



## What is the GASP Tool?

Harbour Health was awarded the **Overall Winner** of the Waitemata Health Excellence Award – 2009, for a web-based asthma assessment and decision support software tool, called GASP (**G**iving **A**sthma **S**upport to **P**atients). It is suitable for adults and children. The GASP tool can standardise asthma patient education and management, ensuring evidence based best practice by adhering to the NZ Guidelines.

The purpose of the tool is to assist doctors and GASP-trained nurses in a comprehensive assessment and management of asthma, plus with their diagnosis of asthma and COPD.

The web-based tool is believed to be the first of its kind and was developed over two years ago by Harbour Health's respiratory manager Wendy McNaughton and Solution Architect, Murray Speight from Comprehensive Health Services. The Tool has been endorsed by Professor D. Robin Taylor and the Asthma and Respiratory Foundation.

## The facts

- New Zealand has the 2<sup>nd</sup> highest incidence of asthma in the world, affecting over 600,000 kiwis – 1 in 6 adults and 1 in 4 children.
- Asthma is one of the top three reasons for children and young adults (15 – 24 years) to be admitted to Waitemata District hospitals.
- The rate of hospital admissions are two to three times higher for Maori and Pacific Island children aged 5 -14 than for non Maori and Pacific Island children<sup>1</sup>.

In a 2004 survey of respiratory services provided to New Zealanders by 21 DHBs, the research concluded that "There is a lack of national leadership and insufficient regional organisation leading to large gaps in service provision of even basic respiratory services. Immediate changes to current service provision structures are required." It also found that "respiratory disorders have now overtaken ischaemic heart disease and cancer as the most common cause of mortality and remain the most common reason for primary care consultation and the second most common cause of hospital admission<sup>2</sup>."

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<sup>1</sup> Holt S, and Beasley R. The Burden of Asthma in New Zealand. Report produced for the Asthma and Respiratory Foundation of New Zealand, December 2001.

<sup>2</sup> Garrett J, Chen B, Taylor DR. A survey of respiratory services in New Zealand undertaken by the Thoracic Society of Australia and New Zealand (TSANZ). NZMJ 2009;122(1289)

## **The History**

In Auckland, almost 200 nurses, known locally as "**GASP nurses**", have completed an advanced asthma course. This training is an extension of the **Asthma & Respiratory Foundation's Fundamentals Programme** and has NZQA accreditation at levels 7 & 8. Nurses completing the course are competent in all areas of asthma management, including setting up a nurse-led clinic and working collaboratively with the GP for improved patient education, health and well being.

This has resulted in many successful nurse-led asthma clinics in the North Shore and urban Rodney districts, which in turn have led to positive outcomes for patients' health and greater job satisfaction for the nurses involved. However, use of paper-based assessment tools and calculators was cumbersome, time consuming and difficult to audit, hence our development of the electronic GASP tool.

## **The GASP Pilot**

A 6-month pilot to test the GASP tool commenced in January 2008. It involved 18 GASP nurses across five GP practices, tracking 75 patients, aged 5-64 years.

**The aims** were to improve patient knowledge and concordance, encourage self management and reduce ambulatory sensitive admissions.

### **The results:**

- ***Reduction in hospital admissions***  
Seven patients had required hospital admission prior to the first GASP consultation; there were no hospital admissions for the 75 patients during the six month GASP pilot.
- ***Reduction in emergency visits***  
The number of emergency visits to hospitals, after hour services, or GP for asthma symptoms reduced from 29 to 5 for patients involved in the GASP pilot.
- ***Reduction in use of oral steroids***  
Prior to the pilot 31 patients were using oral steroids; this reduced to 4 patients during the GASP pilot.
- ***Improved peak flow measurement***  
All 7 acute asthma patients who had been admitted to hospital in the period before the GASP pilot had improved peak flow measures after the pilot. Overall, 50% of the 75 patients involved in the pilot improved their peak flow rate.

## Advantages of the GASP Tool

- GASP is a **gold standard** for asthma management and is based on the New Zealand, BTS/SIGN and GINA Guidelines. GPs can be confident that the advice the GASP nurse gives a patient is based on robust best practice evidence. Being an electronic tool, it can be updated as necessary.
- GASP is **web-based** and is compatible with Med-Tech 32 and soon with My Practice. **It populates data to and from the patient's notes.**
- **Ease of Use:** The GASP Tool is on **ONE** page. It is very easy to use and the GASP nurses find it saves time and follows a format which they are comfortable with. All the calculations required for an asthma assessment are automatic, so it is less time-consuming and less open to errors. It allows the GASP nurse to interact better with and include the patient in the assessment process, which many enjoy.
- **Patient consent and privacy:** The patient is offered an option to share personal and medical information with the PHO. **This is anonymous** and is identifiable by NHI number only.
- **Assessment:** Using a variety of pop-up prompts and drop down boxes, the GASP Tool offers a comprehensive assessment of the patient's history of asthma; triggers; exacerbations; inhaler technique; adherence to treatment; symptom scores; medication use.

Patient education plays a pivotal part of the assessment process, and the GASP nurses play a key role in this area.

- **Objective Tests** can be a stand-alone option. They include:
  - Reversibility tests, which are calculated to assist the clinician with diagnosing asthma or COPD accurately.
  - Spirometry and Nitric Oxide (FE<sub>NO</sub>) testing, with assistance for interpretation of results.
- Personalized **Trigger Advice** will show the patient how best to manage triggers and can be printed and given to the patient.
- A personalized **Action Plan** can be printed for the patient. The calculations used are based on the patient's best home peak flow measurement. However, they can also be generic or "symptom based" and offered to both adults or children.
- The **Decision Support** is a complex tool which provides hundreds of different decision probabilities and offers the clinician evidence based advice and points to consider.

## Audit

The Claims Management system controls quality by collecting patient's data for the PHO, providing information on current population trends and costs. This is essential for a robust audit to be analysed and gives an insight into areas of care requiring more support and education.

## **Future Plans**

There has been interest in the GASP Tool from all over New Zealand and the UK.

Since the official launch of the GASP Tool in November 2008, Harbour Health has given the GASP programme to all its GP Practices. ProCare Network North have access to it.

A research project, with Dr. Felix Ram and Massey University in collaboration with the Asthma Foundation, is now underway. The aim is to outline the impact of using the GASP tool in the Primary Care sector.

Other primary health organisations interested in acquiring the GASP Tool at a subsidised cost are welcome to contact Wendy McNaughton.

Harbour Health will also provide training to nurses from other healthcare organisations.

### **For more information, please contact:**

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