National Prescribing Service Limited

National Prescribing Service Stakeholder Forum

19 June 2008, Sydney

Report on Proceedings

General practice clinical data and quality prescribing

Islands of information in an ocean of opportunity

Video and PowerPoint presentations from the Stakeholder Forum

are available at: www.nps.org.au/all_events.

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1. Introduction

The National Prescribing Service (NPS) held a Stakeholder Forum: *General practice clinical data and quality prescribing - Islands of information in an ocean of opportunity* on 19 June 2008 in Sydney. The goal of this forum was to find ways to improve access to and use of general practice clinical data for quality improvement, to support and promote quality prescribing, and ultimately to improve health outcomes. Stakeholders were invited to share their experiences and challenges in this area, and to consider ways in which we might move forward.

Computerisation of general practice and the increasing use of coded clinical data have created an opportunity to use this data for a range of purposes, both primary and secondary. The focus of this forum was on primary use of this data for quality improvement in general practice, particularly prescribing. There are also other uses of this data that relate to the quality use of medicines (QUM), for example pharmacovigilance.

While potentially very useful for a range of purposes, there are significant challenges in accessing and using general practice clinical data, including the following: sophisticated searching and reporting functionality in software is required; legal and technical issues must be overcome (particularly in relation to dedicated data extraction and reporting tools); clinical indicators must be valid, reliable, and technically feasible to extract from software; issues associated with the quality of clinical data need to be addressed; and privacy principles relating to access, use and storage of patient data must be adhered to.

The objectives of the forum were to:

- discuss the use of clinical data for quality improvement and patient care
- identify barriers to access and use of the data
- increase understanding of searching and reporting functionality in clinical software and the benefits and shortcomings associated with this aspect of clinical software
- increase understanding of third-party data extraction tools currently being used in Australia, including some of the technical issues associated with accessing data and the benefits and shortcomings associated with using these tools
- explore issues associated with the quality of clinical data in general practice clinical software
- identify activities or programs where data extraction is being used; ‘map’ activities nationally and provide opportunities to link work and build relationships
- summarise the proceedings and make recommendations for vendors and policy makers.

The forum included presentations on the current situation in Australia in this area, what’s been achieved in the United Kingdom (UK) and how it was achieved, and provided perspectives from the National Prescribing Service, the Department of Health and Ageing, the Medical Software Industry Association and software vendors. The program and list of delegates are shown in the Appendices.

2. Current situation

2.1. In Australia

Computerisation and use of software in general practice

There is a high rate of computerisation in general practice. General practitioners (GPs) routinely use computers for prescribing and ordering pathology tests; recording progress notes and use of full electronic health records is not as widespread but is increasing. Computerisation in general practice has been achieved largely as a result of Government incentives over the last decade.

There are approximately 20 general practice clinical software systems available in Australia, with variable functionality. There are no standards or accreditation processes for these systems. They have different clinical record data structures, and use a range of disease and medicine coding terminologies, making it difficult to share and compare data across systems.

Most of these systems include some data extraction and reporting functionality, which varies in sophistication, flexibility and usability; even the best of these has limitations and could not search on some indicators when tested (by the NPS).

As a result, a number of dedicated data extraction and reporting tools have been developed (eg. Canning Data Extraction Tool and Pen Clinical Audit Tool, both demonstrated at the forum). They have been taken up by some practices and have generally received positive feedback from users, as well as support from some GP Divisions. Precise uptake and use amongst GPs is not known. While these tools are user-friendly and provide a useful means for GPs to evaluate their data, there are challenges in incorporating clinical indicators into the tools.

The market leading clinical software product is subsidised by pharmaceutical advertising. This has made it difficult for competitors to develop and innovate their products when it is believed many GPs are not willing to pay more for high quality software without advertising.

While general practice is highly computerised, most hospitals and specialists are not using e-prescribing or electronic health records (EHRs) yet.

Representatives from various organisations described the following projects and related initiatives.

Projects and initiatives

National Primary Care Collaboratives

The National Primary Care Collaboratives (NPCC) program (2004-7) showed that it is possible to engage GPs in the process of improving and using their clinical data for quality improvement. In addition to improved patient care, the program also made possible more efficient and sustainable practice, and provided GPs with a greater sense of professionalism. Key contributors to success included regular feedback to GPs, the ability for GPs to identify patients where intervention was required and provide relevant information to these patients, the multidisciplinary approach taken (including clinicians, practice managers and practice nurses), and the provision of training opportunities and sharing of knowledge. Nominal payments were made.

This program has been continued and expanded with the establishment of the Improvement Foundation, which will deliver the second phase of the program known as the Australian Primary Care Collaboratives (APCC). This program has been funded by the federal government for a further three years.

National Prescribing Service and the Australian General Practice Network

The NPS is working with the Australian General Practice Network (AGPN) on a project to incorporate the NPS clinical prescribing indicators into two dedicated (third party) data extraction and reporting tools. These tools will be evaluated in general practices around Australia.

National e-Health Transition Authority

The National e-Health Transition Authority (NEHTA) is developing unique health provider and patient identifiers as well as medicines[1] and clinical terminologies, which will support many of the initiatives discussed at the Forum. Participants expressed frustration at the slow pace of development of this work, some of which is an essential prerequisite for ongoing development in this area.

Royal Australian College of General Practitioners

The Royal Australian College of General Practitioners (RACGP) offers a new Category 1 QA&CPD activity related to ongoing NPCC-type activities by GPs, Rapid 'Plan, Do Study, Act' (PDSA) cycle (40 points). The RACGP is also developing a new strategy around the use of data for quality improvement, tentatively known as "Using information wisely". The next round of RACGP Standards may include new clinical/ outcome indicators.

Medical Software Industry Association

The Medical Software Industry Association (MSIA) has submitted a proposal to the Department of Health and Ageing with a plan to map the data in all GP clinical systems to a common clinical record data structure known as a Template Data Document. This would facilitate sharing of data and interoperability between systems.

Department of Health and Ageing

The Department of Health and Ageing (DoHA) has a number of programs under consideration or in progress which are relevant. These include ePrescribing (electronic transmission of prescriptions), the National Primary Health Care Strategy, and development of a National e-Health Strategy.

The Department has funded GP Victoria to study the implementation issues experienced by general practice in their use of data extraction and analysis tools. GP Victoria will produce a best practice resource for practices and Divisions to use in early 2009.

The Australian Institute of Health & Welfare (AIHW) is undertaking a project looking at data collection in primary care. It will consider quality and breadth of data items collected, and usefulness of data for meeting information needs of various stakeholders. It will also review methods for the electronic collection of general practice data.

[1] NEHTA has stated that the Australian Medicines Terminology currently includes all PBS *medicine* products. By end of Oct 2008 it will include *all* PBS products (incl foods, dressings etc). Thereafter, an update will be released monthly, and will include new PBS items. Current work involves adding all registered medicines, with the aim to have 99% of prescribable items on the AMT by March 2009.

A review of e-health activities in the States & Territories is currently in progress and a report will be made to the Council of Australian Governments (COAG) later this year.

Record linkage tool – GRHANITE™ (University of Melbourne)

Record linkage has much potential but is currently limited in Australia (eg. the Western Australian Data Linkage project). A generic data extraction tool (GRHANITE™, University of Melbourne, demonstrated at the forum) that is currently being trialled offers a means of linking records with security and consent mechanisms that permit data linkage in an ethical way.

2.2. In the United Kingdom

In UK general practice there is almost 100% computerisation, with 70% of practices paper-free. Computerisation began more than 20 years ago when free computers were provided to GPs in exchange for access to coded clinical data for research, thus there is a culture of recording and using coded data.

In contrast to Australia, a national approach has been taken within the NHS to encourage GPs to enter accurate data to improve patient care, to make their practices more efficient, and to enable health records to be shared across the health system. This has taken place via a process of negotiation and clinician engagement over a number of years.

There are a number of incentive schemes for GPs, including the Quality Outcomes Framework (QOF), the IM&T Directed Enhanced Service (DES) and local schemes to improve prescribing run by Primary Care Trusts. The QOF offers payment for performance (128 indicators [80 clinical, 48 non-clinical] totalling a maximum achievable 1000 points), and over 90% of practices have achieved the maximum annual payment (vs 70% expected). The IM&T DES scheme offers payment to practices to produce good quality data ie. data fit for sharing. Practices must be accredited under this scheme to upload information to the national NHS "spine" which contains summary care records that can be accessed throughout the NHS. These programs have been aided in no small part by the availability and use of national clinical and medicines coding terminologies across all systems.

Clinical software systems must be accredited ("GP Systems of Choice") to meet various specifications and functions, this has been introduced using a step-wise approach over time. National data extraction software is available to practices.

Information Management and Technology (IM&T) education and training of GPs and their staff has been undertaken through a comprehensive, nationally funded program known as PRIMIS+.

An IT Code of Conduct has been developed to address privacy concerns.

3. Barriers to more widespread use of clinical data extraction and reporting

Lack of a national approach

The main barrier and one that was mentioned by several participants is the lack of a national approach to the extraction and use of general practice clinical data. A number of initiatives have been undertaken successfully in different areas however overall the use of clinical data for quality improvement amongst GPs is variable and incomplete.

Poor quality data with little incentive to improve

There are few incentives for GPs to improve the accuracy and completeness of data entry, which is likely to take extra time during consultations. Widespread behavioural change will require incentives and a change in culture.

IM&T education and training

There is no funding or a coordinated approach to IM&T education and training for GPs and their practice staff.

Software and technical issues

There are no standards or an accreditation process for general practice clinical software. There are difficulties in sharing and comparing data as the systems have different clinical record data structures and use different disease and medicine coding terminologies.

Native search/report functionality in these systems is limited.

The software marketplace is distorted by pharmaceutical advertisements subsidising the leading product.

The dedicated (third party) data extraction and reporting tools are useful but development of indicators is complex and time-consuming. There are no standards or an accreditation process for these tools.

Privacy and security concerns

This was not discussed in detail but it was acknowledged that there are significant privacy and security concerns which will need to be addressed.[2]

Potential legal/copyright issues

There are potential legal/copyright issues with third party data extraction and reporting tools accessing data in clinical software systems. Vendors should be aware of these issues when developing such tools.

[2] NEHTA is addressing this issue and released the *Privacy Blueprint for the Individual Electronic Health Record* for comment in July 2008.

4. Recommendations and key points

The following recommendations and key points were made by participants at the forum.

1. A command authority at a central level is necessary to guide the development and provide oversight for initiatives 2 to 7 below.
2. Incentives are required for general practice to encourage recording of good quality coded clinical data, with consideration given to the balance between financial incentives and improving professionalism. The clinical/outcome indicators used for measurement must be based on clinical evidence and must be able to be measured objectively by a computer.
3. Standards and an accreditation system are required for general practice clinical software systems. This could occur as a staged process, starting with accreditation for features that are identified as having a high priority. It is recognised that the software is complex and that development and improvement takes time and resources.
4. Specifications and/or standards for clinical data structure are required to enable sharing of data between systems and interoperability (this may be addressed by the proposed MSIA Interoperability project). For this initiative to be effective, it is necessary for all vendors of clinical software systems to participate.
5. Access to national clinical and medicines terminologies, and unique healthcare providers and patient identifiers, would greatly enhance progress in this area. These are in development by NEHTA, but participants expressed frustration at the slow rate of progress on these projects.
6. A nationally coordinated and funded IM&T training program should be implemented for GPs and their staff, particularly practice nurses who are becoming increasingly involved in managing clinical data.
7. A privacy and security framework is required to address concerns associated with sharing of health record data; will require consultation, new legislation, etc. (NEHTA is addressing some but not all of this).
8. General practice organisations need to lead the way to facilitate changes in culture and behaviour in general practice, in relation to the value of recording and using accurate coded clinical data. GP champions were crucial to achieve this in the UK.
9. Valuable feedback on prescribing could be provided to GPs using linked MBS and PBS data; not all data needs to come from the GP desktop.

5. What NPS will do

5.1. NPS current activities

The following activities are currently being undertaken by NPS and contribute to some of the recommendations made above.

1. NPS is working in partnership with AGPN to develop a quality improvement activity for general practices to extract clinical data from software and compare their own prescribing data with best practice standards. This project is a quality improvement trial which incorporates a formal evaluation. The outcomes will be used to develop innovative quality use of medicine interventions that will be offered to all Divisions across Australia.
2. NPS and the Improvement Foundation have an in-principle agreement to work together on clinical indicators and how they are measured by dedicated data extraction and reporting tools. There are potential efficiencies to be gained by stakeholders collaborating to develop specifications for these tools, for example agreement on diagnosis codes for extraction of clinical data and fields accessed by extraction tools, and development of consistent user interfaces and consistent report formats for users.
3. NPS is completing a study to assess the *Safety, quality and usefulness of general practice prescribing software*. Some of the features identified in the study relate to access and use of clinical data. General practice prescribing systems used in Australia have been evaluated for the presence of these features. The results of the study will be promoted to vendors, key stakeholders and Government with the aim of improving the software used by GPs.
4. As a member of NEHTA Medicines Reference Group, NPS is contributing to the development of clinical and medicines terminologies for the Australian setting.

5.2. Next steps

The Stakeholder Forum Report is being distributed to delegates and stakeholders. Feedback on the report and the key recommendations is invited. Once we have received feedback from stakeholders, NPS will consult with the Department of Health and Ageing to identify ways to progress the recommendations in this report.

6. Conclusion

It was agreed that there are a range of benefits to be gained for both consumers and clinicians by improving the quality, access to and use of clinical data in general practice, including more efficient and effective provision of healthcare.

While the technical capability for data extraction and reporting is largely available, there are significant barriers to more widespread use of general practice clinical data including behaviour change in general practice, financial costs and inconsistent coding terminologies. The commercial environment is also a challenge in the absence of clinical software standards.

Moving forward will require commitment from Government, industry, health professionals and consumers. A command authority at a national level is required to coordinate activities and provide adequate resources for development of relevant standards, provision of incentives and training for general practice, and development of a privacy and security framework. Any initiatives to enhance data quality and extraction in primary care need to fit in with broader national e-health initiatives.

Appendix 1. Program

General practice clinical data and quality prescribing ***Islands of information in an ocean of opportunity*** The American Club, Sydney—19 June 2008			
Time	**Session**	**Presenter/s**	**Details**
9:00am	***Registration***	***Tea and coffee on arrival***	
9.25am	**Welcome to country**		
9.30am	**Welcome** Overview and objectives of the forum	**Dr Lynn Weekes** CEO, National Prescribing Service Ltd (NPS)	Purpose of stakeholder forum NPS interest in the area Objectives of the day
9.40am	**SESSION 1 – KEYNOTE PRESENTATIONS** Chair: Dr Janette Randall, Chair, NPS		
9.45am	**Keynote address 1:** Using clinical indicators in Australian general practice to improve quality of prescribing	**Dr Tony Lembke** General Practitioner & Clinical Director, Australian Primary Care Collaboratives	Current situation in general practice in Australia - use of electronic health records; data quality; data extraction. What are we aiming for? How can we address the barriers? APCC/NPCC experience
10.05am	**Keynote address 2:** Use of clinical indicators in the United Kingdom to improve quality of prescribing	**Dr Gillian Braunold** General Practitioner & Clinical Director, NHS Connecting for Health	UK experience – general practice, use of EHRs, GP software Use of primary care clinical data; data extraction tools, NHS central spine Challenges/barriers in getting to the current situation, and how addressed. GP incentives.
10.45am	Q&A		
11.00am	***Morning tea***		
	SESSION 2 – NPS PERSPECTIVE & CASE STUDIES Chair: Dr Janette Randall, Chair, NPS		
11.20am	Implementing indicators of quality prescribing in the current environment	**Dr James Reeve** Pharmaceutical Decision Support Program Manager, NPS	Brief history/overview of general practice software environment in Aust, incl native data extraction tools Quality of clinical data, GPRN dataset NPS activities and QUM indicators
11.40am	Challenges of searching and reporting on clinical data – the Canning Tool	**Mr Ian Peters** Software Developer, Canning Division of General Practice	Why use a 3rd party data extraction tool? Technical and privacy issues associated with accessing clinical data. Emerging standards and issues around interoperability GP use of Canning tool, feedback from users

Time	Session	Presenter/s	Details
11.55am	The Lion, The Witch and the Wardrobe….or was that The Ferret, the CAT, and the Kitty	**Mr John Johnston** Director, Pen Computer Systems	Why use a 3rd party data extraction tool? Technical, legal and privacy issues associated with accessing clinical data. Emerging standards and issues around interoperability GP use of PCS tool, feedback from users
12.10pm	A novel data extraction tool - GRHANITE™	**Dr Douglas Boyle** Senior Research Fellow, University of Melbourne	Overview of GRHANITE software How does GRHANITE address privacy and security Legal/copyright issues Current and potential use of GRHANITE for quality improvement and clinical indicators.
12.25pm	Q&A		
12.45pm	***Buffet lunch***	***Demonstration of tools***	
1.45pm	**SESSION 3 – GOVERNMENT & SOFTWARE INDUSTRY PERSPECTIVE** Chair: Dr Stephen Phillips, Chair, NPS Pharmaceutical Decision Support Working Group		
1.50pm	Current and Upcoming initiatives to assist searching and reporting on indicators of quality prescribing	**Dr Vince McCauley** President, Medical Software Industry Association	Vendor perspectives on third party searching and reporting (data extraction) tools Who owns the data in primary care information systems? Current activities that could assist the objectives of this forum MSIA interoperability project
2.10pm	Clinical data in primary care – the government perspective	**Ms Megan Morris** First Assistant Secretary, Primary and Ambulatory Care Division, Dept of Health and Ageing	National Primary Health Care Strategy Outcomes of the DoHA consultancy: "Investigation of GP data extraction and reporting tools"
2.30pm	Q&A		
2.45pm	***Afternoon tea***		
3.00pm	**SESSION 4 – PANEL DISCUSSION** Chair: Dr Stephen Phillips		
	Outcomes and recommendations – How can we move forward?	**Dr Gillian Braunold** – NHS Connecting for Health, **Dr Tony Lembke** – APCC **Ms Judith Mackson** – NPS **Dr Vince McCauley** – MSIA	**Ms Megan Morris** – DoHA **Dr Michael Nolan** – AGPN **Ms Teri Snowdon** –- RACGP
4.15pm	Where to next?	**Dr Stephen Phillips**	
4.25pm	***Closing comments***		

Appendix 2. List of delegates

First name	Surname	Organisation
Zabin	Ali	National Prescribing Service
John	Aloizos	Australian Pharmaceutical Advisory Council
Louise	Bartlett	Department of Health and Ageing
Jenny	Bergin	Pharmacy Guild & NPS Board Director
Michael	Bolt	Department of Health and Ageing
Douglas	Boyle	University of Melbourne
Gillian	Braunold	GP & NHS Connecting for Health
Helena	Britt	Bettering the Evaluation And Care of Health
Bernadette	Broadbent	National Prescribing Service
Colleen	Brooks	National E-Health Transition Authority
Jonathan	Dartnell	National Prescribing Service
Marion	Demann	National Prescribing Service
Neil	Donnelly	National Prescribing Service
Julie	Eisenberg	National Prescribing Service
Catherine	Ellis	Consumers' Health Forum
Kylie	Fahey	QIP & AGPAL
Mike	Farrell	Community Pharmacist & PDS Working Group Member
Michael	Fitzsimons	Medicines Australia
Dale	Ford	Improvement Foundation
Paul	Giacometti	Australian General Practice Network
Heather	Grain	Llewelyn Grain Informatics & Standards Australia
Anne	Grunseit	National Prescribing Service
Ken	Harvey	La Trobe University
Joan	Henderson	Bettering the Evaluation And Care of Health
Roger	Hewitt	Valintus Pty Ltd
Nancy	Huang	Heart Foundation
Pradeep	Jayasuriya	GP & PDS WG Member
John	Johnston	PEN Computer Systems
Christine	Kardash	South East Alliance of General Practice
Karen	Kaye	National Prescribing Service
Jenny	Laffey	Medical Software Industry Association
Ian	Landreth	Sunshine Coast Division of General Practice
Bill	Lawrence	Australian Commission on Safety and Quality in Health Care
Tony	Lembke	Australian Primary Care Collaboratives
Helen	Leonard	The Pharmaceutical Alliance
Heather	Leslie	Ocean Informatics & PDS WG Member
Winston	Liauw	St Vincent's Hospital & PDS WG Member
Siaw-Teng	Liaw	University of Melbourne & PDS WG Member
Phil	Lowen	Australian General Practice Network
Judith	Mackson	National Prescribing Service
Vince	McCauley	Medical Software Industry Association

First name	Surname	Organisation
Lisa	McGlynn	Department of Health and Ageing
Graeme	Miller	Bettering the Evaluation And Care of Health
Megan	Morris	Department of Health and Ageing
Christopher	Mount	Department of Health and Ageing
Michael	Nolan	AGPN & Central Bayside
Sheena	O'Riordan	National Prescribing Service
Holly	Parsons	National Prescribing Service
Rodney	Pearce	Australian Medical Association
Ian	Peters	Canning Division of General Practice
Stephen	Phillips	GP & PDS WG Chair
Marie	Pirotta	GP & PDS WG Member
Janette	Randall	NPS Board Chair
James	Reeve	National Prescribing Service
Steven	Riddell	National Prescribing Service
Jane	Robertson	University of Newcastle
Libby	Roughead	University of South Australia
Debra	Rowett	Drug & Therapeutics Information Service
Steve	Sant	Rural Doctors Association of Australia
Saloni	Shah	Canning Division of General Practice
Teri	Snowdon	Royal Australian College of General Practitioners
Carolyn	Stapleton	Australian General Practice Network
Monica	Strasser	Canning Division of General Practice
Michelle	Sweidan	National Prescribing Service
Matt	Tweedie	Canning Division of General Practice
David	Vaile	Cyberspace Law and Policy Centre (UNSW)
Lynn	Weekes	National Prescribing Service CEO
Margaret	Williamson	National Prescribing Service
Michelle	Wilson	Heart Foundation
Di	Wyatt	Australian College of Rural and Remote Medicine
Andrey	Zheluk	National Prescribing Service