EVALUATING THE 8TH EDITION OF THE AUSTRALIAN IMMUNISATION HANDBOOK

QUALITATIVE RESEARCH REPORT

Prepared for the Australian Government Department of Health and Ageing

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Notes on Research

Qualitative research deals with relatively small numbers of consumers and explores their in-depth motivations, attitudes, feelings and behaviour. The exchange of views and experiences among participants is relatively free flowing and open, and as a result often provides very rich data that can be broadly representative of the population at large.

The findings however are not based on statistics: they are interpretive in nature, and are based on the experience and expertise of the researchers as they analyse the discussions.

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1 EXECUTIVE SUMMARY

1.1 Background to the Research

The Australian Immunisation Handbook (the Handbook) provides guidelines on vaccination practice to immunisation providers. Its purpose is to give practitioners clear guidance about immunisation in Australia, and be an accessible data summary on vaccine preventable diseases and the use of registered vaccines in Australia.

The latest edition of the Handbook (the 8th edition) was prepared by the Australian Technical Advisory Group on Immunisation (ATAGI) and approved by the National Health and Medical Research Council (NHMRC) in 2003. This edition was produced in hardcopy in A5 format, and E-Handbook on CD Rom. An online format was also made available for the first time.

The past four editions of the Handbook have been supported by research with immunisation providers on the existing edition, with improvements being made in each edition of the Handbook in recognition of the feedback gained. This research was conducted to provide the Department with an in-depth understanding of how the 8th edition of the Handbook is perceived and used by immunisation providers in order to inform the development of the 9th edition.

1.2 Research Overview

The research consisted of a program of qualitative research involving 10 discussion groups and 18 in-depth interviews with immunisation providers. The methodological approach was structured to ensure representation within New South Wales, Victoria and Queensland of the two primary target audiences for the Handbook:

- General Practitioners (GPs) within private practices; and
- Community immunisations providers – as represented by nurses who provide immunisations. While it was proposed that GPs who provide immunisations in community service arrangements would also be included in this target group, none were able to be identified throughout recruitment processes. Information on community service providers throughout this report only includes nurses.

The fieldwork was conducted between 10 May and 25 May 2006, across metropolitan, regional and rural areas of the three states of New South Wales, Victoria, and Queensland.

1.3 Key Findings

Usage of the Handbook

Three usage segments were identified through research conducted in 2001 on the 7th edition of the Handbook:

- Constants users – mainly community providers who relied heavily on the Handbook and valued it highly;
- Occasional users – a larger group of the GPs involved in the research. While this group had a preference for other reference sources, they still made use of the Handbook; and
- Non-users – a smaller group of GPs within the study who did not use the Handbook or other resources, except for the childhood immunisation schedule, despite conducting immunisations.

There has been little change to these usage segments since that research, with the exception that more GPs appear to have become non-users rather than occasional users. Greater access to a range of alternative resources, increased use and reliance of prescription writing software (PWS), and a growth in the use of practice nurses has resulted in some GPs moving from occasional usage to non usage.

Community providers tend to use the Handbook as a primary reference source, and indications are that it will continue to be their 'Bible' in terms of immunisation information. In contrast, GPs use the Handbook as an occasional reference source and are relying more heavily on other resources such as PWS and specialist organisations such as MASTA (providing travel health advice on vaccines and immunisations) for decision support, and local Divisions of General Practice for general information. This is unlikely to change in the future.

For community providers, the Handbook is among the first information sources consulted when a query arises, whereas for GPs it is generally the last. GPs hold a preference for resources that provide a brief and actionable answer to a direct query. Only after other sources are exhausted, and the query still not answered, do GPs refer to the Handbook. The most common reason given for why the Handbook was often the last resource used was the perception that the Handbook was out of date soon after distribution.

The hardcopy is the preferred format for the majority of immunisation providers. As most community providers visit a number of different sites to conduct immunisations, they do not have ready access to computers and the Internet. While computerisation and Internet access appears to be increasing among GPs there is still an overriding preference for a hardcopy of information sources, mainly due to the lack of familiarity with other formats. Very few providers had used the CD Rom version of the Handbook, with online the preferred electronic format for the Handbook although this was still limited in use.

Perceptions of the Handbook

Evaluation of the 7th edition indicated high praise for the physical attributes of the hardcopy Handbook, resulting in the 8th edition of the Handbook being produced in a similar physical format. Findings from the research on the 8th edition indicate that all immunisation providers continue to strongly endorse the current physical format of the Handbook. Due to low usage no feedback was gained on the production values of the CD Rom format. Some changes to the layout and content of the online interactive version were suggested.

The majority of providers believe that the current branding of the book adds to its credibility and authority when shown to parents and patients. National Health and Medical Research Council (NHMRC) endorsement was seen as contributing to this, with few providers spontaneously aware of ATAGI's role in the production of the Handbook.

The current content is thought to be well organised for a reference book, with the overall framework considered suitable. However, providers made suggestions for change in each section of the Handbook. All of these suggestions were concentrated on allowing easier reference to the more frequently used information more quickly, highlighting the key difficulty that providers have with the Handbook - practical information is difficult to find among the more detailed text.

The greatest criticism of the Handbook is that it is perceived as going quickly out of date. The large number of changes in immunisation over the past few years, particularly to the childhood immunisation schedule, has resulted in the latest edition of the Handbook being seen as more quickly out of date than previous editions. In turn, reliance on other sources that provide regular updates as a matter of course has increased.

Suggestions for Future Editions

In optimising usability of future editions of the Handbook, the challenge will be in striking a balance between the resource's dual roles - of the primary reference book on immunisation in Australia and being a practical resource relevant for everyday use. Although the reference information is not used frequently, it provides credibility and authority in dealings with patients and parents. And while the practical information is used more often, it can be lost within the reference information. A solution may be to offer greater guidance to the more practical information by highlighting more frequently used information within the body of the text.

A key issue is raising the perception that the contents of the Handbook are current, given frequency of changes in the area of immunisation. Crucial to this, will be ensuring that updates are consistent and timely. Ideally, the preference would be if a process could be implemented so that updates are received by all immunisation providers at a dedicated time period, for example, every six months or every quarter. Providers would then be aware of when and from which organisation to expect change.

The overall preference is for the hardcopy of the Handbook to maintain its physical elements as much as possible, although some consideration should be given to a process that allows for the easy incorporation of updates into this format. There is opportunity to increase usage of the online format with GPs, as this group is increasingly using online or software-based resources. However, the website will need to provide a reason to encourage use. Two areas were identified that could increase use of the online format.

Firstly, ensure that updates to the Handbook are included within the main body of the Handbook online, rather than in a separate section. Providers expect online information to be up to date. Secondly, promote the development and use of practical tools such as the catch-up calculator. This was seen as something relevant and useful that would provide a reason for GPs to visit the website.

1.4 Research Recommendations

1 Maintain the current physical attributes of the handbook as far as possible although consideration should be given to how changes could be more easily incorporated. Suggestion for this included the use of 'sleeves' in the book and quick-reference tools such as tabs and highlighting of practical elements.

2 Ensure updates to the next version are easily noticed, as well as not inconsistent with current content to maintain the Handbook credibility among providers. Currently inconsistencies that occur when the Handbook is updated create confusion and raise questions on the Handbook's accuracy.

3 Consider implementing changes on a regular basis, such as half yearly or quarterly, to provide a schedule for when immunisation providers know to expect updates. This will raise the profile of the Handbook in the perception of providers as they will be assured of the Handbook currency each time a regular update is provided. Ensuring updates are delivered from the same source will avoid confusion among providers.

4 Consider making the CD Rom available to those who have access to computers but not to the Internet, rather than to all. The majority of those who prefer electronic information sources will use the Internet, and will have broadband connection, rather than use a CD.

5 Awareness and usage of the online interactive format could be encouraged through a number of methods. Emailed newsletter updates to providers will raise awareness, and promotion of practical tools such as the catch-up calculator will assist in encouraging usage. Redesign of the website aimed at making search functions easier and access to the contents of the Handbook more noticeable, along with incorporating links with other relevant websites will further satisfy user needs.

6 The website should be redesigned to allow for updates to be incorporated into the main body of the Handbook, rather than be found in a separate section. This is consistent with expectations of website users.

BACKGROUND AND METHODOLOGY

2 BACKGROUND TO THE RESEARCH

2.1 Overview

The Australian Immunisation Handbook (the Handbook) provides guidelines on vaccination practice to immunisation providers. Its purpose is to give practitioners clear guidance about immunisation in Australia, and be an accessible data summary on vaccine preventable diseases and the use of registered vaccines in Australia. To achieve this, the Handbook provides practitioners with information vaccination procedures, details of vaccinated diseases that are currently on the National Immunisation Program Schedule (NIPS) as well as vaccines for travel, occupational health and special risk groups. The Australian Government Department of Health and Ageing is responsible for development, production and distribution of the Handbook.

Over time, the format and content of the Handbook has evolved. Original versions focused on basic immunisation procedures, with later editions including more information on vaccine-preventable diseases, and new vaccines. The latest edition of the Handbook (the 8th edition) was prepared by the Australian Technical Advisory Group on Immunisation (ATAGI) and approved by the National Health and Medical Research Council (NHMRC) in 2003.

The 8th edition was produced in hardcopy in A5 format, and E-Handbook on CD Rom. An online format was also made available for the first time. In regards to content, the 8th edition introduced some new vaccines, provided recommendations and procedures for administering vaccines and included some changes in presentation. Some specific changes included:

- the addition of a separate chapter on vaccination for international travel;
- revisions to a number of tables dealing with pre-vaccination assessment, response to adverse reactions, and exposure of vaccines to different temperatures;
- updated information on risk/benefit (table format), the Australian Childhood Immunisation Register (ACIR), and the reporting of adverse events following immunisation reflecting changes to the national reporting arrangements;
- clarification of injection techniques with new photographs illustrating techniques;

- a change of chapter title and the inclusion of new recommendations for patients who have special vaccination needs; and
- the inclusion in the online version full references for level of evidence for new recommendations. The print version is not fully referenced nor does it include levels of evidence.

Initial distribution of 70,000 hardcopies of the Handbook occurred in December 2003. Recipients included all General Practitioners, paediatricians, private hospitals, State and Territory Health Departments (then responsible for further dissemination), Aboriginal Community Controlled Health Service, Aged Care facilities, Divisions of General Practice, professionals associations, universities, and organisations that made a submission during the consultation period. A further 10,400 hardcopies have since been distributed.

2.2 The Need for Research

The past four editions of the Handbook have been supported by research with immunisation providers on the existing edition. A range of improvements have been made in each edition of the Handbook in recognition of the feedback gained from immunisation providers as end users.

This research was conducted to provide the Department with an in-depth understanding of how the 8th edition of the Handbook is perceived and used by immunisation providers in order to inform the development of the 9th edition. As Blue Moon conducted the evaluation of the 7th edition of the Handbook, this report contains broad findings from this previous research as a comparison.

3 RESEARCH OBJECTIVES

The overall aim of the research was to evaluate the 8th edition of the Australian Immunisation Handbook in order to assist the Department in producing the next edition of the Handbook. Three broad areas were identified for inclusion within evaluation research:

1. Understanding use of the 8th edition of the Handbook among immunisation providers;
2. Exploring perceptions of the 8th edition of the Handbook among immunisation providers; and
3. Exploring the needs of immunisation providers in regards to future editions of the Handbook.

More specifically, the objectives of the research included exploring:

- relevance of the Handbook's various formats (hardcopy, CD Rom, and online interactive) to different groups of immunisation providers;
- overall reaction to the various formats and perceptions of accessibility;
- usage patterns including frequency, sections referred to and any notable differences between formats and previous editions;
- perceptions of usability of the various formats, including ease of use/reference;
- reactions to the current layout and attributes including images, charts, tables, size, length;
- overall satisfaction with the Handbook and identifying any differences between formats;
- reactions to the introduction of the new formats in the 8th edition (CD Rom and online interactive) and identifying any unmet expectations of these formats;
- possible changes for future editions to increase value and usability to providers;
- any key changes from our findings in the previous research on the 7th edition undertaken by Blue Moon.

4 METHODOLOGY

4.1 Overview

The research consisted of a program of qualitative research involving 10 discussion groups and 18 in-depth interviews with immunisation providers. The methodological approach was structured to ensure representation within New South Wales, Victoria and Queensland of the two primary target audiences for the Handbook:

- General Practitioners (GPs) within private practices; and
- Community immunisations providers – as represented by nurses who provide immunisations. While it was proposed that GPs who provide immunisations in community service arrangements would also be included in this target group, none were able to be identified throughout recruitment processes. Information on community service providers throughout this report only includes nurses.

The fieldwork was conducted between 10 May and 25 May 2006, across metropolitan, regional and rural areas of the three states of New South Wales, Victoria, and Queensland. The research was conducted in each of the three capital cities and in the regional areas of Coffs Harbour (NSW), Wagga Wagga (NSW), Sunshine Coast (Qld), Geelong (Vic) and Shepperton (Vic). Rural areas included Broken Hill (NSW), Mt Isa (Qld), Townsville (Qld), Mildura (Vic), and Horsham (Vic).

4.2 Rationale for Methodological Approach

A range of variables were required to be included in the sample if it were to be representative of immunisation providers. These were identified as location, practice size, age and gender, and socio economic status (SES) of patients. It was determined that a mix of qualitative methods would be required. The use of a mixed methodology also provided the opportunity for other variables, such as proficiency of use of electronic media and general usage patterns of the Handbook to emerge.

Group discussions were conducted where a relatively homogenous group of immunisation providers could be brought together, for example, GPs from a metropolitan area who have been in private practice for over 15 years.

Where this was not possible, in-depth interviews were used to supplement the sample. In addition, the incorporation of in-depth interviews allowed more detailed coverage of various elements of the Handbook. For example, usability elements of the online interactive version were able to be investigated in more detail in a 'live' one-on-one environment with those who made regular use of the Internet as an information resource.

4.3 Sample

The sample frame was devised according to the variables believed to ensure homogeneity in group situations while ensuring adequate representation of the target groups. The rationale for each of the variables is discussed in the following section.

Table 1: NSW Sample Characteristics

Research task	Provider type	Location centre	Provider demographics	Patient demographics
Group 1	GPs	Sydney	< 15 years in practice	Young Families Low/med SES
Group 2	GPs	Sydney	>15 years in practice	Older Families Retirees Med/ High SES
Group 3	GPs	Regional (North)	Mix	Mid/High SES Young Families/ Retirees
Group 4	Community Providers	Regional (West)	Mix	Low/ mid SES Families/ Older Retirees
Interview 1	Community Provider	Sydney	Mix	All ages Mix SES
Interview 2	Community Provider	Sydney	Mix	All ages Mix SES
Interview 3	GP	Sydney	1x <15 years	All Ages Mix SES
Interview 4	GP	Sydney	1x >15years	All Ages/ SES
Interview 5	Community Provider	Regional (North)	Mix	Low/ mid SES Families
Interview 6	Community Provider	Rural (Far West) (Phone)	Mix	Low/ mid SES Families

Table 2: Victorian Sample Characteristics

Research task	Provider type	Location centre	Provider demographics	Patient demographics
Group 5	GPs	Melbourne	>15 years in practice	Mid/ low SES Young Families
Group 6	Community Providers	Melbourne	Mix	Mix SES Young Families/ Retirees
Group 7	Community Providers	Regional	Mix	All Ages/ Mid/low SES
Interview 7	GP	Melbourne:	1x <15 years	All Ages Mix SES
Interview 8	GP	Melbourne	1x >15years	All Ages Mix SES
Interview 9	GP	Melbourne	Either	All Ages Mix SES
Interview 10	Community Provider	Melbourne	Mix	All Ages Mix SES
Interview 11	GP	Rural (Phone)	1x <15 years	All Ages Mix SES
Interview 12	GP	Regional	1x > 15years	All Ages Mix SES
Interview 13	Community Provider	Regional	Mix	All Ages Mix SES
Interview 14	Community Provider	Rural (Phone)	Mix	All Ages Mix SES

Table 3: Queensland Sample Characteristics

Research task	Provider type	Location centre	Provider demographics	Patient demographics
Group 8	GPs	Brisbane	< 15 years	Mid/High SES All Ages
Group 9	GP	Brisbane	> 15 years	Mid / Low SES Families
Group 10	GPs	Sunshine Coast	Mix	Older/ Retirees Younger People
Interview 15	Community Provider	Brisbane	Mix	All Ages
Interview 16	Community Provider	Brisbane	Mix	All Ages
Interview 17	Community Provider	Rural (phone)	Mix	Mix SES
Interview 18	Community Provider	Remote (Phone)	Mix	Mix SES

4.4 Rationale for Sample Design

The following variables were considered primary determinants for the sample.

State, Metro/Regional and centre location

Research was conducted in three states in recognition of the differences in delivery of immunisation services across states. NSW, Victoria and Queensland were selected as these states show the greatest differences in immunisation delivery as well as offering a high population distribution to ensure diversity in sample. In NSW immunisations are traditionally delivered by GPs in private practice with a small amount being delivered through community providers. In contrast, public providers such as councils and health clinics account for approximately half of immunisation delivery in Victoria. Queensland is the only state to not have school programs that provide access to vaccinations, however community providers still deliver approximately 20% of immunisation through health clinics and mobile units run by local councils.

To cater for these state differences, the sample was structured to be representative of immunisation providers of each state chosen to be included in the research. As approximately 80% of immunisations in NSW and Queensland are conducted in private practice, most commonly by GPs, the samples of NSW and Queensland were skewed to include more GPs than community providers. In contrast, the sample in Victoria was structured to reflect that 50% of immunisations are done in private practice by GPs and 50% by community providers.

Metropolitan, regional and rural representation allowed regional differences in use of electronic media and reference sources to be explored. This involved the inclusion of telephone and face-to-face in-depth interviews with immunisation providers in regional and remote areas. In addition, a range of locations in metropolitan areas was included in the sample to reflect the socio-economic and cultural diversity within a city.

Provider Demographics

The number of years of practice as a GP, either more or less than 15 years, was used as the primary provider demographic with which to design the sample. This variable tends to correlate with a number of other demographic variables, such as age and preference of resource formats (electronic and/ or hardcopy).

Patient Demographics

Immunisation providers will typically administer different types of immunisation to meet the needs of their patients, therefore patient profile was considered an important variable to include in developing the sample. Providers who see a high proportion of older people typically administer more influenza vaccines, and those that see younger families administer more child vaccinations. Others provide a greater range of immunisations for patients across the age spectrum, including vaccines for international travel.

Culturally and Linguistically Diverse (CALD) and Indigenous Backgrounds

Immunisation providers who see people from culturally and linguistically diverse (CALD) and Indigenous backgrounds were represented as they fell naturally from recruitment.

Other Characteristics

Quotas were placed during recruitment to ensure representation of the following variables within the sample:

- a mix of genders;
- a range of practice sizes and types for GPs - sole or multi–partner practice and medical centre, street, or shopping centre location;
- awareness of the Handbook formats; and
- provider access, use, and degrees of proficiency of computer and Internet facilities.

It should be noted that within the target groups of community immunisation providers, the resultant sample was skewed towards some of these variables. For example, most community immunisation providers are women and the majority have limited access to the Internet during normal work hours and work locations.

4.5 Recruitment of Discussion Group Participants

Group participants were recruited from commercial lists by specialist Interviewer Quality Control Australia (IQCA) recruitment companies. A letter on Departmental letterhead was faxed to immunisation service providers by recruiters. This letter served to alert them to the study and encouraged providers to take part. A recruitment screener (Appendix A), approved by the Department prior to use, was then administered to ensure group or interview suitability. Respondents participating in discussion groups were asked to bring a copy of the Handbook and/ or other immunisation resources they use to the group.

4.6 Discussion Coverage

A semi-structured discussion guide was developed for use in all focus groups and in-depth interviews. This was approved by the Department prior to use. An overview of the content of the guide is described below, with a copy appended (see Appendix B).

Broadly, the following was discussed in each group:

- current use of the Handbook including levels of use and access of various formats;
- place of Handbook in reference to other reference materials on immunisation;
- access to and satisfaction with changes for the Handbook (keeping up to date);
- layout, attributes, organisation of Handbook including production values, contents, and preferences for change;
- reactions to changes made to 8th edition;
- suggestions for future inclusions;
- distribution including satisfaction with current mode and preference for future; and
- comparison of formats (hardcopy, CD Rom and online).

4.7 Group Size and Duration

Each focus group was approximately 1 ½ hours in length and consisted of between 6-8 respondents. Each in-depth interview was with individuals and was between 45 minutes to 1 hour in length.

Due to location, five in-depth interviews were conducted by phone, with the remaining being done face-to-face. Where possible, interviews were conducted in the normal place of work for the immunisation provider.

DETAILED FINDINGS

5 USE OF THE AUSTRALIAN IMMUNISATION HANDBOOK (8TH EDITION)

5.1 Comparison to Previous Research

Research on the 7th edition of the Handbook was undertaken in 2001. This research identified three usage segments of immunisation providers based on behaviour and attitudes in relation to the Handbook.

'Constant users' were characterised by providers who relied heavily on the Handbook and used it very regularly. These users tended to consult other specialised information sources only when a query was complex, although they often used brief information, such as the schedule, in conjunction with the Handbook. Constant users valued the Handbook highly and believed it to be accessible and comprehensive. Most relied on it as the highest authority for everyday best practice, with the Handbook considered as the single respected source from which to provide recommendations when queries or questions arose. All community providers and a small number of GPs who had a special interest in immunisation fell into this usage segment.

'Occasional users' were providers who would infrequently use the Handbook to answer patient queries. These users had a preference for brief communication sources, such as wall charts or directly asking a question by phone or in person with a specialist. The Handbook was considered by occasional users as being too text dense for the busy and experienced GP to readily and easily locate information on specific queries. This usage segment perceived the Handbook as more of an academic information source, rather than a practical resource to be used everyday. A larger number of GPs participating in the 2001 study comprised this segment.

The final usage segment, 'Non users', were identified by stating that they never consulted the Handbook. This segment tended to not rely on any information source other than their own knowledge or consultation with other specialist immunisation providers. Non users were comfortable with their current immunisation practices and tended to be characterised by some lack of interest in immunisation despite providing it. A smaller number of GPs in the 2001 study were seen as in this category.

The characteristics of these usage segments are shown in summary form in the table below.

Table 4: Usage Segments Identified by Previous Research

CONSTANT USERS
Relationship with the handbook
• Rely heavily on it; use it constantly; • Consult specialised sources only when query is very complex; • Use brief information (eg schedule) as adjuncts to Handbook; and • Value it highly.
Who were they?
• All the Community Providers; and • Some GP's (with 'a special interest' in immunisation).
Reported reasons underlying attitude and behaviour by providers
• Need to rely on Handbook as highest authority for best practice, every day; • Need to cite recommendations from one respected source; • It is accessible and comprehensive; • Handbook is very familiar: perceived to be aimed at their profession and relevant to their role; and • Used in training/qualification (Community Providers).

OCCASIONAL USERS
Relationship with the handbook
• Do not often consult or look into it as preferred source of information; • Will sometimes use it to answer patients' queries; • Consult specialists, personally or eg biopharmaceutical company CSL; and • Rely primarily on brief communications (eg wall charts, P1).
Who were they?
• A larger number of GPs in the study.
Reported reasons underlying attitude and behaviour by providers
• Handbook is too much like a textbook (dense prose); • Is not designed for busy, experienced GPs; • Would take too long to find anything; • Unlikely to answer specific query; and • It is a government publication and therefore unlikely to be relevant to day-to-day general practice, will focus on academic material rather than the practical.

NON USERS
Relationship with the handbook
• Do not rely on this or any other information; and • Answer queries from own knowledge or refer to other immunisation providers.
Who were they?
• A smaller number of GPs in the study.
Reported reasons underlying attitude and behaviour by providers
• Are not especially interested in immunisation (yet provide it, in some instances increasingly); and • Resistant to learning anything new or to revising their procedure; comfortable with their practice re immunisation.

Both the 2001 research and current research used a qualitative methodology, so it is not possible to determine the *proportion* of the provider population that is included in each segment. However, using the same characteristics to identify the use, attitudes and behaviour, the current research indicates little change to these segments.

Constant users continue to be mainly community providers, with the reasons underlying their attitudes and use of the book similar to that identified in the previous research. The Handbook is perceived as a consistent, standardised resource that all community immunisation providers use for training and qualification purposes. It continues to be seen as the most authoritative and credible source of immunisation information in Australia by constant users.

Further, community providers are required to have access to a Handbook whenever they perform immunisations. Most are extremely familiar with the layout, making it easier to use.

The small change that has occurred since the previous research is that more GPs appeared to have become non users of the Handbook, rather than occasional users as in 2001. The primary reasons identified for this change included:

- access to a greater range of alternative resources, such as regular information provided by local Divisions of General Practice and telephone and Internet access to sources such as MASTA;
- use and reliance on prescription writing software as a decision support system seems to have increased; and
- growth in the use of practice nurses who now administer the majority of immunisations within the practice. Some GPs only administered vaccinations on specific request of parents.

5.2 Current Usage Patterns

All community providers referred to the Handbook as the 'Bible'. Most indicated that they had used it more than ten times in the past six months for either checking or confirming information, doing background reading for certain vaccinations, or for providing authoritative information to a parent or carer with queries or doubts on an immunisation issue. The quotes below are typical of all community providers.

> *"I use it all the time, I can almost tell you what's on each page"*
>
> *"There's a couple in the clinic and each of us has our own"*
>
> *"Whenever we go out to a clinic we take a copy with us"*

In contrast, GPs used the Handbook like a 'textbook'. Few had used it more than one to three times in the past six months, with many having to find it on a bookshelf or in some cases ask a colleague or practice nurse for a copy to refer to during the research.

The majority of GPs did not perceive the Handbook as a resource that would provide them with any new information, with it being more suited for those that were beginning in general practice or in a position of administering immunisations. However, as GPs believed the Handbook to be the most authoritative source of immunisation information in Australia they would use it for situations that were unique or considered 'tricky'. The quotes below are indicative how GPs tend to perceive and use the Handbook.

> *"I had to go find my copy in the nurse's room".*
>
> *"I have been doing this for 25 years..."*
>
> *"If I really don't know the answer I'll go to it"*

The differences in current use of the Handbook by community providers and GPs is best illustrated by Figure 1.

Figure 1: Comparison of Handbooks

Community Provider Handbook | General Practitioner Handbook

Community Providers would often highlight important or frequently used sections within their Handbook. Many had pasted or stapled in new information over sections within the Handbook when updates had become available. Almost all had some form of tabs, as illustrated by the use of post it notes above, to assist in easy reference of the Handbook. All these characteristics are indicative of how frequently the Handbook is used by this group of immunisation providers.

On comparison Handbooks owned by GPs were generally not marked in any manner. Many that were brought to group discussions or used in interviews appeared as if they were new, complete with the National Immunisation Program insert and the CD Rom yet to be removed from the back fold out cover.

5.3 Types of Information for which the Handbook is Used

There is a notable difference in how community providers and GPs use the information in the Handbook. For community providers, the Handbook is used more as a reinforcement tool, and they seek information often to refresh their understanding of a specific area. Catch-up vaccinations were the primary example given, with community providers often referring to the relevant section before administering a catch-up immunisation.

Other examples of the Handbook being used as a tool for reinforcement of information include:

- reviewing background information prior to a round of vaccinations for a change or something new, such as the varicella vaccination; and
- use as an authoritative source for explanation of the vaccination program, both in general and on specific diseases, for parents.

In addition, community providers would often discuss information found in the Handbook with colleagues, particularly if they were still unclear about the answer to a specific query.

In contrast, GPs would refer to the Handbook when placed in a situation where they did not believe they were already aware of the answer. The Handbook was seen as a reference source for information which is not already known. GPs often referred to the specific times when they would use the Handbook as the *"tricky situations",* or alternatively as a directory of where to go for further information. The more common circumstances that GPs gave for referring to the Handbook included:

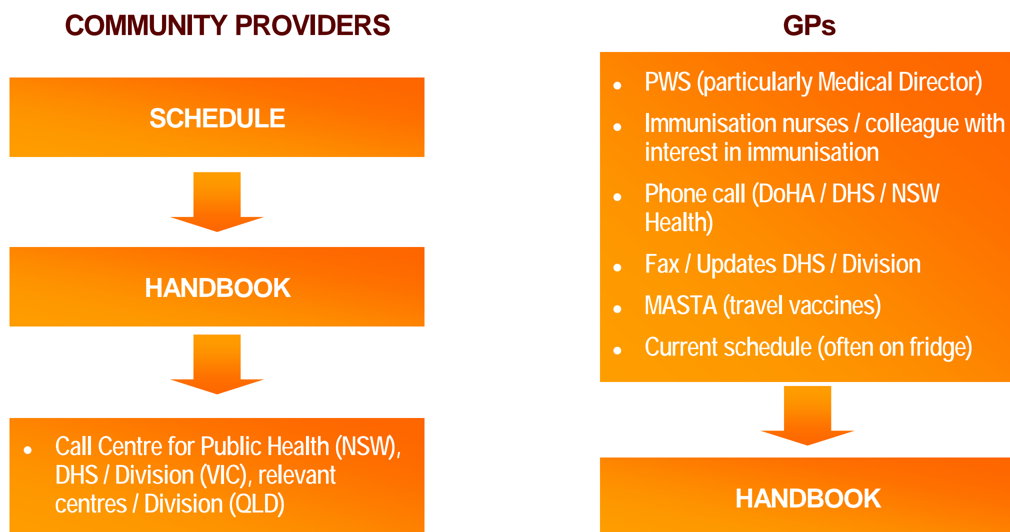
- finding phone numbers to ring for advice, specifically on catch-up situations for children from inter-state and other countries;
- background information on times or intervals when vaccinations could be given together, particularly in the situation above;
- checking doses and reactions for less common vaccines; and
- checking doses and reactions for vaccines that are new to the schedule, for example varicella, or where the administration of vaccines may change, for example polio.

Although less often than community providers, GPs would use the Handbook as a source of information for parents when they perceived that further information was required as a form of persuasion or reassurance for unsure parents or patients.

5.4 Placement within the Range of Information Sources

Community providers tend to use the Handbook as a primary reference source. As illustrated in the diagram below (Figure 2), they will use the Childhood Immunisation Schedule and the Handbook for any query before going to other sources such as the state or local health organisations. Other sources used by community providers, if unable to answer a query using the Handbook, include Public Health Units within Local Area Health Services (NSW), the Department of Human Services (Vic), Queensland Health (Qld). Local Divisions of General Practice also appeared to have a small role as an information source for community providers.

Figure 2: The Handbook as an Information Source



In contrast to community providers, GPs use a range of sources for information on immunisation. Almost all GPs that participate in the research indicated reliance on Prescription Writing Software (PWS), in particular Medical Director, as their primary reference tool in making decisions regarding immunisation. While the research did not aim to measure the incidence of computerisation or use of PWS among GPs, the results appear to indicate a heavier reliance on this software than has been found in previous studies undertaken by the researcher among GPs.

If their PWS could not supply the necessary information, GPs would then seek the assistance of practice nurses who undertake immunisations, if available, or other colleagues within the practice with a special interest in immunisation. If the query was immediate and still not answered, GPs would contact either the Department or state health organisation by phone.

Many of the GPs participating in the research subscribed to MASTA and used this service for information on travel immunisation requirements. In one area where the research was conducted, a local pathology lab had begun to offer GPs a free service whereby the lab sought the necessary information from MASTA on request of the GPs. This obviated the need for GPs with more infrequent queries on travel vaccinations to subscribe to MASTA.

Other sources GPs used regularly were MIMS and the childhood immunisation schedule which was often laminated and on the refrigerator door. Few GPs mentioned product information or other information provided by pharmaceutical company representatives; however it is likely that most have this information. They may not perceive it as a specific source.

For more general information and updates, most GPs relied on information supplied on a regular basis from their local Division of General Practice, particularly in Victoria and Queensland. Weekly or fortnightly faxes were common, as were a monthly or bi-monthly brochures dedicated to changes or information on immunisation. In the examples of these seen during the research, the Handbook was often referenced.

GPs indicated that it was only after these sources of information had been exhausted, and the query still not answered, would they refer to the Handbook. The most common reason given for why the Handbook was often the last resource used was the perception that the Handbook was out of date soon after distribution. This was enhanced by the number of changes that had occurred in immunisation, particularly to the childhood immunisation schedule.

Additionally, GPs considered it easier and faster to find information from other sources. It was generally believed that the other sources provided specific answers to specific questions, whereas the Handbook gave more detailed information on general queries. GPs, many of whom were unfamiliar with the resource, found that it took some time to find the answer they required. This was not a preferred option for a time poor GP.

Further, some expressed discomfort in having to spend what appeared to be a lengthy time sourcing information in front of patients. The quotes below illustrate these commonly held views:

"It becomes obsolete very quickly"

"Generally speaking when I go to the book I'm in a hurry, and it can take quite a few minutes to find what you want"

"It's just easier to get the nurse to ring Public Health"

Underlying these barriers to regular use was the perception that the Handbook tended to provide more general information on immunisation rather than answers for highly specific cases. Essentially GPs considered themselves knowledgeable in the general areas of immunisation, were comfortable with their current methods and practices, and did not feel the Handbook could provide them with necessary information they were not already aware of.

Despite this, all GPs expressed discomfort with the idea of not having access to a hardcopy of the Handbook. While they did not use it often, almost all believed it was necessary to have access to it within their practice in case other sources were not available. In addition, GPs felt that the Handbook was the primary reference source of immunisation in Australia, and as a matter of course they should have access to it should they need it.

It was suggested that in recognition of the minimal use made of the Handbook by GPs, a hardcopy could be sent according to each practice rather to each individual provider. This should also be accompanied by an option to request more copies for the practice.

"It is an education book, you need a hardcopy"

"When I need it, it is really useful"

"Don't get rid of it, just because I don't use it very often doesn't mean I don't need it!"

5.5 Usage of Hardcopy versus CD versus Online

Hardcopy

The hardcopy is the preferred format for the majority of GPs and for almost all community providers. As most community providers visit a number of different sites, they do not have ready access to computers and the Internet. For most, even when in an established clinic or centre access to computers and the Internet is generally limited to those in more managerial, supervisory of senior positions rather than those who are primarily responsible for administration of immunisations. In summary, for community providers a hardcopy of the Handbook is essential as:

- it can be carried to and from immunisation sites;
- rarely have computer access when out and about; and
- the format has been similar over the past few editions, so most are able to source information easily. As stated by one

> *"There'd be some anxiety if you changed it too much"*

While computerisation and Internet access appears to be increasing among GPs there is still an overriding preference for a hardcopy of information sources, mainly due to the lack of familiarity with other formats. Some GPs were not highly computer literate and very few suggested they would read information from a computer screen. This was more common among those that had been practising for 25 years or more. Some GPs, of all ages, tended to expect online searches to be time consuming and some were simply unaware that the Handbook was available online and had therefore not used it.

CD Rom

Very few providers had used the CD Rom version of the Handbook, with those that had were more likely to be younger GPs who were computer literate but with limited access to the Internet within their practice. The CD Rom also appeared to be more commonly used by GPs who had been trained in other countries than Australia. Very few community providers used the CD Rom, although there appeared to be a relatively high awareness of the Handbook being available in this format.

A number of barriers to use of the CD Rom were identified. These included:

- limited access to computers for community providers as they are 'on site' at schools, community halls, workplaces and in mobile units in the usual course of work;
- a belief that it takes up a lot of memory on computer (both GPs and community providers);
- those that are computer literate have a preference for online if they have access to Internet. This is due to the belief that the Internet version is regularly updated and therefore allows access to the most recent information; and
- some had experienced difficulties in installing the CD Rom.

Online

Online was the preferred electronic format for the Handbook although this was still limited in use. Similar to the CD Rom version, the online version of the Handbook was more likely to be used by younger GPs and GPs who had been trained in other countries. However, the main drivers to online use are computer literacy and access to fast/ broadband Internet connections. Other reasons given for online being the preferred electronic format of the Handbook included:

- the ability to search using keywords allowed more specific queries;
- the perception that the online version is the most up to date; and
- the assumption that changes are automatically incorporated into the main body of the online version and not in a separate section.

As with the CD Rom format, community providers were less likely to use the online version of the Handbook due to most of their work taking place outside of an office location with no computer access. However, community providers in more management or supervisory positions who were based in an office had used the online version. They commented that it was particularly useful in printing information in PDF format for parents or patients with concerns or queries.

A number of the GPs participating in the research commented that they had some concern over how information sources were increasingly on the Internet and not in other formats. They expressed discomfort due to not being highly computer literate and not being accustomed to reading information on a computer screen. This was more common among older GPs who had been practicing for longer but not unique to them.

5.6 Changes in Use over the Past 12 months

The majority of community providers and GPs believed that their use of the Handbook had remained relatively similar over the past 12 months, with only a small number indicating their use had increased or decreased. Changes in the schedule was the main reason given by those claiming that their use had increased, and also the main reason given by those claiming their use had decreased.

For those with increased use, changes in the childhood immunisation schedule had prompted them to read more about the specific vaccination or disease in order to refresh their knowledge. For example, some commented on reading the background information on varicella when it was introduced to the immunisation schedule. The quotes below illustrate this reason for increased use:

> *"There have been so many changes to the schedule, I need to look at it more now than before"*
>
> *"There are always ongoing changes and updates that require confirmation"*
>
> *"Because of the new and altered schedule and different combinations of vaccines"*

Two other reasons underlying why some providers had increased their use of the Handbook were identified as:

- An increase in questions by more informed parents and care givers. Due to more accessible information, parents and carers are reading more about immunisation in general and specific vaccinations. The Handbook is used as an authoritative, credible source for the information in response to these queries; and…

"Clients are asking more questions, especially about the side effects of immunisation"

"Parents are more informed and asking more questions"

- More mobile populations resulting in more children from other Australian states and from other countries.

"We get a lot of kids from Sudan and it's hard to know what to do"

"Parental enquiries such as overseas families"

Those with decreased use of the Handbook were more likely to be GPs than community providers. Many believed that the changes in the schedule had resulted in the Handbook having less currency and not being as relevant and reliable as other sources. This has, in turn, prompted greater reliance of those other resources.

"Some of the new vaccines are on Medical Director – it's a lot quicker"

The increase in immunisation nurses being used in practices is also seen as a contributing factor to decreasing use by some GPs. Others commented that broadband Internet within their practices had improved access to websites that were used as immunisation information sources. Websites most often used tended to be MASTA and the National Centre for Immunisation Research and Surveillance (NCIRS).

"Handbook is used significantly more by practice nurses"

"My nurse is doing a lot more of the follow up for me. She also has a direct Internet link to MASTA."

"The practice is computerised at the beginning of the year and they have access to lots of online resources".

5.7 Profiling Current Usage

Situations of Current Use

All providers claimed that the section they referred to most often were those related to practical situations rather than the more theoretical sections of the Handbook. The catch-up vaccination section was used by all, with other sections used varying across providers depending on the type of practice and patient profile. Common across all cases was that use of the Handbook was focused on finding the recommended course of action in a specific situation with a specific vaccine.

However, while not used often, the theoretical information was seen as an important and necessary part of the Handbook. The inclusion of this information was perceived to give the Handbook greater credibility when used as a resource for reassurance or persuasion for parents and patients. Specific instances that providers suggested where the theoretical information was particularly useful involved when evidence based information on the benefits of vaccination was needed in discussion with parents, and when reassurance about the safety of specific vaccinations was needed. This last point was raised in conjunction with the measles, mumps and rubella (MMR) vaccine.

Testing Usage

Research participants were given a series of scenarios to ascertain usability of the Handbook (see Appendix C). Most GPs approached this task with some apprehension, and the majority indicated that they would not consider looking for the required information as they "*would just know it*". It became apparent during the scenarios that most GPs were uncertain how to locate information due to unfamiliarity with the layout and format of the Handbook.

On performing the tasks the majority of GPs used the index pages at the back of Handbook, with few using the table of contents. Once a keyword was found within the index pages, GPs would find the relevant section and flick through scanning titles until they found what they believed was the right information.

Community providers were more confident in performing the tasks, due to greater familiarity with the Handbook, although there was still some confusion. Many used the 'tabs' that they had placed in the book themselves as a way to find the required information. Others used the index at the back of the Handbook or would flick through the blue signposts if they believed the information would be found in the section where diseases are listed alphabetically. As with GPs, few used the table of contents.

Community providers provided a number of suggestions which they believed would make the information easier to find. It was felt that the index pages would be easier to use if multiple page references listed after a keyword were divided according to subheadings. For example, after the word 'measles', pages 96, 182-92 are shown. It was suggested that each page reference should refer to a subheading of the main search word. The second suggestion was that Handbook be produced with tabs that are cut into the pages of the book, *"like a dictionary or encyclopaedia".* Ideally, to achieve the objective of quick referencing, section headings would be able to be located without opening the Handbook.

6 PERCEPTIONS OF THE AUSTRALIAN IMMUNISATION HANDBOOK (8TH EDITION)

6.1 Physical Format

Evaluation of the 7th edition indicated high praise for the physical attributes of the Handbook, resulting in the 8th edition of the Handbook being produced in a similar physical format. Findings from the research on the 8th edition indicate that all immunisation providers continue to strongly endorse the current physical format of the Handbook. As shown in Table 5 below, all attributes continue to be satisfactory for immunisation providers.

Table 5: Indications of Satisfaction with Physical Attributes

ATTRIBUTE	COMMUNITY PROVIDERS	GPS
Weight	✓	✓
Size	✓	✓
Thickness	✓	✓
Paper Weight	✓	✓
Durability	✓	✓
Portability	✓	✓
Tactile Impression	✓	✓
Size of Print	✓	✓
Clarity of Images / Charts	✓	✓

The current physical format is particularly important for community providers, as they carry the Handbook to and from immunisation sites. Community providers perceive the current size, thickness and weight have resulted in the **portability** of the Handbook being ideal. Despite constant use, the Handbook was considered highly **durable**. Further, the professional look and feel of the book (paper weight, tactile impression, size/ type of print) was thought to enhance its **credibility**. This was particularly important when the Handbook was used as a resource for showing parents authoritative information when queries arose. The quotes below are typical of comments made by community providers on the physical attributes of the Handbook:

"I have a specific place for it in my kit, so I know exactly where it is at all times"

"It's all there, not one page has fallen out"

The majority of immunisation providers would prefer the physical attributes of the Handbook to be maintained as far as possible in future hardcopy editions. The 8th edition being similar in physical characteristics to the previous two editions, has contributed to the Handbook being recognised as a continuing series. While occasional and non users may simply take the old edition from their bookshelf and replace it with the new one, others in these usage segments will still have the previous few editions and will put the next edition with them. Constant users will compare the new edition to the old when it arrives to ensure they are aware of any changes to format and content.

Each of these actions indicates the value that is placed on the Handbook as a continuously updated reference source regardless of usage. Maintaining the current physical attributes will enhance this perception of value and continuity. Constant users also agreed that changing the colour of each edition was good practice. Most recognise the latest edition by its colour.

6.2 Branding

The majority of providers believe that the current branding of the book adds to its credibility and authority when shown to parents and patients. Particular features contributing to this are:

- 'The Australian'– indicates national standards;
- '8th edition' – indicates a continuing series that is consistently updated;
- the Australian Government crest - indicates authority; and
- the NHMRC brand – 'Medical' and 'Research' provide an extra level of credibility.

The National Health and Medical Research Council (NHMRC) was an organisation known by most immunisation providers, and command respect as the peak body within health producing evidence based information. Among providers that were less familiar with NHMRC as an organisation, the combination of the words 'medical' and 'research' were thought to be reassuring that the information within the Handbook was authoritative and credible.

Some providers claimed that NHMRC was increasingly being recognised by the general public as an authoritative organisation within health. Some felt that this may be due to the production, or endorsement of guidelines in the other areas that are of interest to the general public, for example nutrition.

In contrast, the majority of providers were not spontaneously aware of the Australian Technical Advisory Group on Immunisation's (ATAGI's) role in the production of the Handbook, with a significant number unaware of ATAGI as a group. While a small number of community providers spontaneously suggested that ATAGI should be the organisation to endorse the Handbook, most providers believed that NHMRC was the most appropriate branding even when made aware of ATAGI.

Given the current awareness of NHMRC among the medical community and the general public, consideration should be given to maintaining NHMRC endorsement of the Handbook. It is currently perceived as adding credibility and authority. However, this endorsement should be balanced with the need for regular publication of updates for the Handbook. The other elements that contribute to the Handbook authority and credibility include the Australian Government crest, the use of the word Australian and numbered editions. This would be sufficient to ensure providers continue to see the Handbook as a credible source if a change was necessary to improve on the frequency and production of updates.

6.3 Perceptions of Online Format

While only small numbers of providers were able to provide feedback on the website, the research identified a number of opportunities for improvement that may assist in improving usage. The initial webpage users encounter was thought to be confusing. While it had a logical web address: www.immunise.health.gov.au/handbook, the user is still required to enter another page to actually reach the online version.

Further, providers who prefer to use the online version of the Handbook do so primarily because they believe that the most recent changes have been incorporated within the main body of the online version of the Handbook. This is currently not the case.

Figure 3 below illustrates these issues.

Figure 3: First page of the Immunisation Handbook Website

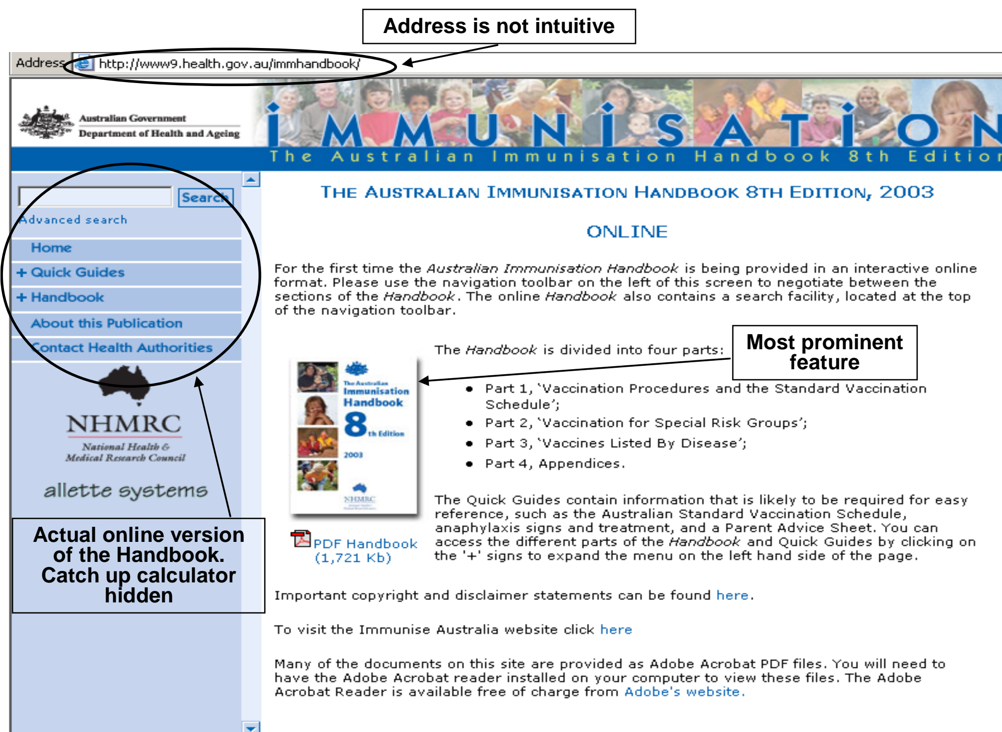
The next page of the website is the actual entry portal into the Handbook, http://www9.health.gov.au/immhandbook. The most apparent feature of this page is the Adobe Acrobat downloads. While these downloads are useful to print and give to parents, most users do not see that they should be the primary feature of an online interactive website.

Providers who used the Internet for other immunisation resources, such as NCIRS and MASTA, had to be prompted on how to use the online version as the side section of the site was not obvious as the main body of the Handbook. Most providers would use a 'quick search' command by typing in a couple of words as the preferred method of sourcing information; however, again, this was not an obvious feature of the site.

For a small number of providers, attitudes towards the 'catch-up calculator' were sought. As this was thought to be a potential way to attract providers to the website, given that information on catch-up vaccinations were the main reason that most providers had used the hardcopy version of the Handbook in the past twelve months.

Where possible, in discussion groups and interviews that occurred later in the research, GPs were either shown the catch-up calculator through the website or shown paper print outs. Most agreed that this was a unique draw card to the Handbook website. However, currently the catch-up calculator is not an obvious feature of the site, thereby limiting its potential as a feature that may assist in increasing use of the Handbook's online format. The issues discussed above are shown in Figure 4.

Figure 4: Second page of the Immunisation Handbook Website



6.4 Perceptions of CD Rom Format

Few providers had used the CD Rom enough to comment on its production values. It was apparent that while the CD Rom format may be useful for those that are computer literate and do not have Internet access, this group is becoming increasingly smaller as Internet penetration is increasing.

Those that are regular computer users and have work access to the Internet, would prefer to use an online version. This preference is based on the belief that the online versions of information are automatically updated when changes occur to content. Further, as the current CD Rom version of the Handbook is required to be downloaded, it is seen as taking up ' memory space'. The Internet version does not require this.

6.5 Content

The current content is well organised for a reference book. The overall framework of the contents is considered suitable with the current division of information as logical for book sections:

Part 1 – 'Vaccination Procedures and the Standard Vaccination Schedule';

Part 2 – 'Vaccination for Special Risk Groups'; and

Part 3 – 'Vaccines listed by Disease'.

The majority of providers believed that the Handbook needed to include what they saw as 'established facts' such as vaccination standards and procedures, and the virology, clinical features, bacteriology, epidemiology of diseases. The inclusion of this information is important if the Handbook is to continue to be perceived as a primary reference tool for immunisation in Australia. However, it is not easily referenced for its role as a practical tool for everyday use. Most providers found it difficult to find the required information in the relevant section, especially when having to do so quickly for parents or other patients.

Most providers found that practical information is difficult to find among the more detailed text. Unless the sections were those that are frequently used they had to read a great deal of information to find relevant sections, which was time consuming and at times frustrating.

Many community providers, the frequent users of the Handbook, used highlighter pens to make the practically important information more readily accessible within larger sections. The quotes below illustrate these views.

"I like all the info but would like to see important bits highlighted"

"Its hard to find exactly what you need in all the text"

Despite praise for the current organisation of the contents, providers readily gave suggestions for improvement within each section of the Handbook. Most common among suggestions was that 'catch-up' should be a separate 'section' rather than a subsection. This suggestion is indicative of practical situations that providers are experiencing with the number of changes that have occurred in immunisation in recent years.

"It's what we use most often – the reminder has to be there but we don't use it as often"

"Catch-up needs to be the first thing you get to"

Neither GPs or community providers used Part Two of the Handbook often. The community providers involved in the research did not administer travel vaccinations, and this sub section was not considered as specific enough for everyday use by GPs. Those who have the patient base to administer a number of travel vaccinations tend to subscribe to MASTA or have access to the resource through other sources such as their local pathology lab. This resource is seen as providing direct answers to specific questions. In contrast, the travel vaccination of the Handbook was perceived to be general and more for background information. Those that praised this sub section believed it should continue to be included in the Handbook for this reason, and in case it was needed by those without access to resources such as MASTA.

Both GPs and community providers felt it would be useful to list out the groups that are included in the subsection 'Groups With Special Vaccination Requirements'. Many were unsure of exactly what the groups with special need would be, *"I wouldn't have known immigrants would be under that section".* It was thought that having a separate section for premature babies would assist, particularly when dealing with parents, perhaps as a group with special requirements.

Currently information for this group is scattered throughout a number of sections of the Handbook.

Part Three of the Handbook is used more by community providers than GPs. This group suggested that it would be beneficial to highlight or make a break out section within each disease of the 'practical' information. This could be placed at the front or back of each disease and make the more frequently used information more accessible in everyday use.

Suggested information to include in this highlighted section in each disease consisted of:

- age;
- contraindications and adverse reactions;
- dosage and administration practice;
- use in pregnancy;
- allergies; and
- catch-up information.

Due to their greater use of the Handbook, community providers were able to provide some highly specific comments on the content. Many observed that now a number of vaccines are combined; listing all by disease can mean having to look up each disease for the one vaccine. The prime example given was when finding information on the MMR vaccine, it was necessary to read relevant sections under measles, mumps and rubella.

However when asked for suggestions to improve this, opinions were polarised. While most could see that there could be a separate section for the more common diseases and vaccines, particularly those on the current schedule, it was debated whether this would take away from the ease of use of the diseases being listed alphabetically. Community providers would ideally prefer if detailed information on common combined vaccines could be included without sacrificing the current organisation to any great extent.

A number of community providers suggested that, at times, there was a lack of consistency between sections when the Handbook is updated. This led to the perception that the Handbook can appear to give contradictory information.

Specific examples provided through the research included:

- 'Commonly asked questions' section being placed up front rather than in the appendix.
- page 45: Table reference 10 OPV / IPV was updated to indicate '1 month' between doses 3 and 4. However written information on page 52 still refers to 3 doses;
- page 211 (new addition) referring to minimal interval for dTpa and page 305 contradict each other; and
- Page 51 (Hep B catch-up) and Page 149 (Hep B) seem to suggest different doses.

6.6 Perceptions of Changes to the 8th Edition

The research reviewed providers' awareness, use and perceptions of usefulness of the changes that were made to the 8th edition of the Handbook. All providers noted it was the 'practical' inclusions to the 8th edition that were the most noticed, most used and thought to be the most useful changes. These changes were:

- inclusion of injection technique with new photographs demonstrating intramuscular (IM) and subcutaneous (SC) injections (especially useful for community providers);
- update of the risk / benefit table on the back cover of the Handbook 'Comparison of effects of vaccines and diseases';
- revision of 'Common adverse reactions and what to do about them' table; and
- inclusion of the chapter on groups with special risks (seen as useful, but not often noticed or used).

These changes to the 8th edition reinforce the need for the Handbook to include and highlight information that may be considered as more 'practical' in future editions.

6.7 Criticism of Current Content

The greatest criticism is that the Handbook is perceived as going quickly out of date. The large number of changes in immunisations over the past few years, particularly to the childhood immunisation schedule, has resulted in the latest edition of the Handbook being seen as more quickly out of date than previous editions.

In turn, reliance on other sources that provide regular updates as a matter of course has increased. While it is recognised that these sources provide regular and reliable information, providers would also like to have changes provided for the Handbook as it is what they perceive to be the primary reference for information on immunisation. This was particularly important for community providers who relied on the Handbook for additional authority when reassuring or persuading parents in decisions on immunisation. Including changes in the Handbook was seen as making them 'more official'.

> *"It just makes it that bit more official"*
>
> *"Confirms it"*

Some community providers currently photocopy updates, make them the appropriate size, then cut and paste the updates into the hardcopy of the Handbook to replace sections with updates. Consideration should be given to developing materials conducive to updates being incorporated with more ease. Ideally, community providers would like to receive updates that are easily incorporated into the existing Handbook in a manner that maintains the professional and official look and feel of the resource.

Regarding updates, providers also questioned the timing of information provided by the Department. It was felt that changes are more efficiently communicated when done through the local/state organisation than the Department. A number of community providers felt that there was room for improvement in how changes and updates in immunisation were communicated from different levels of government.

It was suggested that a more efficient method could be devised in highlighting changes to immunisation providers. This could be as simple as updates occurring on a regular basis, for example every three or six months. Providers would have an expectation of when they may be notified of changes, or alternatively, that no changes have occurred.

6.8 Visual Appeal

The handbook is seen as having a good balance between text and visuals. Most of the visuals used are considered necessary where they are currently placed, with photographs and diagrams of administering vaccinations seen as particularly practical and useful.

Maintaining the current balance between text and visuals is seen as important as the focus is still on the book being perceived as serious and highly credible. To achieve this, photographs should not be used gratuitously. The map of outer islands of the Torres Strait was provided as an example of an unneeded visual. In addition, some of the tables were criticised for being unclear and unhelpful as it was not possible to make comparisons.

Different diseases and vaccines were shown in different tabulated format. Ideally it was thought that, where possible, tables should be all on one page, and separated by key criteria. Further, tables should be done in a consistent manner where content is similar.

6.9 Distribution

There were very few issues with distribution of the Handbook. The majority of providers claimed they received as many copies as they need. Few of those participating in the research were directly involved in the ordering process. Many GPs were unclear of how, when or from whom they received the Handbook, suggesting that it was likely to be the practice administrative staff that ordered it.

Similarly, many community providers were unsure of the sourcing arrangement and assumed that they were provided through the Area Health Service (NSW), Department of Human Services (DHS) or local councils (Vic) and Queensland Health (Qld). Some community providers involved in administration or management roles commented that they had found it difficult to obtain more copies of the Handbook when needed over the years, or if insufficient copies had originally arrived. There was some impression of suppliers being reluctant to send more out. Most commented that their preference was to order directly from the source of the publication, rather than have to go through local/ state organisations as this could increase delays.

7 SUGGESTIONS FOR FUTURE EDITIONS OF THE HANDBOOK

7.1 Content

In optimising usability of future editions of the Handbook, the challenge will be in striking a balance between the resource's dual roles - as the primary reference book on immunisation in Australia and being a practical resource relevant for everyday use. Although the reference information is not used on a frequent, regular basis, it adds credibility and 'weight' to the book, particularly when using it as an authoritative source in dealings with patients and parents. And while the practical information is used more often, it can be lost within the reference information.

A solution may be to offer greater guidance to the more practical information. A number of methods of achieving this were suggested within the research:

- highlighting the practical information in the body of the book as well as in the index, in a similar manner as community providers currently do themselves;
- providing easier access to it, such as colour-coded in-built tags, as was suggested by almost every community provider; and
- offering the practical information in a section before the more reference-based information, to avoid having to spend time reading through heavy text.

The primary issue in terms of content was updates and how best to receive them. Opinions varied, with each provider suggesting their preferred communication method. The ideal would be to present a choice of email, fax, or post to providers.

The key factor is that updates are consistent and timely. Ideally, the updates should be received by all immunisation providers at a dedicated time period, for example, every six months or every quarter. Providers would then have an expectation that they would be notified of any changes that have recently occurred.

This process will be most effective if updates of changes are released by the same source. This will avoid any inconsistency or confusion that may occur when immunisation providers are receiving information from relevant Federal, State and Local government bodies.

7.2 Hardcopy Version

The debate that has occurred in previous research of changing the format from a book to a ring binder to incorporate updates more easily was again raised. While a ring binder would offer the opportunity to file easily-referenced updates in the appropriate sections, it was believed to be not as portable or durable as the book format.

As well as being considered more durable, portable and easy to handle, the current production values of the Handbook are seen as professional and enhance the Handbook as a serious and authoritative source. What it does not currently offer is the ability to incorporate updates in a manner that maintains the professional format. Immunisation providers found it difficult to suggest an acceptable solution. The compromise suggested was to maintain the book format, but incorporate 'sleeves' for inserting updates that are published specifically to be compatible to the Handbook in size and format.

7.3 Online Version

Online does potentially offer a solution to regularly updating the Handbook as changes occur. However, this would only be possible with GPs, as currently, community providers simply do not have the access to computers which would be necessary to use the online format of the Handbook on an ongoing basis.

Internet penetration of GP practice is increasing, however if the Handbook in online format is to be used by GPs, they will need a unique reason to visit the website. The research identified two areas that could be developed further that will encourage use of the online format.

Firstly, changes should be incorporated within the main body of the online version of the Handbook. Many providers currently hold the expectation that the website will always be up to date, and not have separate sections that need to be referred to for changes. As articulated by one GP,

> *"The online version is redundant unless it is kept continuously updated. You need to be able to do a search and know that you are getting the most up to date information"*

The second area of development that will encourage online use is by the development and promotion of the practical tools such as the catch-up calculator. GPs are looking for resources that provide decision support, and while many of them have only recently begun using resources such as prescription writing software, this format is likely to continue to grow within normal GP practice. Developing and promoting a tool such as the catch-up calculator will enhance the value of the website for GPs. The quotes below illustrate GPs views on what is needed to make the website more relevant and useful.

> *"The online version would be much more useful if you could type in a scenario (child's age, immunisation history and state) and it gives you the answer"*

> *"If this was available, this would push more GPs to use online"*

The calculator was seen as a genuinely useful tool, as it has relevancy to their work in the area of immunisation where they are increasingly having to face catch-up situations. It was also acknowledged that a tool like this was only really valuable online. To ensure relevancy, the catch-up calculator would ideally be relevant Australia wide and could take into account both inter-state and some international schedules.

APPENDICES

A RECRUITMENT SCREENER

RECRUITMENT SCREENER FOR IMMUNISATION HANDBOOK

Times and dates are to be allotted as per the accompanying document.

Please use own questions to determine the following:
- practice type (size and location);
- genders; and
- levels of computerisation and Internet access within practice.

Ensure a mix in each group, and a mix across number of in-depth interviews.

GP

Q1. Do you administer immunisations to your patients? This could be childhood vaccines, flu vaccines or travel vaccines? (Note: If GP says a practice nurse administers vaccines, then it is a no)

1. Yes ....CONTINUE
2. No...TERMINATE

Q2. How long have you been in general practice?

1. Less than 15 years ....(CONTINUE FOR GROUP 8, INT 7, 11)
2. Greater than 15 years....................(CONTINUE FOR GROUPS 5 & 9, INT 8 & 12)

NOTE: Group 10 and Interview 9 can be a mix of length in practice.

Q3. Thinking broadly about your patients, which of the following best describes the average level of income and occupations (their socio- economic status (MAY BE A MULTIPLE RESPONSE, USE MAIN GROUPING FOR SPECIFIED GROUPS)

1. Low/ medium ....(CONTINUE FOR GROUP 5, 9)
2. Medium ....(CONTINUE FOR GROUP 5, 9)
3. Medium to High ....(CONTINUE FOR GROUP 8)

NOTE: FOR GROUP 10 AND INT 7, 8,9 & 11 A MIX OF THE ABOVE IS REQUIRED. CONTINUE FOR ALL.

Q4. And thinking about the average family life of your patients, which best describes your general client base….

1. Young singles/ couples ....(CONTINUE FOR GROUP 10)
2. Young families ....(CONTINUE FOR GROUP 5, 6, 9)
3. Older families ....(CONTINUE FOR GROUP 9)
4. Older people/ retirees ....(CONTINUE FOR GROUP 6, 10)

NOTE: FOR INT 7, 8, 9, 11, 12, A MIX OF THE ABOVE IS REQUIRED.
INVITE ALONG TO APPROPRIATE GROUP/ INT. All who administer immunisation should qualify to something. Remember to ask for them to…

"**Please bring along the resource that you most commonly use when referencing immunisation, for example, it may be the Handbook or another publication. If it is online, please come prepared to discuss.**"

Community Providers

Q1. Are you an approved immunisation nurse/ doctor? This could be childhood vaccines, flu vaccines or travel vaccines?

1. Yes..(CONTINUE FOR ALL)
2. No ....TERMINATE

Q2. When administering immunisations, is it generally on behalf of a community health provider (can be health centres, local councils, state governments) or a private practice?

1. Community health provider ....(CONTINUE FOR ALL)
2. Private practice..............................TERMINATE

Q3. Thinking broadly about your patients, which of the following best describes the average level of income and occupations (their socio- economic status)… (MAY ANSWER MORE THAN ONE)

1. Low/ medium
2. Medium
3. Medium to High

NOTE: PLEASE ENSURE A MIX OF INCOME RANGES ARE REPRESENTED ACROSS GROUPS AND IN-DEPTHS. MAY BE THAT GROUPS/ INTERVIEWS IN COUNTRY AREAS SKEW TO LOWER SES – IS OK.

Q4. And thinking about the average family life of your patients, which best describes your general client base….

1. Young singles/couples
2. Young families
3. Older families
4. Older people/ retirees

NOTE: PLEASE ENSURE A MIX IS REPRESENTED. RESPONSES SHOULD MAINLY BE YOUNG FAMILIES (MAYBE SOME OLDER), SO OK IF OTHER CATEGORIES NOT HIGH IN REPRESENTATIONS.
INVITE ALONG TO APPROPRIATE GROUP/ INT. All who administer immunisation should qualify for something.

"**Please bring along the resource that you most commonly use when referencing immunisation, for example, it may be the Handbook or another publication. If it is online, please come prepared to discuss.**"

B DISCUSSION GUIDES

IMMUNISATION DISCUSSION GUIDE

1. Introduction

- Recap on topic and scope of the discussion or interview, assurances of anonymity; agreement to recording, commissioned by Department of Health and Ageing
- General patient profile; immunisation profile; how big a part does immunisation represent? What types of immunisation do they offer? What material did they bring as their preferred reference for immunisation? (Do not discuss yet – will later)

2. Current Use of Immunisation Handbook

- Respondents to fill out self-complete questionnaire…(collect sheets at end of section)
  - level of use of all formats; preferred format
  - any changes in level of use in the past year or so
  - reasons for any change
  - rating of satisfaction with usefulness of the contents of the Handbook
  - rating of ease of use overall
- Where is the hardcopy handbook normally kept? The CD Rom? Does the participant have **access** to the internet in their workplace? Have they used it to access the Handbook online? Ask for preferences on formats if not covered yet.
- When were the last three occasions reference was made to the Handbook? (Want to identify the practical occasions where it is used). Identify if other than Hardcopy format is used.

3. Place of Handbook

- What about other immunisation reference material (refer to others that may have been brought in or ask what other material may be used?) –Schedule, Strive for 5, Myths & Realities; PI: Understanding Childhood Immunisation,
  - NOTE: Other materials include: State or Territory department produced material (an example of this is the Victorian Government Guidelines for immunisation practice in local government); drug company produced material, international material from WHO.

- How do these other resources compare to the Handbook?
    - differences in use?
    - reasons for preferences? Why?
    - complementary?
- What about keeping up to date? How does the Handbook compare in terms of keeping up to date compared to these other resources?
- What about in general? How do they find how the Handbook is kept up to date in response to new research or initiatives? How does it happen? Do they trust it? Are they comfortable with it?

4. Layout, attributes, organisation of Handbook

(Begin groups with Hardcopy) – do in-depths with preferred version . If in an office with Internet and online is their preferred version, take through the online version.

- Explore perceptions of attributes of the hardcopy of the Handbook including design (physical, not contents):
    - appeal, weight, size, thickness, paper weight, durability, portability, tactile impression (quality), size of the print inside
    - title / authority (clarity of branding)/ reaction to NHMRC branding? What about if it was changed to ATAGI only, instead of NHMRC and ATAGI? (Australian Technical Advisory Group on Immunisation)
- Provide a scenario for respondents to test the organisation of the publication (and their use of it. For in-depths choose relevant format). Choose a relevant scenario for patient group. Use cards to show scenarios
    - observe use of and get to explain how they find the information – in depths get to take through as they are doing it – in groups recap after.

- Organisation of contents (For in depths use preferred format – for groups use hardcopy but ask for comments from those who have used CD Rom and Online version same questions)
  - satisfaction with the current organisation?
  - any improvements that could be made/ preferences for change in organisation or order of contents?
  - is it well enough signposted?
  - any other issues with access to its organisation?
  - sum up overall perceptions and order any priorities for change that have been stated?

RECAP FOR CD ROM and ONLINE IF NECESSARY (IE. HAVE USERS) IN A GROUP.
GO OVER OTHER FORMATS BASED ON USERS KNOWLEDGE IN DEPTHS.

- Changing Organisation?
  - turn to table of contents pages and ask to rank sections broadly in order of importance. Explain that it is to identify what parts would/ could be reduced/ expanded if necessary?
  - how would this help practically? Ask for examples?
- Preferences for style and format
  - are there sufficient images and charts? Are they clear? Do they effectively communicate the necessary information?

5. Reactions to change made to 8th edition

- What changes have been made since the 7th edition? Explore spontaneous responses. (HAND OUT SHEET 2) – Get them to complete and then discuss
- Prompt any reaction to the actual changes? (Ask perceptions of change in appearance - white cover with blue writing)
- Were they noticed?
- Are they used (content changes)?

6. **Suggestions for future inclusions**

- What should future editions have in it?
- Why?
- What about updating the format and content? What is the preference (may be covered earlier)?
- What initiatives, if any, need to be taken with immunisation providers to encourage them to keep up-to-date with changes to the Handbook's content via the online version?

7. **Distribution**

- What is the normal method of distribution of the new handbook? Is this satisfactory?
- Are there any preferences across the modes of distribution? Eg. From State or Territory Department, Divisions of General Practice, direct mail out from the Commonwealth, request at Infoline/ website?
- Are they satisfied with the timing within which it arrives, timing of any updates and timing of new editions? Areas of improvement?

8. **Format Comparison**

- Recap if necessary on usage of the other formats – who uses?.
- SHOW CD ROM BRIEFLY, AND IF INTERNET AVAILABLE USE INTERNET CONNECTION TO SHOW VERSION.
- Ask participants if they have any examples of other health/medical resources that they find useful and user friendly online?
- Identify preferences of formats and ask for
  - benefits of each – actual/ perceived?
  - advantages/ disadvantages of each – actual/ perceived?
  - strengths and weaknesses in regard to each other – actual / perceived?

(NOTE: Some of this may be already covered earlier in guide).

Thank and close

C SCENARIOS FOR TESTING USE OF THE HANDBOOK

<u>Scenarios for handbook market research</u>

Category: Young Family 1. (a) A young child aged 18 month olds is brought in by his mother for vaccination. She tells you he missed his injections at 12 months of age as he was unwell at the time. He has since been in perfect health and you need to advise about which vaccine/s should be given today. (b) In what site should vaccine be administered in a child of this age? Upper arm or upper leg? (c) The child's mother is 3 months pregnant. She has heard that MMR is a live vaccine and is concerned that she might catch rubella from the child after vaccination. How would you respond?	**Catch-up vaccination p43-45, and p281.** **p11-12 or page 149, page 281,** **Appendix 4, "Commonly asked questions about vaccination, p308**
Category: Young Family 2. If the child in 1(c).has egg allergy, can MMR be given?	**Measles chapter (p188 and p190)**
Category: Vaccine Management **3.** You are planning to do an immunisation clinic away from the surgery/clinic. How long should ice packs be "sweated" for prior to packing the insulated container for transport?	**Part 1.10 p61.**
Category: Young Family 4. After giving a vaccine to a 4 year old, he/she develops signs of anaphylaxis. Where would you look for dosage of adrenaline?	**Inside back cover and p32**
Category: Young Family 5. A 6 month old baby has been in contact with measles 5 days ago. What advice would you offer? How would you go about checking dosage?	**Measles chapter, immunoglobulin, p190-191.**
Category: Special Risk Group + Older person 6. A 67 year old male presents before going on holiday on a cruise ship to Thailand. He has a history of diabetes and IHD. What vaccinations would you suggest?	**Part 2.2, Vaccination for International Travel, p77** **Part 2.3 Groups with special vaccination requirements p93.**
Category: Adult 7. A 26 year old female childcare worker has had a blood test to see if she is immune to rubella. She is planning a family herself very soon, but is currently not pregnant. If she has MMR vaccine, how long should she wait before she becomes pregnant?	**Rubella chapter p254**
Category: Special Risk Group 8. A 4 year old child from South East Asia arrives in Australia as a refugee. He has an uncertain vaccination history. What vaccinations should be given and when (assuming he is otherwise well)?	**Catch-up vaccination** **Part 1.9, p42 and p103.**
Category: Older person 9. A 71 year old woman was gardening yesterday and cut her arm with a scythe. What should you recommend regarding the risk of tetanus infection?	**Part 3.24 Tetanus. P264-267.**

D USING THIS RESEARCH

It is important that clients should be aware of the limitations of qualitative and quantitative research.

Qualitative Research

Qualitative research deals with relatively small numbers of group participants and attempts to explore in–depth motivations, attitudes and feelings. This places a considerable interpretative burden on the researcher. For example, often what group participants do not say is as important as what they do. Similarly, body language and tone of voice can be important contributors to understanding group participants' deeper feelings.

Client should therefore recognise:

- that despite the efforts made in recruitment, group participants may not always be totally representative of the target audience concerned
- that findings are interpretative in nature, based on the experience and expertise of the researchers concerned

Quantitative Research

Even though quantitative research typically deals with larger numbers of group participants, users of survey results should be conscious of the limitations of all sample survey techniques.

Sampling techniques, the level of refusals, and problems with non-contacts all impact on the statistical reliability that can be attached to results.

Similarly quantitative research is often limited in the number of variables it covers, with important variables beyond the scope of the survey.

Hence the results of sample surveys are usually best treated as a means of looking at the relative merits of different approaches as opposed to absolute measures of expected outcomes.

The Role of Researcher and Client

Blue Moon believes that the researchers' task is not only to present the findings of the research but also to utilise our experience and expertise to interpret these findings for clients and to make our recommendations (based on that interpretation and our knowledge of the market) as to what we believe to be the optimum actions to be taken in the circumstances: indeed this is what we believe clients seek when they hire our services. Such interpretations and recommendations are presented in good faith, but we make no claim to be infallible.

Clients should, therefore, review the findings and recommendations in the light of their own experience and knowledge of the market and base their actions accordingly.