Promoting evidence-based practice in population health at the local level: a case study in workforce capacity development

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Abstract

This paper describes a service-based initiative to enhance capacity for evidence-based practice (EBP) in the South Western Sydney Area Health Service Division of Population Health. A working group planned an organisational response to a customised EBP needs assessment using the New South Wales Department of Health's framework for capacity building focussing on five key action areas; organisational development, workforce development, resource allocation, leadership and partnerships. Innovative strategies to promote EBP were developed and implemented and on-site training programs that targeted specific groups of staff were conducted. Because there was commitment and leadership from senior staff for the initiative, a comprehensive approach to building capacity for EBP in population health was possible. Evidence of impact needs to be collected in the future.

Aust Health Rev 2007: 31(3): 422–429

What is known about the topic?

While there has been a lot of talk about the need to embrace evidence-based practice in health care there are few published studies providing guidance on methods.

What does this paper add?

Based on a needs assessment where 80% of the surveyed staff suggested that evidence-based practice would improve the effectiveness of their work, a working group developed and implemented an evidence-based practice program throughout the South Western Sydney Area Health Service Division of Population Health. The program identified evidence-based planning competencies and planned training and capacity building initiatives to assist staff in enhancing the competencies.

What are the implications for practitioners?

Other organisations may want to take a similar approach to developing evidence-based practice.

IN ITS VISION for population health New South Wales Health (NSW Health) has affirmed evidence-based practice (EBP) as a founding principle to achieve health gain.[1] An evidence-based approach also appears among the agreed core functions in Australia for population health practice.[2] Despite this increased rhetoric about EBP in population health, there has been relatively little systematic assessment of capacity for EBP among population health practitioners or determination of barriers and enablers. Because EBP first gained momentum in clinical medicine,[3] it is unsurprising that more studies have been conducted to examine the effectiveness of educational and organisational strategies with clinical practitioners such as physicians, nurses and pharmacists. Of the 40 systematic reviews available through the Cochrane Effective Practice and Organisation of Care (EPOC) Field in the Cochrane Collabora-

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tion, none address population or public health staff. There is a paucity of literature to assist those who seek to promote EBP in population health.

At the time of this project the Division of Population Health (DPH) in South Western Sydney Area Health Service (SWSAHS) embraced a wide range of services including public health, health promotion, drug and alcohol services and women's health.[4] This diverse suite of services is not atypical in NSW.[5] Following major reform in NSW, SWSAHS subsequently amalgamated with Central Sydney Area Health Service (CSAHS) to form Sydney South West Area Health Service (SSWAHS). The larger SSWAHS continues to support EBP in population health.[6,7]

In 2002 a needs assessment was conducted in SWSAHS to examine capacity for EBP among all non-administrative staff within the Division of Population Health, using quantitative[8,9] and qualitative[10] methods of enquiry. More than half (55%) of DPH staff indicated a self-assessed need to increase their own capacity in EBP.[8] A majority of staff (80%) also agreed that EBP would improve the effectiveness of their work.[9] Furthermore, participants in the qualitative study recognised that the needs assessment had both increased awareness about EBP and legitimised this agenda for strategic development.[10] In this paper, we report how the DPH responded to the issues raised in the needs assessment.

Methods

First, an EBP working group was convened by the Director of the DPH to respond to the findings of the needs assessment (see Acknowledgements for membership). To support this working group, the position of Workforce Development Coordinator (MM) was repositioned from within one of the internal units of the Division to adopt a wider organisational mandate and report directly to the DPH Director.

The EBP working group was responsible for organisational planning to facilitate EBP across the DPH.[8-10] The working group continued to use the definition of evidence-based practice as used in the needs assessment and adapted from Sackett et al,[11] specifically "evidence-based practice (EBP) means the conscientious use of current best evidence in making decisions about population health strategies". The EBP working group then selected a capacity building framework from NSW Health for its deliberations.[12] In this framework "capacity building" was defined as "a way of developing sustainable skills, structures, resources and commitment to health improvement".[12] Five key action areas for capacity building have been recommended, namely organisational development, workforce development, resource allocation, leadership and partnership. Leadership, resources and organisational structures had also been identified by the National Institute of Clinical Studies (NICS) as key enablers for evidence-based clinical practice.[13]

Outcomes

Organisational development

Organisational support and structures were considered vital to help staff move closer to the philosophy and practicalities of EBP. Organisational development was considered at all stages of planning to facilitate EBP capacity building in the workforce. For example, identifying staff's required competencies in EBP and the development and implementation of initiatives including training programs were consistent with the roles and priorities of the local workforce. The use of an organisational development approach also helped to ensure the sustainability of capacity over time. The development of statements of EBP core competencies and resources for staff were prioritised for development and are described below.

Development of EBP competencies

Roles and responsibilities of staff in DPH services vary widely[5] as do the levels of competency required to perform effectively in any given role. Our EBP needs assessment survey had shown that the majority of staff (42%) rejected the concept of a single level of competency for EBP for all staff.[9] During qualitative interviews, comments further

I Evidence-based practice (EBP) competency tool as developed by the EBP working group to assess population health staff's required level of EBP competency based on their roles and responsibilities

Unit(s) of competence	Elements
Level a: Staff who need an understanding of the principles of EBP and its value to population health	
a.1 Demonstrates an understanding of evidence-based population health practice	a.1.1 Defines evidence and evidence-based population health a.1.2 Describes ways in which EBP is applicable to their role or the work of their service
Level b: Staff who need an understanding of the principles of EBP and the application to their own practice	
Those listed in a; and	
b.1 Formulates a researchable question appropriately for a population health problem	b.1.1 Defines question that needs to be answered
b.2 Demonstrates skill in identifying best available evidence	b.2.1 Undertakes a literature search meeting agreed standards b.2.2 Understands and is able to explain NHMRC levels of evidence
b.3 Uses best available evidence in decisions to address a population health problem	b.3.1 Contributes to application of an evidence-based approach to policy b.3.2 Contributes to application of an evidence-based approach to program development b.3.3 Identifies evidence used in selection of objectives and strategies
Level c: Staff who plan, implement and evaluate programs	
Those listed in a and b; and	
c.1 Uses an evidence-based approach to policy and program development, implementation and evaluation	c.1.1 Undertakes and/or can prepare a clear brief for commissioning a systematic review c.1.2 Interprets and synthesises research results c.1.3 Demonstrates understanding of key steps in critical appraisal for identifying and assessing evidence c.1.4 Demonstrates understanding of the contribution of other forms of scientific enquiry to decision making in population health c.1.5 Recognises importance of cost-effectiveness in making decisions regarding best available evidence c.1.6 Demonstrates use of a rigorous and quality approach to implementation
Level d: Staff who are accountable, at a high organisational level, for the implementation of an evidence-based approach	
Those listed in a, b and c; and	
d.1 Translates evidence into practice	d.1.1 Applies evidence-based approach to select priorities for investment d.1.2 Provides resources and support for staff to facilitate an evidence-based approach d.1.3 Provides a non-threatening environment for staff to challenge decisions and refine evidence-based practice
d.2 Disseminates research findings and facilitates policy uptake	d.2.1 Identifies ways to improve the use of research in their organisation or workplace d.2.2 Establishes and promotes effective dissemination systems
d.3 Ensures that the workforce participates in ongoing professional development regarding EBP	d.3.1 Recognises contributions of staff to EBP d.3.2 Identifies and addresses EBP professional development needs via performance management
Level e: Staff who generate evidence for population health policy and practice	
Those listed in a, b, c and d; and	
e.1 Generates evidence	e.1.1 Demonstrates application of ethical and legal considerations in generating evidence e.1.2 Assesses suitability of research methods when evaluating an intervention e.1.3 Demonstrates rigour in collecting evidence
e.2 Disseminates evidence	e.2.1 Prepares summaries on available evidence that identify strengths, weaknesses and gaps in the evidence e.2.2 Prepares reports that contribute to evidence, to a standard acceptable for publication e.2.3 Provides recommendations for policy makers

reinforced that stratification of EBP competencies in the form of a "self-assessing tool" would be useful to staff and their managers to identify their required level of competence in EBP based on their responsibilities.[10] Hence, the working group set about to develop a set of EBP competencies.

Following consultation with staff, five categories of competency were proposed by the working group. These categories allowed for the diversity of roles and responsibilities across the DPH. These proposed EBP competencies then were assessed by three external reviewers and consequently revised by the working group. A pilot was conducted among Directors and staff of two services within the DPH to test the potential and appropriateness of the "EBP competency tool". The tool was finalised after receiving feedback from the Directors.

The final "EBP competency tool" (Box 1) was then used by Directors of all restructured units and services within DPH to categorise current staff based on their required level of EBP competency. At that time, 40% of staff in these services were categorised as "staff who need an understanding of the principles of EBP and the application to their own practice". Twenty-nine percent of respondents were categorised as "staff who plan, implement and evaluate programs". Only 17% of staff were required to have EBP competency at a level "to generate evidence for population health policy and practice" (Box 1). The working group recommended that EBP competencies be included in duty statements for each specific position to further promote the vision and expectations for EBP to new staff.

EBP guidelines

In response to the view among staff that access to resources would improve their efforts,[9] the EBP working group developed guidelines specifically to assist staff to make decisions based on best available evidence. These guidelines explained the concepts of EBP and reinforced its applicability in the context of population health practice. Reference was made to the NHMRC taxonomy as the national standard for evaluating evidence.[14] The EBP guidelines were designed to be used as a "road map" to assist staff in understanding basic principles and to develop informed decision-making based on available evidence. To promote access, these guidelines were posted electronically on an intranet site available to all population health staff.[15]

EBP training programs

When workforce development initiatives are linked with other capacity building strategies they can help to bring about sustained changes within the organisation.[11] Based on identified needs including "lack of training in searching for evidence" and "lack of quantitative skills and data management expertise to generate local evidence",[9,10] the working group recommended the development and implementation of EBP training programs, EBP forums and a performance management process to incorporate and support EBP.

"Lack of training" was identified as a major barrier discouraging EBP in population health by 76% of respondents.[9] Furthermore, most respondents (82%) "strongly agreed"'or "agreed" with the importance of EBP training for all population health practitioners.[9] Most respondents (89%) also agreed with the necessity of regular training and continuing education for all population health staff.[9] Our qualitative study reinforced the value of "work-based training programs" to address barriers to EBP.[10] Respondents perceived that these programs most particularly should increase EBP skills in relation to their specific roles.[10]

The challenge for the working group in developing training initiatives was to provide appropriate, targeted training that met the diverse needs of all staff. The EBP training programs needed to address gaps between required and actual level of competence for practitioners, not researchers. While the current evidence about effectiveness of EBP training programs is weak and based largely on teaching critical appraisal as a relatively specific skill,[16-18] positive effects of short courses upon knowledge and skills in EBP have been shown.

To meet the different needs of staff, various work-based interventions, including training sessions and forums, have been planned by the EBP

working group. For example, the working group initiated dialogue with the consortium of the University of Sydney, the Cochrane Health Promotion and Public Health Field,[19] and academics at La Trobe University who had received Commonwealth funding to "enable the use and synthesis of evidence in Australian public health and health promotion policy, practice and research".[20] The consortium provided training, resources and support for course facilitators. Resources were then further developed to deliver additional training for DPH staff.

The first two EBP training sessions were offered in April 2005 and May 2006. Course facilitators were those staff who had attended the initial training course conducted by the consortium and other experienced staff from within the Area Health Service. The DPH also contracted the original course developer from the University of Sydney to assist with facilitating the first training session. This was designed to support the other facilitators and be a drawcard for participants to attend the course. As implemented, the target group for the first session was program managers, Service Directors and senior DPH Executive. Twenty participants attended the first training session. The target group for the second session was expanded to include project staff whose role included incorporating evidence into practice. Twelve participants attended this session. Only modest resources were required to offer these training sessions, namely payment for the external facilitator for the first training session, catering, printing and staff time for organisation. By specifically targeting senior staff for the first training course, we were able to share the vision for EBP that had been developed among the Executive of the DPH. Consequently, those who participated in the first training course could vouch for it to their staff.

EBP forums

In June 2005 the forums known as "DPH Research and Evidence Meetings" were commenced to provide scheduled, on-site opportunities for staff of the DPH to learn and critique "in-house" scenarios for how evidence should influence policy and practice. These forums occur monthly and are hosted in rotation by staff from DPH units and services to provide a non-threatening environment for staff to learn about and challenge the application of evidence in policy and practice. Meetings are advertised on department noticeboards and a flyer is sent via email to all staff via their manager. In the first 6 months of this initiative, an average of 24 staff attended each meeting. Roles of those attending varied from managers to project staff.

Performance management to incorporate and support EBP

The working group further considered that inclusion of EBP in the performance management process would reinforce organisational commitment and support. The performance appraisal forms are used annually to probe performance-related issues that can be discussed in a constructive and confidential manner at annual performance interviews. The working group changed the performance appraisal form to include achievements and deficiencies in relation to EBP, enabling specific training and support needs for individual staff members to be identified for the coming year. Two questions were added, namely:

- What evidence-based practice initiatives have you led or contributed to in your unit in the previous 12 months? and
- What training and/or support needs do you have in relation to evidence-based practice?

Further, the EBP competencies as described earlier (Box 1) had been designed as a clear tool for identifying competency gaps that could be addressed by professional development opportunities tailored for individuals, and in turn these could be specified in annual performance agreements.

Resource allocation

The DPH showed clear and resolute commitment to support workforce development and organisational change by reallocating resources. As described previously, the redesignation of the Workforce Development Coordinator position to a more senior level in the Division demonstrated

the high priority that EBP had become for the Division as a whole. In the same period, the Centre for Research, Evidence Management and Surveillance (REMS) was created from within existing resources in 2004 to ensure that population health research conducted within the Division would meet academic standards and, thus, add meaningfully to the evidence base for population health practice.[4] Staffing for REMS consisted of staff from the former Epidemiology Unit and research and evaluation staff from other service units within Population Health. This redirection of resources to the creation of REMS and the position of Workforce Development Coordinator were also essential to enhancing organisation support for EBP. Without these resources the training sessions and ongoing monthly research and evidence meetings may not have occurred or may have been withdrawn due to other competing priorities.

Leadership

Experience from the clinical setting has shown that better practice can be facilitated through leadership.[12,21] Within the capacity building framework,[11] leaders are responsible for efforts that precede change, setting parameters and reinforcing desired changes. Articulation of a vision for EBP was clear in the SWSAHS Strategic Directions Statement[7] and reinforced in the Annual Report.[4] EBP is clearly recognised as a priority for the organisation. Leadership of senior staff in the DPH to participate in the EBP working group and advocate this initiative were key to its success. Leadership was also critical for developing and promulgating a vision for EBP in the DPH. This leadership, initially developed within the Executive, was further accepted and enacted upon by the participants in the first training session.

Partnerships

Working in partnership can allow organisations to capitalise on their strengths and achieve shared goals that neither could realise as well by working alone.[12] Commitment to working in partnership has been recognised as a means of achieving systematic and lasting change.[13] The working group first deliberately and conscientiously "brainstormed" the names of other like-minded organisations and individuals as potential partners. Feedback from external reviewers in relation to the EBP competencies was vital to ensure relevance and accuracy for population health staff. As mentioned previously, the Commonwealth-funded consortium was approached proactively as a deliberate partnership. The Workforce Development Coordinator continues to monitor key journals and websites to ensure that other partners are identified quickly through their contributions to scholarship.

Discussion

In response to the needs assessment, we believe that the development of EBP competencies for the DPH as instigated by the Working Group was particularly important. The input of staff, senior staff and external reviewers was crucial to their conceptualisation and refinement. As shown in Box 1, these competencies provide a robust way of articulating the EBP expectations for each role within the DPH and promoting the vision for EBP. The use of EBP competencies in performance management and training allowed for targeted and appropriate opportunities for staff. Recent reforms to Area Health Services in NSW[22] require a resolute commitment to population health and a workforce well-prepared, not only for EBP but also advocacy, evidence generation and accountability.

We believe that our work will have relevance for the national population health workforce. Our EBP initiative also will complement a draft document entitled Population Health Standards for Area Health Services[23] that has been developed by NSW Health as an organisational tool for quality improvement. Several of its standards require an overt commitment to developing EBP capacity in specific services in population health.

While we have been able to provide preliminary information regarding the impact of strategies, we acknowledge the limitation of our work is the absence of a comprehensive evaluation of strategies. Although it is difficult to secure outcome evaluation in health care settings, it is

2 Application of a NSW Health capacity building framework[11] to promote evidence-based practice (EBP) in SWSAHS Division of Population Health

Key action area	Strategies
Organisational development	Development of EBP competencies EBP guidelines developed for intranet site and promoted by supervisors
Workforce development	EBP training programs offered to staff EBP Forums Performance management process to incorporate and support EBP
Resource allocation	Workforce Development position moved to DPH Directorate and responsible for all workforce development Training funded Creation of the Centre for Research, Evidence Management & Surveillance (REMS)
Leadership	Articulation of vision to all staff by Director and supervisors Commitment of senior staff on working group SWSAHS Strategic Directions Statement endorses EBP in population health
Partnerships	External partners identified to support EBP initiatives and training Routine surveillance of Australian journals to identify those publishing in this field

SWSAHS = South Western Sydney Area Health Service.

imperative that further resources be allocated to the implementation of such plans to measure any outcomes for individuals or organisations. This would also allow us to compare more rigorously the achievements of our plan against other research regarding the uptake of EBP.

Conclusions

Both quantitative[8-9] and qualitative[10] results of a needs assessment were used to plan a response to develop workforce capacity for EBP in a population health workforce. A capacity building framework[12] was useful in developing a range of strategies to build capacity for EBP (Box 2). Leadership, commitment and visioning are vital to facilitate organisational change and to build the capacity of the organisation and its staff to implement EBP. Establishing EBP competencies for staff is recommended for organisations seeking to improve population health through diverse services and a large workforce.

Acknowledgements

In addition to the authors, other members of the EBP working group were Dr Kerry Chant, Ms Elizabeth Harris, A/Prof Bin Jalaludin, Ms Deborah Marks and Ms Mandy Williams. We thank all members of the working group for their valuable contributions. We also thank the external reviewers of our EBP competencies, namely: Dr Lynne Madden, NSW Department of Health; Dr John Wiggers, Hunter Centre for Health Advancement; and Prof Nicholas Glasgow, the Australian National University.

We are also grateful to our colleagues from former SWSAHS Division of Population H ealth who participated in the original needs assessment.

Competing interests

The authors declare that they have no competing interests.

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(Received 30/08/06, revised 10/01/07, accepted 18/03/07) □