ACAM
Australian Centre for Asthma Monitoring

Woolcock Institute of Medical Research
Level 4, 431 Glebe Point Road, GLEBE, NSW 2037 Australia

PO Box M77, Missenden Road, NSW 2050

Telephone: +61 02 9114 0467
Facsimile: +61 02 9114 0012

Refining National Asthma Indicators: Delphi Survey

Australian Centre for Asthma Monitoring

2008

Background

The Australian System for Monitoring Asthma has been developed to monitor asthma data and inform policies addressing asthma in Australia. It is an indicator based monitoring system by which defined topics of interest (indicators) have been developed for data collection and monitoring. The current asthma monitoring system is based on 24 asthma health indicators. These asthma indicators were initially developed by the Australian Institute of Health and Welfare (AIHW) in 2000 and subsequently refined by the Australian Centre for Asthma Monitoring in 2004 (Baker et al 2004). They cover the areas of disease prevalence; impact (quality of life, disability, disease severity and mortality); risk factors; and management practices.

It has been identified that such a large number of indicators can be complicated and off-putting for health policy makers and others. In order to encourage the uptake of asthma monitoring, a parsimonious model (a model with the least factors that explain the most variations) must be established. Two overlapping processes have been proposed to ascertain this model. One of these processes is the focus of this document; the use of a Delphi survey to obtain expert input on the relative merit of each asthma indicator.

The Delphi survey is a qualitative research method used to gain consensus among a panel of individuals who have knowledge of the topic. It employs a series of surveys (referred to as rounds) in which each subsequent survey provides summary feedback to the panellists from the responses to the previous survey and invites panellists to modify their responses based on the views of the group. By this means, it implements a structured group communication process in which panellists can be influenced by the responses of others in the group. A key component of the methodology is that the identities of panellists and their individual responses are kept anonymous from the group. This is designed to avoid dominance in the group by more outspoken or prestigious participants.

The other component proposed in establishing a parsimonious model is to assess statistical correlations using factor analysis to acquire empirical information using data already collected and reported for a number of the indicators. This will be conducted independently of the Delphi survey.

The Delphi survey is useful for gaining the judgement of experts in circumstances where there are limits in the ability of empirical methods to ascertain information because knowledge is, by its nature, incomplete or unavailable. This is relevant to the situation existing for most asthma indicators, and this method has the potential to provide helpful information for refining national asthma indicators.

Research Question

What are the most important indicators for asthma surveillance in Australia?

Aim

To identify the views of people with expertise in asthma and data monitoring on the priority of individual indicators for asthma surveillance in Australia

Objectives

- To consult individuals with interest and expertise in asthma and data monitoring on the value of indicators for monitoring asthma.
- To obtain consensus among asthma and data monitoring experts on which indicators are the most important in the asthma monitoring system

Ethics

An application will be submitted to the University of Sydney Human Research Ethics Committee. A key issue in the ethics will be establishing rigorous methods to ensure that the promise of anonymity of the panellists' responses is maintained.

Panellists

The panel will comprise a purposive sample of asthma experts representing the disciplines of interest, selected by the project team based on knowledge of the population. The aim will be to include approximately 20 panellists.

Selection criteria

- Highly knowledgeable about some aspects of asthma and data monitoring in Australia
- Interest in understanding the status of asthma in the Australian population using indicators
- Asthma stakeholder such as currently practicing respiratory physician, paediatrician, general practitioner, asthma researcher, epidemiologist, asthma educator, policy maker, representatives from health departments or relevant interest groups.

Exclude

- ACAM employees

Methods

Pilot test

The initial questionnaire should be pilot tested on at least 3 respondents prior to the commencement of the study, and adjustments made as required.

Recruitment

Potential panellists will be contacted by email from the researchers inviting them to participate. At this time they will be provided with an explanation of the Delphi survey purposes and process, and the activities they will be asked to undertake as panellists

(including time it will take, number of rounds, how information will be used etc). Details will be given to reassure them that their responses will be anonymous to the rest of the panel at all times (identities will need to be known by researchers to follow-up non-responders and to provide feedback).

Administration

- The survey will be administered as web-based questionnaires with communication to the panellists through email

Survey rounds:

- In the initial questionnaire panellists will be asked to give a rating for the value of each of the indicators and to identify a set of five indicators that would yield a useful set of data. Panellists will be asked to qualitatively provide explanations for their rankings and selections.
- The second questionnaire will provide pooled results of the first questionnaire and give panellists the opportunity to modify their responses in light of the responses of the group. Results could be presented as either tabulations or figures.
  The second survey will generally collect quantitative data. However if participants provide 'outlier' views, they could be given the opportunity to justify their stance qualitatively, and this in turn, fed back to other panellists in the subsequent round.
- The third questionnaire (if required) will be used to provide further feedback if insufficient consensus was gained after the second round. This would be a quantitative questionnaire.

Analysis

Consensus

Suggested criteria for determining consensus (or criteria for stopping):

- When 60% or more agreement is reached on the priority of indicators
- When there is general consistency in the priority of indicators between panellists (i.e. clusters of similar opinions)
- When there is little change in responses between rounds (diminishing returns)
- Majority findings when three questionnaires have been administered (i.e. when resources are exhausted)

Analysis of qualitative data

Qualitative responses can be grouped (groupings will need to be verified, and might use suitable software) and summarised and given as feedback with the second questionnaire.

Analysis of quantitative data

Simple presentation of quantitative responses can be summarised for each indicator. E.g.: highest, lowest and mean ranking, or quartiles and medians. The pooled results can be shown alongside the responses for each individual.

Reporting

A report will be prepared after the final survey has been completed and the results analysed and considered by the steering committee. It will include both the findings from the factor analysis as well as the Delphi survey. It is anticipated that this report will recommend which indicators should be core indicators and subject to the most detailed analysis, which have some or limited value, and which have little value and might be removed from the monitoring system.

As the Delphi survey is a qualitative research method, attention would need to be given in the report discussion to the reliability of the findings. For instance, this method does not guarantee that if the survey were delivered to a different group of panellists, it would yield the same results. Nonetheless, if carried out rigorously, it has been shown that the results can be reasonably reliable (Keeney et al 2001).

The draft report would be submitted to the ASMA Steering Committee who would review it and, once satisfied, provide their recommendation for AIHW to publish.

It may be possible to publish a research paper detailing the study methods and results in a suitable peer-reviewed journal.

It may also be considerate to provide feedback to the panellists of the pooled results of the final survey, and then provide them with a copy of the full report and recommendations when published.

References

Baker DF, Marks GB, Poulos LM & Williamson M 2004. Review of proposed National Health Priority Area asthma indicators and data sources. AIHW cat. no. ACM 2. Available at www.asthmamonitoring.org. Canberra: AIHW

Hader M, Hader S. 1995 cited in European Commission For Learn Guide: Delphi Studies. At: http://forlearn.jrc.es/guide/2_scoping/meth_delphi.htm sited April 2008.

Hasson F, Keeney S, McKenna H. Research guidelines for the Delphi survey technique. *Journal of Advanced Nursing* 2000, 32(4): 1008-1015

Keeney S, Hasson F, McKenna HP. A critical review of the Delphi technique as a methodology for nursing. *International Journal of Nursing Studies* 2001, 38: 195-200

Keeney S, Hasson V, McKenna H. Consulting the oracle: ten lessons from using the Delphi technique in nursing research. *Journal of Advanced Nursing* 2006, 53(2): 204-212

Powell C. The Delphi technique: myths and realities. *Journal of Advanced Nursing* 2003, 41(4): 376-382

Steering committee

A steering committee has been established for this project to oversee the study and monitor its progress. It includes the following members:

Dr Helen Reddel
Dr Brett Toelle
Professor Guy Marks
Ms Patty Correll
Ms Leanne Poulos
Dr Wei Xuan
Ms Elena Belousova
Associate Professor Teresa To (corresponding member)

Steering committee tasks include:

- Establishing who will comprise the research team
- Developing a list of potential participants
- Developing the questionnaires and participant information
- Resolving issues that arise
- Reviewing results and devising recommendations