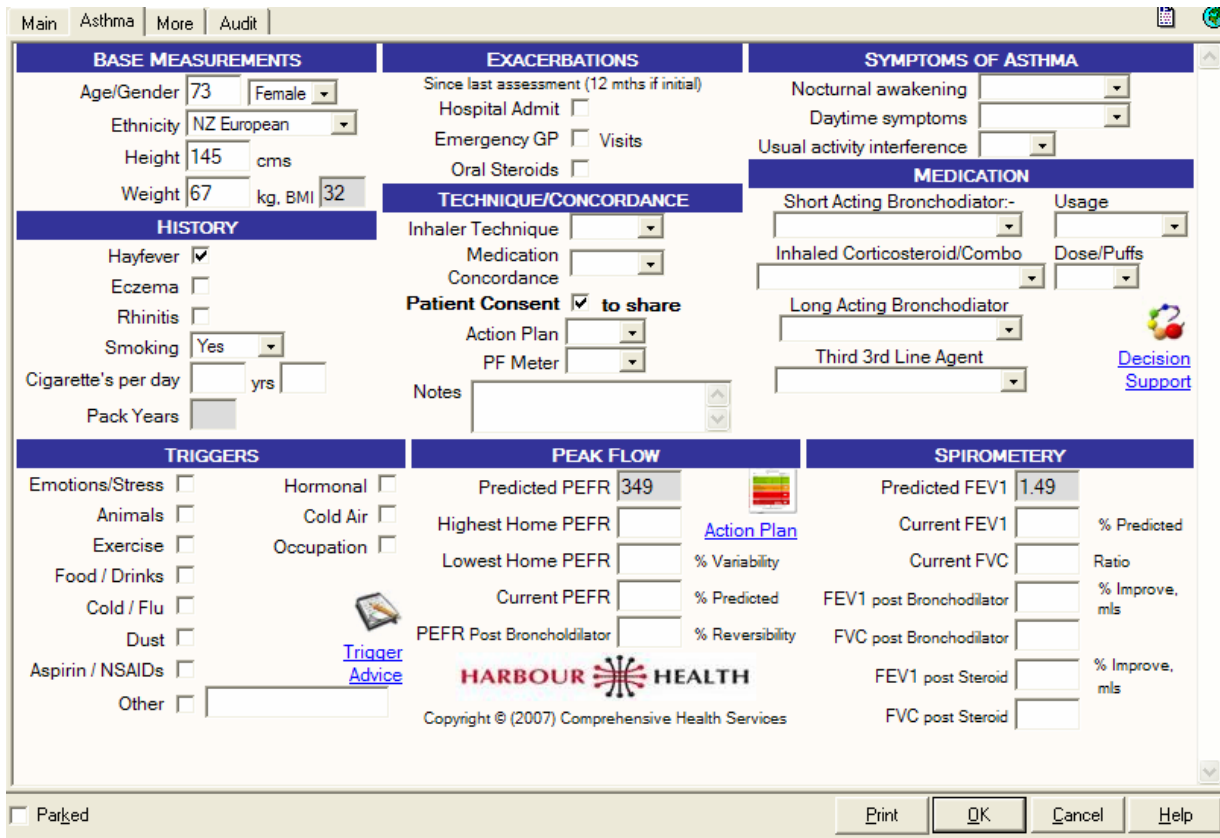


## Web-based asthma tool with decision support

Asthma is the 2<sup>nd</sup> most preventable hospital admission in the Waitemata DHB district for all ages up to 24 years. Unsurprisingly, the second most common avoidable admission for all ages over 65, is COPD.

Harbour Health has produced a web-based asthma assessment tool with decision support for GPs and trained asthma nurses to assess patients with chronic asthma more comprehensively.



The screenshot shows a web-based asthma assessment tool interface. The interface is organized into several sections:

- BASE MEASUREMENTS:** Includes fields for Age/Gender (73, Female), Ethnicity (NZ European), Height (145 cms), and Weight (67 kg, BMI 32).
- EXACERBATIONS:** Includes checkboxes for Hospital Admit, Emergency GP Visits, and Oral Steroids.
- SYMPTOMS OF ASTHMA:** Includes dropdown menus for Nocturnal awakening, Daytime symptoms, and Usual activity interference.
- HISTORY:** Includes checkboxes for Hayfever, Eczema, Rhinitis, and Smoking (Yes), along with fields for Cigarette's per day and Pack Years.
- TECHNIQUE/CONCORDANCE:** Includes dropdown menus for Inhaler Technique, Medication, and Concordance, a checkbox for Patient Consent to share, and fields for Action Plan and PF Meter.
- MEDICATION:** Includes dropdown menus for Short Acting Bronchodilator, Inhaled Corticosteroid/Combo, Long Acting Bronchodilator, and Third 3rd Line Agent, along with Usage and Dose/Puffs fields.
- TRIGGERS:** Includes checkboxes for Emotions/Stress, Animals, Exercise, Food / Drinks, Cold / Flu, Dust, Aspirin / NSAIDs, and Other, along with checkboxes for Hormonal, Cold Air, and Occupation.
- PEAK FLOW:** Includes fields for Predicted PEFR (349), Highest Home PEFR, Lowest Home PEFR, Current PEFR, and PEFR Post Bronchodilator, along with a color-coded PEFR scale and an Action Plan link.
- SPIROMETRY:** Includes fields for Predicted FEV1 (1.49), Current FEV1, Current FVC, FEV1 post Bronchodilator, FVC post Bronchodilator, FEV1 post Steroid, and FVC post Steroid, along with % Predicted, Ratio, and % Improve. mls labels.

The interface also includes a 'Decision Support' link, a 'Trigger Advice' link, and a 'Copyright © (2007) Comprehensive Health Services' notice. At the bottom, there are buttons for 'Print', 'OK', 'Cancel', and 'Help'.

The advantages of the tool will be:

- It can be populated to and from the Medtech PMS system
- It is a web based application, accessible via the internet.
- It will reduce time for the GP/ nurse asthma assessments, as the 'calculations' required are instantly available.
- It has a built in **Decision Support programme**, with reference to, the BTS/SIGN, GINA and NZ best practice guidelines for asthma (2007/2006/2002 respectively.)
- Once completed, it should result in asthma being managed in a 'uniform' way, with improved adherence to treatment and medical management.
- An Action Plan calculator and print-out plan is available for both adults and children
- A Trigger management print-out is available for relevant patient triggers

- It will improve the management of chronic asthma in Primary Health, resulting in fewer avoidable exacerbations and admissions to hospital
- It has an ALERT comment, when the patient's management is outside the guideline parameters, (e.g. using a SABA with a LABA, but no ICS prescribed, or is on a very high dose of ICS, or on more than 6 doses of SABA per day).

The web based tool is being piloted in 6 Practices until June, and the results of the pilot will be audited. However it will be available for all Harbour Health Practices for GPs and trained asthma nurses soon after that date. *N.B. The tool has had 'Sign off' by Professor Robin Taylor, Respiratory Physician, Otago University and School of Medicine, Dunedin.*