

ENHANCING EDUCATION AND PRACTICE

## General Practitioners' Perceptions of Continuing Medical Education's Role in Changing Behaviour

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**ABSTRACT Context:** *The effectiveness of moving to compulsory, prescriptive continuing medical education (CME) for New Zealand general practitioners (GPs) is questioned. Motivational interviewing theory suggests that a series of interventions gradually increase awareness of the need to change until change is finally actioned. This study aimed to explore GPs' views on their need for CME, experiences regarding its provision and perceptions on the effect of CME in changing their clinical behaviour.*

**Method:** *Qualitative study using semi-structured interviews of 24 GPs from Auckland and North Island rural areas assessing their CME experiences and preferences.*

**Findings:** *All participants acknowledged that CME is a life-long process essential for GPs. Changing behaviour is generally seen as an incremental, evolutionary process with reinforcement of knowledge from different sources. Single events were perceived to effect change rarely. These were often high-impact, either punitive or incentive-based. GPs have a myriad of CME sources including reading, the internet, specialist letters, conversations with colleagues, quality assurance feedback, as well as traditional meetings. Credit-based quota requirements received mixed opinions but mostly were perceived negatively, discouraging needs-based approaches to learning. GPs' greatest barrier to obtaining CME is time.*

**Discussion:** *GPs perform poorly in assessing their specific learning needs. Their behaviour change is likely to be incremental. Therefore multi-faceted interventions and reinforcement from different sources are likely to be most effective in changing clinical practice. Understanding this is important for CME providers, GP Colleges and funders. Narrow, credit-based approaches to CME may discourage time-strapped GPs obtaining motivation to change from exposure to a wide variety of CME sources.*

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## **Introduction**

New Zealand (NZ) general practitioners (GPs) must undergo re-certification to maintain their vocational registration. This is usually achieved through meeting the requirements to become Fellows of the Royal New Zealand College of General Practitioners (RNZCGP) and then participating in credit-based re-accreditation. Continuing medical education (CME) credits are mostly obtained from attending registered courses, although reading and approved internet activities can give credits.

Before the legal requirement for vocational registration was introduced in 1995, College membership was voluntary. Numbers applying for entry surged with legislative changes. College Fellowship effectively has become the only practical route for a GP without the requirement of general oversight by a colleague. In 2001 the RNZCGP had 2940 active members, 92% of NZ Medical Council recorded GPs (Wilkinson & Flegg, 2001).

Prior to the RNZCGP accreditation and re-accreditation scheme, most NZ GPs engaged in self-directed CME. This varied considerably between practitioners but included reading journals, bulletins and reports from government agencies, and visits from pharmaceutical representatives promoting specific medications. Formal lecture-based seminars and courses sometimes could be accessed at local hospitals, general practice departments at the medical schools and post-graduate medical societies. In some localities GPs formed peer groups, meeting regularly to discuss problem cases, mutually-agreed topics or with an invited speaker for a specialty update. Some GPs would consult with practice partners on difficult cases, perhaps calling them into the consultation to provide a second opinion. Some had good working relationships with local specialists, whom they could telephone when encountering a problem beyond their experience.

The move from voluntary to compulsory, more prescriptive CME has both advantages and disadvantages. A RNZCGP survey of members' views on the accreditation and re-accreditation process had mixed responses. While the majority thought the programme was effective in helping to maintain their professional standards, some GPs' view was "attending a lot of CME does not necessarily mean you are a good GP" (Flegg & Wilkinson, 2001).

The effectiveness and value of CME in changing clinical behaviour has been questioned over the years, both by NZ GPs and also in research. Evidence indicates that didactic sessions do not appear to be effective in changing doctor performance, although interactive sessions can be more successful (Davis *et al.*, 1999).

Changing behaviour may be an incremental process requiring a number of exposures to new information before it occurs. An analogy can be drawn with motivational interviewing, an approach used primarily in managing addictions, demonstrated to be very effective in helping patients develop commitment and reach a decision to change (Wilk *et al.*, 1997). This approach uses brief intervention strategy to assist and motivate patients in recognizing and actively changing harmful lifestyle behaviours. The model is based on the hypothesis that giving up an addiction requires transition through the processes of pre-contemplation, contemplation, planning and then action. One session or exposure to new concepts may merely raise awareness without inducing a behaviour change. Repeated exposures may lead to a 'pre-contemplative' GP becoming ambivalent and eventually deciding to implement new practice behaviours.

Research coordinated through the Society of Medical College Directors of Continuing Medical Education explored how learning relates to change in order to better design education to facilitate change (Fox *et al.*, 1989). The researchers suggest that a qualitative approach to discovering variables of lifelong learning is more productive than traditional quantitative and correlational approaches, because it offers a framework for conceptualizing CME.

The rationale for our study was to ascertain whether the introduction of compulsory CME improved GPs' ability to assess and access CME to meet their learning needs. We aimed to canvass GPs' opinions on the usefulness of their various CME experiences and explore their views on their need for CME, experiences regarding its provision and perceptions on the effect of CME in changing the way they practice.

## **Methods**

A qualitative research approach was used to explore GPs' views on their CME needs and its provision. GPs' preferences for CME provision have been reported separately (Goodyear-Smith *et al.*, 2002). GPs generally valued personal interaction involved in meetings, demonstrated an opportunistic rather than needs-based approach to learning and had a preference for succinct, evidenced-based GP-focused content.

Initially GPs were randomly selected from a database of Auckland GPs. Most New Zealand GPs belong to an Independent Practitioners Association (IPA), groups of GPs located at various geographically separate sites who unite for joint promotion, quality improvement and contracting with government agencies.

Purposive sampling was used to deliberately include 'outliers' with respect to their gender, age, ethnicity and the socio-economic nature of their practice (Barbour, 2001). Additional GPs were selected from a list of rural GPs

practising in the central region of the North Island. This built sample diversity with respect to different subjects and themes along the main topics of interest to improve data robustness. It permitted a focus on 'cases that are rich in information because they are unusual or special' (Patton, 1990).

The interview data were collected in an iterative process in which responses from the early interviews were specifically checked in later interviews. Semi-structured open-ended questions were progressively focused to more structured questions. GP recruitment ceased once data saturation had occurred, with no new themes emerging (Strauss & Corbin, 1998). From a total of 25 GPs invited to participate, 24 consented and were interviewed by telephone. The GPs were paid for their time. The conversations were audio-taped, and although not transcribed, hand-written responses were double-checked with the audio recordings. The interviews were typically 30 min duration. A topic guide was used with questions regarding GPs' CME sources, preferences and views, how they identify their own CME needs, their perceived barriers to obtaining optimal CME, and what CME experiences had contributed to changes in the way they practised.

All the interviews were conducted by a visiting UK GP (MW) working in the Auckland Department of General Practice as an honorary research fellow. All three researchers are GPs who were involved in the study design, aware of the research aims, and contributed to paper preparation. Data analysis was primarily conducted by FG-S and MW.

A general inductive approach to the data analysis was used. Interview transcripts were collated and analysed to identify themes which were combined through ongoing discussions between researchers and re-reading of the transcripts until consensus was reached. The data were independently double coded as a consistency check and discrepancies resolved by adjudication.

Approval was given by the University of Auckland Human Subjects Ethics Committee.

## **Findings**

The subject group comprised 16 urban GPs from the Auckland region and eight rural GPs from the central North Island. There were 16 males and eight females with an age range of 37 to 75 years. The sample included members of European, Maori and Asian ethnic groups. Their mean number of years in general practice was 16 (range 2 to 39). Eighteen were Fellows of RNZCGP.

The key themes identified are presented in Table 1 with appropriate quotes from the GPs. There was overwhelming agreement that GPs must engage in a life-long process of CME to keep their knowledge and skills up-to-date.

A strong theme to emerge was that changing behaviour was an evolutionary process. One event was not perceived necessarily to change behaviour—rather

it was the reinforcing of the knowledge from different sources that led a GP to change his or her practice.

GPs who could identify a single event changing their behaviour were in the minority, and this generally related to activities other than traditional CME. For example, one GP had had a traumatic event with a complaint; another identified that viewing videotaped consultations conducted for the purpose of accreditation, although unpleasant to do, resulted in changing consulting skills, and the role of a GP's IPA was also identified in changing behaviour, such as antibiotic use. Occasionally, GPs identified a particular lecture or paper that contributed to changing their practice.

When asked where they obtained their CME, most GPs identified meetings, usually run by RNZCGP-registered CME providers or endorsed conferences. However with prompting they recognized a myriad of sources whence they obtained new knowledge including reading, internet sources, letters from specialists regarding referred patients, quality assurance measurements feedback and collegial discussions over difficult cases. Written material ranged from evidence-based journals, textbooks, free medical periodicals, guidelines and governmental bulletins.

Some felt that the College system requiring annual CME-credits quota encouraged people to get updated information. One GP perceived the system was not ideal, but was a start to ensure some CME was undertaken.

However, most were critical of the scheme. Some expressed strong negative feelings about requirements to collect points, with both a dislike of imposition from outside agencies and a perception of faults in the system—numbers of points collected were not an automatic correlation with competency. The system was seen as directing CME choice towards point collection, not need or interest. While the College goal is to encourage adult self-directed learning, some GPs believed the system actually discouraged a needs-based approach. One viewed College requirements as a very blunt instrument to identify the relatively few incompetent GPs.

By far the greatest barrier to obtaining CME was time. Many GPs stated that fulfilling College requirements took a great deal of their time that could have been used more productively. Re-accreditation was perceived by some as yet another stress in their already busy lives.

## **Discussion**

Our data suggest that for some GPs, one event was unlikely to change their behaviour. Rather change was evolutionary in response to acquiring new knowledge from a variety of different credible sources. This is reinforced by Grol, in whose opinion changing clinical practice “usually demands good planning and a combination of different interventions” (Grol, 1997) and Cantillon and Jones (1999), whose review of the outcomes of CME found that

**Table 1.** Principal findings of the study

Theme	Quotes from general practitioners
GPs must engage in life-long process of CME to keep knowledge and skills up-to-date.	<p>“Essential- from day one to the end of time.”</p> <p>“Important part of ongoing practice and personal development. Obviously integral part of our practice.”</p> <p>“Quite necessary. The pace of technology is changing so quickly, you have to keep up with that. There is no dispute on that, you don’t have any option.”</p>
Changing behaviour is an evolutionary process.	<p>“You use information, but often not directly. It’s often an infusion, more than anything.”</p> <p>“It’s an osmotic process”.</p> <p>“Not a single change but evolution—change comes from a number of sources”.</p>
GPs identifying single event changing their behaviour were in the minority – for example:	
Traumatic complaint event.	“So now I practice more defensively”
Viewing videotaped consultations for accreditation (although unpleasant to do).	“Although I hated it . . . it led to my being more attentive to the person’s face and body language, looking for cues”.
Particular lecture or paper contributed to changing practice.	“Guidelines on hypertension management was an important source of change”
Role of IPA in changing behaviour e.g. antibiotic use.	“The motivation has come from {my IPA}.”
College system requiring annual CME-credits quota encourages updating knowledge, ensures some CME undertaken.	<p>“I think it is a good way to motivate people and keep people going in CME.”</p> <p>“I do worry the current approach is process-orientated rather than outcome- or competency- orientated.”</p>
Strong negative feelings system and requirements to collect points:	

*(continued overleaf)*

**Table 1.** (continued)

Theme	Quotes from general practitioners
<p>Numbers of points is not automatic correlation with competency. System directs CME choice towards point collection, not need or interest – discourages needs-based approach</p>	<p>“I don’t think that a person who gets 2000 points a year is necessarily going to be able to practice General Practice.”  “I used to be goal orientated now I have to go to things.”  “Before these regulations I always made sure that I kept up to date. It really annoys me to have to go to courses to get points. It’s really dumb, stupid waste of time.”  “You can go along to what you want at the moment, you could spend the whole year not necessarily learning anything new, but still meet the requirements.”  “This is what the college requirements have reduced you to. You sit looking at those bloody points. You don’t do things, because it is necessarily something you need to up-skill on.”</p>
<p>College requirements very blunt instrument to identify relatively few incompetent GPs. Greatest barrier is time. Added stress to busy lives.</p>	<p>“I am being made to jump through really ridiculous hoops to become a member of the College.”  “A bit like making all boogie board riders wear wet suits to prevent six people drowning in 20 years”.  “You do need CME, but the way it’s got now is not user friendly.”  “There is a lot of work because of College requirements. I think they could make sure that you were up to date in a simpler way.”  “Problem is having to write everything down afterwards”.</p>

“most changes were brought about by a combination of factors”. Although attending a lecture may improve knowledge, didactic sessions do not appear to be effective in changing physician performance (Davis *et al.*, 1999). Passive dissemination of guidelines alone is unlikely to effect behaviour change (Lomas, 1991). Similarly, mailed educational materials alone are generally ineffective (Soumerai *et al.*, 1989). A systematic review by Davis (Davis *et al.*, 1995) found that effective change strategies in changing physician performance and health care outcomes included reminders, patient-mediated interventions, outreach visits, opinion leaders, and multifaceted activities. Audit with feedback and educational materials were less effective, and formal CME conferences or activities, without enabling or practice-reinforcing strategies, had relatively little impact. Evidence from a systematic review does suggest that interactive workshops can result in changes in professional practice (Thomson O'Brien *et al.*, 2002).

In all, this suggests that multi-faceted interventions and reinforcement from different sources combine to reach a ‘critical mass’ which over time encourages doctors to change the way they practice, often in an incremental manner.

While GPs generally believed that a CME event did not lead to “landmark changes”, not all modification in practice requires this step-wise approach. For some, a single event with sufficient impact, either negative or positive, was seen to be effective. This might be punitive-based, such as a complaint; the salutary message of viewing a videotaped consultation (“To see yourself perhaps as some of the others have seen you”); or incentive-based, the approach often used by IPAs offering bonuses to member GPs who attain specified targets. On occasion a single paper or lecture might offer sufficiently compelling evidence to lead to behaviour change.

Caution must be adopted in extrapolating from our results. We have assessed GPs' opinions of what has influenced them to change their clinical practice, not measured their actual changes in response to an educational event. However, our findings are in line with Cantillon and Jones' conclusions in their summary of systematic reviews of educational interventions that can effect change (Cantillon & Jones, 1999). They postulate three models of behaviour change: accumulation (behaviour change is triggered when evidence exceeds a threshold), conflict (behaviour is changed by a critical event) and continuity (some doctors constantly update their practice and are sensitive to outside influences).

Three forms of self-directed learning can be distinguished: informal, ongoing, habitual experiences directed at maintaining competence; semi-structured learning experiences that typically have their basis in immediate patient problems; and formal, intended planned activities (Eraut, 2001). Eraut makes the distinction between on-the-job and off-the-job learning. GPs in our study tended to equate CME with the latter, particularly attendance at CME meetings, courses or conferences. When prompted, they acknowledged on-the-job learning experiences as CME but viewed this largely as adjunctive, possibly

because these activities generally do not accrue CME credits. Informal ongoing learning experiences may include routine reading of journals, hardcopy and/or electronic bulletins, guidelines, interaction with pharmaceutical representatives, discussions with their colleagues and feedback from specialists' letters regarding referred patients. Semi-structured learning experiences involve immediate decision-making about best management for a particular patient and hence could involve consultation with colleagues (other GPs or specialists), literature searches and reading.

GPs have been shown to be poor at accurately assessing their specific learning needs, with weak correlation between their perceived and actual knowledge (Tracey *et al.*, 1997). It can be argued that emphasis on "off-the-job" learning promotes a one-dimensional approach to professional development. This approach is not in tune with a self-directed learning programme applying the Kolb adult learning cycle of identification of learning needs, addressing those needs and evaluating the outcome, with reflection inherent in the process (Kolb, 1984). Focusing on easily identified learning "events" for which credits can be awarded may under-value and diminish those other learning activities in which GPs have traditionally engaged, revolving around immediate patient care and habitual activities that keep them up to date.

Work commitments make time a precious commodity for GPs. Ironically the time required to get their credits and meet the requirements of the college and often also of their IPA may impede their ability to identify their own learning needs and structure their CME activities to specifically meet those needs. There is no clear, compelling body of research that demonstrates that mandatory CME ultimately results in improved GP learning (Leinicke & Francisco, 2000).

Our findings are supported by existing educational theory and research. One comprehensive analysis of continuing professional education recommended allowing for more small group and individualized learning; teaching adult learning theories and practices to education providers; and developing processes whereby practitioners may assess their needs and develop learning plans (Sattem, 1997).

In conclusion, GPs generally viewed change in clinical behaviour as an evolutionary process, with many different contributing learning methods and media. This is analogous to motivational interviewing theory, where a series of interventions gradually increase awareness of the need to change until change is finally actioned. An understanding of this GP behaviour change is important for CME providers, GP Colleges and funders, as our research also suggests that a narrow, credit-based approach to CME may inhibit GPs resourcing a wide variety of CME from both external and self-directed sources and hence gaining motivation to change. A system of CME points collection given mainly for external events can devalue and discourage other learning, given that time is a factor. It can detract from a desirable focus of identification of educational needs, addressing those needs and reflecting on the process. The challenge for

CME providers is to provide multi-faceted approaches to presenting material, facilitating needs identification and self-directed learning wherever possible, taking GPs' views and preferences into consideration and offering resources attractive to the time-strapped GP.

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