

Mentoring for population health in general practice divisions

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Abstract

This paper describes the implementation and evaluation of a three-way model of service development mentoring. This population health mentoring program was funded by the Commonwealth Department of Health and Ageing to enable staff from eight Divisions of General Practice in South Australia to gain a sound understanding of population health concepts relevant to their workplace. The distinguishing features of service development mentoring were that the learning was grounded within an individual's work setting and experience; there was an identified population health problem or issue confronting the Division of General Practice; and there was an expectation of enhanced organisational performance. A formal evaluation found a consensus among all learners that mentoring was a positive and worthwhile experience, where they had achieved what they had set out to do. Mentors found the model of learning agreeable and effective. Division executive officers recognised enhanced skills among their "learner" colleagues, and commented positively on the benefits to their organisations through the development of well researched and relevant projects, with the potential to improve the efficiency of their population health activities.

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THE CURRENT CLIMATE in general medical practice in Australia is one of change and reform.¹ There is increasing recognition of the role of general practitioners in population health activities as part of the primary health care network.^{2,3} The Commonwealth Department of Health and Ageing⁴ defines population health as "the organised response by society to protect and promote health, and so prevent illness, injury, disability and early mortality". The report of the General Practice Strategy Review Group⁵ has affirmed the important role of general practice in population health and the need for more collaboration and

What is known about the topic?

Divisions of General Practice have a crucial role to play in advancing population health in Australia. Effectiveness in this role will be supported by enhanced population health skills among divisional staff and general practitioner members.

What does this paper add?

A three-way model of service development mentoring is described, involving a staff member or a GP member (the learner), an academic mentor, and the GP division. The distinguishing feature is that the learning is grounded in the development of a plan for the resolution of a problem confronting the organisation. Service development mentoring can build population health knowledge and skills within Divisions of General Practice, while at the same time enabling the design of practical projects capable of enhancing the health of a specific group in the catchment population.

What are the implications for practitioners?

Decision makers in Divisions of General Practice may wish to adopt this model of service development mentoring as an organisational investment in staff development and population health capacity. The model is potentially transferable to capacity building activities in other health organisations. ♦

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integration across the primary health sector to guide GPs in public health activities.

First appearing in 1992, and supported by the subsequent emergence of state and national peak bodies, Divisions of General Practice provide a focus for strengthening the vitality of local medical practice. Their increasing involvement in population health activities calls for the development of population health skills among divisional staff and GP members. University departments of public or population health may have a role in providing this education.

Mentoring, in the present context, has been understood to be a process of knowledge and skill exchange between peers in a working environment, one with a learning need and another who is able to meet that need. This perspective stresses collegiality between the learner and the mentor, and acknowledges that the learner brings a store of important knowledge and skills to the relationship.

Kolb has developed a useful model of adult learning, which recognises that workers bring valid experiences to a learning situation.⁶ They can then reflect upon these experiences and develop sound theories which can be tested in new situations through problem-solving activities. This model envisages learning as an iterative process, in which new experiences are generated by the problem-solving activities, and so the spiral of learning continues.

Mentoring is a well recognised strategy, accessed by health care professionals for education and professional development.^{7,8} The process of mentoring has been used to facilitate students and novice practitioners towards more advanced levels of clinical expertise.⁹ Mentoring has also assisted experienced professionals to develop specific knowledge and skills.¹⁰

Conceptually, mentoring often relates to a partnership of mutual respect that promotes explicit learning. There are a multiplicity of designs, roles, contexts and functions of mentoring agreements. Mentoring relationships can variously focus on task development, information sharing, education, social support or career guidance. They often provide the forum and skills for participants to reflect on and enhance their intellectual and emotional resources.⁸

Mentoring has been widely used to develop specific aspects of practice, such as research capacity and productivity.^{9,10,11} Predoctoral nurses reported increased confidence in the research process, increased productivity, work organisation and innovative communication following a structured mentoring relationship.¹² An external mentoring project promoted the research growth of faculty members through exposure to highly productive, discipline-specific academics from other universities.¹¹ Mentoring has also been shown to enhance retention and recruitment of skilled staff.¹³

While mentoring is largely an educational process with individual benefits, alternative outcomes are also possible. In addition to the usual practice of developing individuals in a traditional two-person model, a three-way (triadic) relationship has been proposed to align individuals with the strategic directions of their organisation.¹⁴ With careful planning and coordination, short- and long-term goals can be achieved for a mentoring triad of organisation, mentor and protégé.¹⁵

The distinguishing feature of service development mentoring, the model used in the program reported here, is that the learning is grounded in the development of a plan for the resolution of a problem confronting the organisation. As well as being based in the work setting and experience, the learning is intended to lead to enhanced organisational performance.

Thus there is a triangular relationship between the learner, the mentor and the organisation. Experience in an earlier program in South Australian rural health regions has also confirmed that there is an important role for a catalyst or program management team, who bring these three parties together. A funder is also essential, because this kind of relationship cannot usually proceed on goodwill alone.

These ideas about service development mentoring have been based upon advice one author (JM) received from DK (Don) White at the Health Services Management Centre, University of Birmingham, UK in 1982–1983. White pioneered a one-year program for promising middle-ranked health service executives in an innovative three-

way relationship between the student, the health authority and the university.

The aim of the overall program reported here has been to enable staff from Divisions of General Practice to gain a sound understanding of public health concepts and knowledge relevant to their workplace duties, using innovative mentorship arrangements that enhance their skills in problem solving and service development. There was a particular emphasis on rural and regional divisions of general practice.

Methods

Implementation

All fourteen Divisions of General Practice in South Australia were invited to participate in this program, by identifying a population health issue and an activity to be planned. They were asked to clarify anticipated benefits in terms of improved population health practice and sustainability, and ability to meet population health needs.

In response, executive officers from eight Divisions of General Practice identified a problem of population health significance and a staff member or general practitioner for part-time release from normal duties to receive education and support through a mentoring partnership with an experienced population health academic. The learner's task was to develop a plan that would improve population health services within their division. For ethical reasons, the development phase of the plan did not include provision of any service to the general public. Eventual implementation remained the responsibility of the relevant Division of General Practice.

The program management team of three academics facilitated the selection of learners and projects through careful negotiation with the executive officers of each of the Divisions of General Practice. Projects were tailored to be practical, feasible and intellectually rigorous, aligned with the skills and interests of prospective learners, and focused on the achievement of one main goal.

Mentors were selected for their commitment to and skills in student-centred education and their

practical understanding of population health and primary health care. All mentors held a higher degree and a university appointment or affiliation. They came from a variety of disciplinary backgrounds including medicine, nursing, physiotherapy, epidemiology, education and public health. Mentors were selected through negotiation involving the nominated staff member and the management team.

The program coordinator worked with each tripartite mentoring group of executive officer, learner and mentor to develop for signing a specific learning agreement (Box 1). Individual responsibilities of all participants were delineated, learning objectives were identified, proposed activities were described against specific timelines, and staff time-release was detailed. The external funding was utilised to cover the learner's release from normal work tasks for one day per week for 26 weeks and to reimburse the mentor's time at standard university rates.

Each mentoring agreement was designed to strategically develop the skills of middle-level staff in planning and resolving a population health problem within a particular Division's mandate. Expected outcomes included both professional development of the designated learner and an implementable plan, designed to improve an aspect of the health of the Division's catchment population.

Evaluation

Evaluation of this program focused on both the processes of accomplishment and the achievement of specified learning outcomes. The process evaluation emphasised the way in which mentoring was both an educational and support strategy for divisional staff. Learning outcomes were evaluated against the original learning objectives and the development of an implementable project to enhance a specific aspect of population health. As a whole, the program was also evaluated for its innovative and transferable outcomes.

The primary process evaluation method was individual face-to-face semi-structured interviews with three key groups of stakeholders; learners, mentors and executive officers.

I Key commitments made in a typical learning agreement

Executive Officer of the nominating Division of General Practice	<ul style="list-style-type: none"> ■ agree on the population health issue to be analysed ■ ensure that the participating staff member is released from their usual duties to undertake the project ■ attend the presentation seminar and participate in the assessment process ■ monitor the development of the health plan to ensure that the agreed objectives and timelines are met, and that the plan is achievable ■ share the written report with other GP Divisions in South Australia and elsewhere in Australia, and with the Commonwealth Department of Health and Ageing
The participating staff member	<ul style="list-style-type: none"> ■ agree on the population health issue to be analysed ■ undertake a relevant program of knowledge and skills development ■ maintain contact with the mentor(s) ■ undertake an analysis of the identified health issue/problem ■ attend a mid-term workshop on report writing skills etc. ■ present a verbal report at a presentation seminar ■ provide a written report ■ take all reasonable steps to ensure that the plan is implementable
The mentor	<ul style="list-style-type: none"> ■ make available time in which to provide advice to, and facilitate the acquisition of knowledge and skill by, the participating staff member ■ take part in a mentoring skills workshop ■ take part in the assessment
The representatives of the consortium members	<ul style="list-style-type: none"> ■ match the participating staff member with a mentor ■ monitor progress of the learning agreement ■ convene the mentoring skills workshop, the mid-term workshop, and the presentation seminar; and moderate the assessment
All parties	<ul style="list-style-type: none"> ■ take part in an evaluation of the outcome in terms of gain in knowledge and skill, the process of problem identification and planning, and potential for problem resolution ■ respect individual privacy and commercial confidentiality ■ agree on budgets and timelines in advance

The conduct of the interviews and analysis took place within 2 months of the completion of the mentorships by researchers independent of the program developers as an attempt to reduce respondent social desirability bias. Sets of about 20 open-ended questions were developed and sent to each group of stakeholders. While there were unique questions for each group of stakeholders, there were common themes across all groups.

For the process evaluation, interview notes were analysed in an iterative manner. The schedule of interviews was designed so that all members of each stakeholder group were interviewed by one of the evaluators. Therefore, commonalities of content and emerging themes were initially noted within each group of stakeholders. Interviewers were seeking to uncover the inherent

strengths and weaknesses of the mentoring process, and the barriers to change and implementability for individual projects. A second iteration compared the perspectives of each stakeholder group. Finally, ideas and suggestions for improvement and change were sought from the program management team, after all other interviews had been completed.

In evaluating learning outcomes, learners were required to present a 15 minute paper to a seminar comprising their own and other mentors, executive officers and other learners. Ample time was set aside for discussion of the substance of the paper, and for personnel from the other Divisions of General Practice to discuss its applicability to their own local situation. These learning outcomes were also verified during interviews with the executive

2 Population health mentoring projects completed

	Title of project	Nominated learner
Urban divisions		
Adelaide Northern	Development of Registers and Recall Reminders as Prevention Tools in General Practice Settings	Two staff members sharing
Adelaide Northern	A Proposal for a Project to Target Children Overdue for Immunisation in the Northern Adelaide Region	Staff member
Adelaide North East	Population Health and Cardiovascular Disease Prevention — Using General Practice to Improve the Outcomes	General practitioner
Adelaide Southern	Self-Management Resources Used by People on the Wait List for a [tertiary hospital] Centre for Anxiety and Related Disorders	Staff member
Rural divisions		
Adelaide Hills	Amphetamine Misuse in the Adelaide Hills	Staff member
Eyre Peninsula	Can Care Planning Prevent Poor Cardiovascular Outcomes?	General practitioner
Limestone Coast	A Strategic Plan to Best Facilitate GPs and their Clinics in the Uptake of the Chronic Disease Initiatives	Staff member
Murray Mallee	Demonstrating the Benefits of Population Health Initiatives to Key Stakeholders	Staff member
Yorke Peninsula	How Effective are GPs on Yorke Peninsula in Detecting and Managing Mental Health Problems in their Clinic Setting?	General practitioner ◆

officers. Learners prepared and submitted a final report to the Board of their Division of General Practice, and to the program management team. This report included a strategic plan that was able to be implemented for the resolution of the identified population health problem.

Results

Implementation

Nine projects were completed; four in urban Divisions of General Practice and five in rural Divisions of General Practice. The size of Divisions varied widely, from 30 GPs and five staff in an extensive rural area to almost 400 GPs and 20 staff in one urban Division.

The learners included three GPs active within their Divisions and seven salaried divisional staff. For one project, two staff members shared a single mentorship. The population health problems identified are among those that commonly lead to general practice encounters and they represented most of the national health priority areas publicised by the Commonwealth Department of Health

and Ageing.¹⁶ Specifically, projects covered cardiovascular disease, asthma, diabetes, anxiety disorders, mental health, immunisation of hard-to-reach groups and illicit drug use (Box 2).

Process evaluation

Twenty interviews were conducted across all three key groups of stakeholders, in the following configuration: nine learners, seven mentors, and four executive officers.

Learners' comments

There was consensus among all learners that mentoring was a positive and worthwhile experience, where they had achieved what they had set out to do (Box 3). Initially, most learners were familiar with the general area of population health that was identified for their project, but they perceived mentoring as an opportunity to increase their knowledge and skills.

Learners reported that mentors provided direction, support, constructive review and critique. They appreciated their mentors being readily accessible, sufficiently knowledgeable and experi-

enced, and able to understand their own work pressures and constraints. They emphasised the benefits of personal qualities of flexibility, enthusiasm, and good communication skills. Individual learners expressed differing needs for communication with their mentor. The frequency of contact varied from weekly face-to-face meetings to email or phone contact every 4 to 6 weeks.

Learners felt supported and encouraged by their executive officers and work colleagues. However, at a practical level, back-fill arrangements were not upheld, and all individuals had to increase their hours of work to incorporate the additional time devoted to their project. Although the majority of learners worked part-time, some took on their project while doing their regular full time work, creating additional stress.

Most learners would recommend the mentoring program to colleagues, provided they had time to devote to it and were working on a project they were interested in with a mentor experienced in that area.

Mentors' comments

Mentors were enthusiastic about sharing their research skills and expert knowledge in an alternative manner to teaching or supervision. All mentors were experienced in supervising postgraduate students. However, they perceived the mentoring relationship as different from supervision. Mentoring was seen to support learners' ideas in a more facilitative and less directive manner than supervision.

Initially, each mentor facilitated their learner to refine their original ideas into a workable project that emphasised their current work interests and aligned their expectations with the Division's priorities. Mentors described a greater variety of starting points for their learners than was their experience with postgraduate students. Initially, mentors had to revise their "idealistic" expectations of merely facilitating their learner, to provide structures for learners to engage in specific tasks such as literature reviews, systematic analysis and report writing. Several mentors described a very individualised process of identifying and remediating specific weaknesses with their learners, espe-

3 Strengths and weaknesses of the mentoring process identified in the evaluation

Strengths

- Opportunity to increase knowledge and skills relevant to population health
- Accessibility of mentors
- More facilitative relationship
- Direction, support, constructive review and critique
- Remediation of identified knowledge and skill gaps
- Practice in thinking strategically
- Opportunity to receive feedback from fellow learners
- Relevance to local Division and local population
- High percentage of completed plans
- Implementability of projects

Weaknesses

- Difficulty in releasing the time of a specialist staff member
- Back-fill arrangements not upheld
- Increase in learners' overall hours of work
- Whether the expense is justified by the population and organisational benefits

cially for skills of writing and literature searching. These skills were also addressed in a mid-program workshop to which all the learners were invited.

Although they gave expert advice and information, mentors encouraged learners to own their projects and guided them to improve their own and the organisation's performance. Generally, mentors reported asking questions of their learners, rather than giving answers.

All mentors described positive working relationships, based on shared understandings, common interests and trust. Regular contact and feedback enabled mentors to match the enthusiasm, styles, strengths and needs of their learners. Face-to-face meetings were preferred, and they were supported by email and phone conversations. Generally, mentors felt sufficiently remunerated for their work. They would all participate in a mentoring program again, and most would recommend it to their colleagues, if they had the time and expertise to contribute.

Mentors summarised the most important criteria for mentoring as needing experience in population health, understanding primary health

4 Learning objectives and achievement of learning outcomes

Learning objectives

Strategic development of the skills of middle level staff in planning and resolving a population health problem within a Division's mandate

Professional development of the designated learner

An implementable plan, designed to improve an aspect of the health of the Division's catchment population

Learning outcomes

The learner's ability to apply enhanced cognitive skills to the investigation of a topic relevant to population health

The learner's enhanced originality, scholarship and argument

Implementability of the plan documented in the learner's report to the Division

care research processes and models, using effective communication and facilitation skills, facilitating organisational and problem solving skills, having project management experience, and a knowledge of local resources.

Executive officers' comments

Executive officers reported initially high expectations of these mentoring projects in relation to upskilling staff, developing well researched and relevant projects, and improving the efficiency of their population health activities. During the project they readjusted their expectations of individual staff to reflect the time frame of the project and the other competing demands in their respective work environments. They were keen to support their individual staff members' professional development and they anticipated benefit from access to academic mentors.

Executive officers contributed clear organisational priorities and suitable projects for staff members to develop with their mentor. Their dominant concern was releasing and covering the responsibilities of a specialist staff member. For most projects, suitable extra staff could not be found to back-fill the learners, who then needed to juggle responsibilities for their regular duties as well as the project. As a result, projects were better suited to part-time staff, who were able to increase their work hours to accommodate the extra responsibilities. Generally, executive officers agreed that staff had both consolidated existing skills and developed new skills and confidence in project management and research areas. They were able to articulate how these skills contributed to improved public health initiatives in their

Division. However, the major concern for executive officers was the sustainability of skill development when the financial support for this project came to an end.

Evaluation of learning outcomes

All learners presented a seminar and submitted a written report to the Board of their Division of General Practice, and to the program coordinator. Four criteria were used to evaluate learning outcomes: originality, scholarship, argument and implementability (Box 4).

Originality was evidenced by the appropriate use of recognised research methodologies to address the source population health problem. All learners addressed issues that were specifically related to the catchment population for their organisation, using a range of qualitative and quantitative planning and evaluation designs.

Learners demonstrated enhanced scholarship through greater awareness of the theoretical debates and methodological approaches. This was demonstrated in the discussion that followed their oral presentations, where mentors posed challenging questions to their own and other learners. Executive officers also recognised the enhanced scholarship of some learners, through plans to involve learners in new projects that required them to generalise their new skills. In one Division of General Practice, the learner began teaching other staff specific skills for participation in these projects.

The criterion of argument concerned the ability to think through a clear line of reasoning with valid inferences from properly tested evidence, and was

most obviously demonstrated in the preparation of the strategic plan for implementation, within the written report. It was closely linked to the final criterion of implementability, which emphasised organisational alignment, affordability and realistic time lines. Although the learners were not responsible for the implementation of their projects, many had influenced the strategic and operational planning activities of their organisations to ensure the resources were available to progress their projects. The implementation of these projects needs to be evaluated in the future.

A future project to evaluate the benefits for individual staff and the organisation is required to fully assess the benefits of this program. Several staff talked about their intention to enrol in tertiary studies, suggesting that this program gave them a familiarity with, and confidence to undertake, formal study. Further, it would be important to ascertain the degree to which these independent projects were carried out within the Divisions and whether they delivered organisational and financial benefits.

Discussion

This program was considered by the three sets of stakeholders to be an innovative and successful opportunity for Divisions of General Practice to develop their own staff to apply population health and research skills, in order to better impact on local health services. Mentoring projects focused on enhancing the learners' specific skills and understanding of population health in ways that could enhance the activities of their organisation. In particular, mentoring provided viable learning and professional development opportunities for some staff who had not yet had an opportunity to undertake a university-based learning program.

The program management team was keen to demonstrate a viable alternative pathway for individual learning about public health. The model emphasises the importance of learning through involvement in a meaningful project in such a way as to enhance the organisational commitment by Divisions of General Practice to population

health activity. This model was also seen as appropriate for rural staff, who often have fewer opportunities for formal skill development.

Factors identified as important for a successful outcome included extended negotiation and thinking through each project topic and design, negotiated selection of highly qualified and motivated mentors and committed learners, and a Divisional focus on implementability through the executive officer. Having an efficient state-wide communication network (through SA Divisions of General Practice Inc.), signed learning agreements, and funding for the learner's time release, for the mentor's time and for the program management team as a catalyst were also important enabling factors.

Allowance had to be made for a considerable length of time to get projects started. This entailed local health workers recognising their learning needs and placing the project in the context of the other work pressures operating on the Division. The start-up phase could be quite stressful, and one role of the program management team was to reassure the learners that a degree of doubt and uncertainty is often a useful part of the process of innovation.

Barriers included divisional staff turnover, difficulties in freeing up the learner's time under the pressure of other work priorities, a paucity of population health experience in some divisions, and, inevitably, limited available time and resources.

Implementability

All projects were designed to be implemented and there was agreement among mentors, learners and executive officers that most could indeed be implemented. However, final responsibility for implementation remained with the Divisions of General Practice. Therefore those projects which were aligned with current initiatives and priorities and those that built upon previous work were more likely to be implemented. Further, learners who were interested in the outcomes of their work were also more motivated to be involved in carrying through the implementation of their project.

Two barriers to implementation were repeatedly reported. During the time of the project

several Divisions changed their organisational focus and prioritisation, which in some cases caused conflict for the learners. Secondly, divisional staff discussed the challenges of recommending and promoting change in GP's practice behaviours, and this reflects a much deeper issue within primary care.

Five learners believed that the strategies within their project could be easily adapted and applied to different patient groups and to other Divisions of General Practice. Mentors were less enthusiastic, and recognised that many organisations would require additional support and resources to use the project methods or tools. In one Division, two staff members could only free sufficient time to share a project. A tenth project was begun but could not be completed due to personal and workload pressures on the staff member.

Perceived benefits

These mentoring projects were observed to legitimise and enhance what many staff in the Divisions of General Practice were already doing. Individual, organisational and community benefits were observed.

Individual learners used adult learning principles to enhance their awareness of and involvement in population health strategies, and to develop a better understanding of and enthusiasm for research. They reported improved skills in defining and directing projects, and in reviewing and using research evidence. When compared with formal study, learners achieved outcomes in a timely manner. Further, individuals' enhanced skills and knowledge were retained in each organisation for future projects.

The economic advantages of this mentoring project are less clear. It can be argued that the cost of a project (about \$10 000 each) was expensive when compared with a full fee postgraduate course cost for one semester (now around \$4000). However, more than half the total was for back-fill costs for learners (typically not included in the cost of postgraduate education). Further, given that the division as well as the individual learner gained from the mentor's advice and the development of an implementable project, the

benefits of service development mentoring may justify the cost. If organisational outcomes of the implemented projects generate tangible health benefits or cost savings, this could demonstrate that service development mentoring is an organisational investment.

Conclusion

This three-way model of service development mentoring offers an innovative and successful strategy for enhancing individual education and professional development, in alignment with the organisation's strategic directions. Divisions of General Practice have a crucial role to play in maximising the population health of all Australians, yet they are often constrained by skill deficits in their own staff and by the individualist focus of GPs. This project has demonstrated that service development mentoring can develop population health knowledge and skills for staff (including interested GPs) of the Divisions of General Practice, who were able to design implementable projects capable of enhancing the health of a specific group of their population. Certain practical necessities have to be recognised. In particular, a Division needs sufficient resources and flexibility to enable staff or GP members to undertake a project, and suitably qualified replacements have to be available, particularly in rural locations, for back-filling.

While this current initiative emphasised the benefits of population health mentoring for Divisions of General Practice, the structure is potentially transferable to capacity building activities in other health organisations.

It is argued that service development mentoring can achieve population health benefits when GPs work with skilled and knowledgeable staff from the Divisions of General Practice. In these scenarios, the GP contributes a client base and an initial point of contact, while Divisional staff design and evaluate projects using appropriate population health theory and methods.

Mentoring offers a viable alternative to formal education and represents organisational investment in staff development. It is also an innovative

means of capacity building. Theoretical population health concepts were applied as a meaningful way of integrating research into an organisation's business. Evaluation of this program emphasised the need for a structured approach to coordination and dedicated time and commitment by individuals to participate in the mentoring relationship.

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Competing interests

The Commonwealth Department of Health and Ageing had no role in study design, data collection, analysis and interpretation, and writing and publication of this paper.

Authorship

Sharon Mickan developed the draft of this paper. She, Barb Hockings and Peter O'Rourke designed and conducted the evaluation. John Moss initiated and led the service development mentorship program and wrote the final report. He, Jeff Fuller and Nicholas Procter consti-

tuted the program management team. All authors take responsibility for the submitted manuscript.

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