AN IMPROVEMENT-ORIENTATED EVALUATION OF CONTINUING MEDICAL EDUCATION PROGRAMMES IN SOUTH AFRICA

by

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DEDICATION

I dedicate this thesis to my family

My husband, Danie
My three sons, Danie, Wynand and Christian
My mother, Paula
My father, Wynand

DECLARATION

I, Sonja Grobler, declare that the thesis hereby submitted is my own work and that neither I nor anyone else at any other university, faculty or department has previously submitted it for evaluation. I furthermore cede copyright of the thesis in favour or the University of the Free State.

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S Grobler

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To the Almighty God who gave me strength to complete this study

Philippians 4:13: I can do everything through Him who gives me strength.

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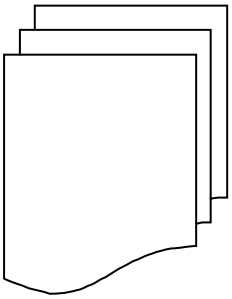

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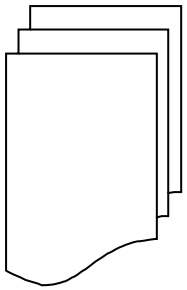

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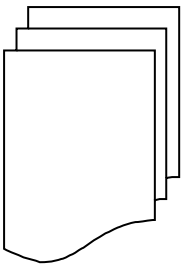

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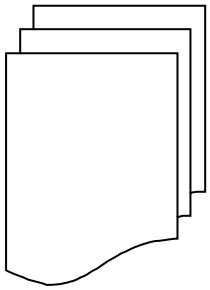

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LIST OF ABBREVIATIONS/ACRYNOMS

AMA	**American Medical Association**
ACCME	**Accreditation Council for Continuing Medical Education**
CI	**Confidence Intervals**
CPD	**Continuing Professional Development**
CME	**Continuing Medical Education**
DHSS	**Department of Health Services Study**
FMA	**Florida Medical Association**
FRCS	**Fellowship for Royal College of Surgeons**
GP	**General Practitioner**
LSA	**Apothecaries License**
LRCP	**License for Royal College Physicians**
MCPGE	**Medical Centre of Postgraduate Education**
MRCS	**Membership of the College of Surgeons**
NOMA	**Norwegian Medical Association**
RC	**Royal College**
RCP	**Royal College of Physicians**
RCS	**Royal College of Surgeons**
SA	**South Africa**
UK	**United Kingdom**
USA	**United States of America**
WFME	**World Federation for Medical Education**

STRUCTURE OF THE STUDY

AN IMPROVEMENT-ORIENTATED EVALUATION OF CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMMES IN SOUTH AFRICA

⇩

ORIENTATION

- The research problem
- Aims of the study
- Demarcation of the aims of the study
- Research design and methodology
- Definition of terms
- Layout of study

⇩

CPD PARTICIPANTS SATISFACTION | **PRESENTERS KNOWLEDGE**

CPD SYSTEM SATISFACTION | **KNOWLEDGE OF ADULT LEARNING TEACHING TECHNIQUES**

⇩

CONTINUING PROFESSIONAL DEVELOPMENT AT THREE SA UNIVERSITIES

⇩

CONCLUSIONS, RECOMMENDATIONS AND GUIDELINES FOR IMPROVING THE CPD SYSTEM AND PROGRAMMES

ABSTRACT

This study focuses on the improvement-orientated evaluation of Continuing Professional Development programmes for physicians in South Africa. The Medical Schools of Cape Town, Bloemfontein and Pretoria were used as sites for data collection in this investigation.

Theoretical aspects of what mandatory CPD in South Africa involves, as well as factors that influence effective teaching and learning methods to bring about change are provided. Improvement-orientated perspectives were obtained on the impact that teaching facilitating skills have on adult learning and behavioural changes in medical practice, with a view to better patient care. This aims at presenting the strengths and weaknesses of the mandatory CPD system and the effect it has on physicians and their medical practices.

The South African system, since implementation in 1999 to date, is outlined with a view to establishing how the implementation affected physicians and their medical practice. Presenters of CPD programmes were also included in the investigation to establish their knowledge on and training in facilitation skills. This was included in the study, since adult learning as well as presentation methods have an effect on the meaningful learning that occurs during a CPD programme.

The multi-method approach was undertaken to provide an in-depth study of the

strengths and weaknesses of the current mandatory CPD system that was implemented in South Africa in 1999. Both the qualitative and quantitative research methods were employed to determine the implications of adult learning and facilitation methods and the related knowledge of presenters of these programmes on CPD. Questionnaires were used to reach CPD programmes presented at three different Medical Schools in South Africa. The results of the questionnaire survey were accumulated and assumptions were made about the strengths and weaknesses of the system, based on the findings and statistical evaluations. Open-ended questions included in the questionnaires gave the researcher the opportunity to prompt respondents to express their feelings, attitudes, perceptions, expectations and frustrations with regard to CPD programmes as well as the CPD system. Furthermore, it presented an opportunity for them (responding physicians) to make recommendations on the improvement of the current CPD system and programmes in South Africa.

The amassed literature served as a framework and as a premise for the empirical research. It indicated strengths and weaknesses of the system and how these factors affect physicians' satisfaction during the period of gathering points for reregistration purposes.

The research undertaking was not just to benefit the student in obtaining a degree, but is aimed at contributing meaningfully to the improvement of the system, particularly with regard to presentation skills to enhance learning, and the outcomes of programme, namely the improvement of patient care.

The recommendations presented in the final chapter serve as a basis that the HPCSA and presenters of CPD programmes could use to improve physicians' satisfaction, and to add to the successful implementation of mandatory CPD in South Africa.

The study also reveals that the implementation of a mandatory system before the necessary administrative systems are in place and the programme presenters had acquired the appropriate presentation and facilitation skills, has proved unsatisfactory to physicians who are legally obliged to participate.

OPSOMMING

Hierdie studie fokus op die verbeteringsgeoriënteerde evaluering van Voortgesette Professionele Ontwikkelingsprogramme (VPO) vir medici in Suid-Afrika. Die Mediese Skole van Kaapstad, Bloemfontein en Pretoria is as plekke gebruik waar data vir die studie ingesamel is.

Teoretiese aspekte van wat verpligte VPO in Suid-Afrika behels, sowel as faktore wat effektiewe leer en leermetodes wat verandering in optrede teweegbring, is voorsien. Verbeteringsgeoriënteerde perspektiewe oor die effek van leerfasiliteringsvaardighede op volwasse leer, en die verandering in optrede in die mediese praktyk met die doel om pasiëntsorg te verbeter is verkry. Hierdie doelwitte verteenwoordig die sterk en swak punte van die verpligte VPO-stelsel en die effek wat dit op dokters en hul praktyke het.

Daar is 'n oorsig gegee van die Suid-Afrikaanse stelsel sedert dit in 1999 geïmplimenteer is tot op hede, met die doel om vas te stel hoe die implementering medici en hul praktyke beïnvloed. Die aanbieders van VPO-programme is ook in die studie ingesluit om hul kennis oor leertegnieke en aanbiedingsvaardighede vas te stel. Dit is ingesluit in die studie omdat volwasse leer sowel as die aanbiedingsmetodes ‘n effek het op betekenisvolle leer wat gedurende ‘n VPO-program plaasvind.

Die multimetode-benadering is toegepas om ‘n dieptestudie te onderneem oor die sterk en swak punte van die huidige verpligte VPO-stelsel wat in 1999 geïmplementeer is. Beide die kwalitatiewe en kwantitatiewe metode is aangewend om vas te stel watter implikasies volwasse leer, aanbiedingsmetodes en die verwante kennis van aanbieders van hierdie programme vir VPO inhou. Vraelyste is gebruik om VPO-programme wat by drie verskillende Mediese Skole aangebied is te bereik. Die resultate van die vraelysopname is versamel en afleidings is gemaak aangaande die sterk en swak punte van die stelsel, gebaseer op die bevindings en statistiese evaluerings. Oop vrae is in die vraelys ingesluit, wat die navorser die geleentheid gegee het om die respondente te pols om hul gesindhede, persepsies, verwagtinge en frustrasies in verband met die VPO-programme sowel as die stelsel uit te druk. Verder het dit ‘n geleentheid geskep vir die dokters wat die programme bygewoon het om voorstelle ter verbetering van die huidige stelsel en programme in Suid-Afrika te maak.

Die versamelde literatuur het as raamwerk en vertrekpunt vir die ondersoek gedien. Dit het sterk en swak punte van die sisteem geïdentifiseer sowel as hoe die faktore dokters se tevredenheid gedurende die periode van punteversameling vir herregistrasie beïnvloed.

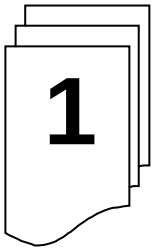
Die navorsing is nie alleenlik tot voordeel van die student vir graaddoeleindes onderneem nie, maar is daarop gemik om ‘n betekenisvolle bydrae tot die verbetering van die VPO stelsel te lewer, veral met betrekking tot aanbiedingsvaardighede ten einde leer te bevorder, en die programuitkomste,

ten einde pasiëntsorg te verbeter.

Die aanbevelings in die laaste hoofstuk dien as 'n basis wat deur die GBRSA en aanbieders van VPO-programme gebruik kan word om dokters se tevredenheid te verbeter, en om by te dra tot die suksesvolle implementering van verpligte VPO in Suid-Afrika.

Die studie toon ook dat implementering van 'n verpligte stelsel voordat die nodige administratiewe stelsel in plek is of die nodige kennis oor aanbiedingsmetodes en fasilitering deur programaanbieders ingewin is, onbevredigend blyk te wees vir dokters wat wetlik verplig word om daaraan deel te neem.

CHAPTER



ORIENTATION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

Medical knowledge is estimated to have a life expectancy of five to seven years (Watts 1980:129; Rubenstein, Parker, Meredith, Altshuler, dePillis, Hernandez & Gordon 2002:1011) – thereafter practitioners' professional knowledge may be outdated. In other professions, such as information technology, teaching and paramedic occupations, a similar problem is encountered. The knowledge explosion has a lot to do with this tendency. The challenge of the knowledge explosion is that medical practitioners (and other professions) cannot remain up to date and this could have detrimental outcomes for the patient (client). In order to remain up to date, all professionals therefore have to attend development programmes annually.

In an attempt to meet the demands of increasing knowledge and new developments within the discipline of medicine, Continuing Professional Development (CPD) was introduced in South Africa in 1999. This was done to help physicians to accomplish continuous updating of knowledge. Many

educators, however, question the value of conventional CPD, as CPD helps the physician to maintain an awareness of the current state of medical practice (Stein 1981:110; Abrahamson, Baron, Elstein, Hammond, Holzman, Marlow, Raggart & Schulkin 1999:1289). This is indeed a necessary function of all CPD programmes, but according to Lewis (1998:339) and Bolton (2002:320), effective CPD involves not only the provision of information that is relevant to learners, but should reinforce and continue to remind practitioners to live up to change, as well as to eliminate any barriers of development within their field of study. The effectiveness of CPD, however, is influenced by the way programmes are structured and presented. It is argued that CPD programmes should be structured in such a way that it assists the physicians to implement new knowledge that benefits the patient. Milne and Oliver support this argument: "To fulfil the broader objective, graduates must also know how to use the knowledge they have accumulated, for otherwise they may be little more than "idiot savants" (Milne & Oliver 1996:442). It is thus important for physicians to be functionally adequate. To be functionally adequate one needs to have sufficient knowledge, judgement and skills for a particular duty.

In the medical profession in general, the updating of medical knowledge is not a new trend, as it started as early as 1300 in Venice where physicians had to attend at least one anatomy and surgical procedure per annum. In 1930, the USA started with the development of courses for physicians to update their

knowledge. It was, however, only in 1952 when Vollan, a medical practitioner who was appointed to concentrate on CPD, suggested mandatory CPD.

With the passage of time, physicians have expressed a variety of concerns regarding mandatory CPD (Boland 1997: 54; Heard, Allen & Clardy 2002:752). They recommend for instance that CPD programmes should be evaluated in terms of the impact on patient care. Although the accreditation of institutions lends credibility to standard types of courses, these programmes usually have no significant impact on the physician's behaviour or improvement of patient care (Boland 1997:55; Downe, Macnaughten & Randall 2000). It is argued that certifying agencies should rather accredit self-help, problem-solving and patient care improvement systems, rather than lectures that do not promote change or participant involvement. The urgency for attending courses for reregistration purposes often forces physicians to attend unsatisfactory CPD programmes.

According to Cantillon and Jones (1999:1267) and Bolton (2002:321) it is foolhardy to demand that busy physicians participate in programmes only to gain CPD points for reregistration purposes. The efficiency of formal CPD courses is therefore of the utmost importance and an aspect that needs to be investigated, otherwise it may easily lead to a moneymaking and artificial practice. We must also keep in mind that the way in which the medical practitioner (as an adult learner) learns, differs from that of the undergraduate student. The typical CPD

participant usually comes from an age group of 25 years and older, while the undergraduate medical student's age varies between 18 and 25 years.

In South Africa (SA) where mandatory CPD has only been applied since 1999, there are mixed perceptions regarding the current CPD system (Natal Witness of 8 February 1999:9). Continuing Medical Education (CME) is referred to as CPD (Continuing Professional Development) in South Africa. Some physicians say that it cuts into work time, thus reducing their income (Citizen of 6 November 1998:6). They also feel threatened that the quality of their practice is being questioned. Yet the Medical Association of South Africa welcomes CPD as a "dream come true," saying that the system will compel doctors to keep up to date. However, many medical practitioners believe that if they are qualified and serving patients successfully, they should not have to be subjected to unnecessary red tape. They are of the opinion that CPD is an inappropriate prescription for a profession already under major stress. Doctor Julia Blitz, head of the CPD Task Group for South Africa's Academy of Family Practice, is of the opinion that the medical profession is supportive of the principle behind CPD, but concedes that practitioners are not yet convinced of the outcome (Exelby in Sunday Tribune of 14 March 1999:1).

CPD, as mentioned before, is a worldwide phenomenon that started as early as 1300 in Venice, Italy, and was already then aiming "to maintain what was considered a minimum standard of professional competence" (Ell 1984:752). It is

mandatory in 23 states of America, the United Kingdom, and in South Africa since 1999. The main aim of CPD is to better patient care and thus effectively change the behaviour of the physician. Unfortunately, this does not always happen in practice, as programmes are not planned according to certain criteria effective for learning and behavioural change.

Domisse (1997:40) suggests that certain criteria should be met before accreditation of courses occurs. The same author also suggests that the experience of other countries should be taken into consideration and taken advantage of in the South African context. Currently, university departments provide most courses; unfortunately, there are no hard and fast rules for criteria to ensure that the desired change is achieved after course attendance.

An appropriate question to ask is whether sufficient attention is paid to sound pedagogical principals in the design of such programmes, and whether careful consideration is given to effective teaching and facilitation strategies, not to mention the assessment of the proposed outcomes. According to Stein (1981:110) and Abrahamson *et al* (1999:1289) CPD can only be effective when it is based on sound educational principles. They also state that didactic instruction alone is not deemed sufficient to achieve desired goals and objectives in CPD. Evidence, as found by the research done by Gravett (2001), does suggest that learner-focused CPD activities that take place in small groups and adhere to the principles of adult learning, are beneficial to practicing physicians.

Arnold concurs (2002:504) and signposts that the action component of professional behaviour is the most difficult to measure accurately and reliably.

As mentioned before, the aim of CPD, according to Cantillon and Jones (1999), is to maintain and improve clinical performance. The assumption is that CPD will transform newly gained knowledge into action. In concord, Manning and Petit (1987:3544) and Bolton (2002:321), in reviewing the state of CPD in the United States of America (USA), concluded that: "Conventional, formal CME, unless learner-focused on specific behavioural objectives, does not alter a physician's practice measurably." In order to accomplish this, adult learning principles, for example determining their learners' needs, facilitating initial learning, making informed decisions about appropriate assessment and the design of performance tasks, have to be taken into account when programmes are planned. Teaching doctors what they already know is a waste of time. However, participants' existing knowledge and experience can serve as an interpretative framework for learning. Existing knowledge can be lifted to the conscious level by using techniques such as the opportunity to hypothesise based on experiences (Gravett 2001:12). In this way, new insight can be gained. The ideal would be to establish a dialogue between learners as well as between learner and educator, characterised by an attitude of reciprocity among participants. This dialogue should be underpinned by trust, interest, respect and concern for one another, even when disagreement and/or misunderstandings occur.

The format of any CPD programme is important in order to ensure the relevance and quality of the programme. CPD should be designed to affect physician's performance and it should be a continuing process occurring at the site of care, rather than away from it (Fourie *et al.* 1999:xv). To ensure that learning needs are met, the first session of a course should include some form of needs assessment, be it formal or informal. These needs should be determined by the patients' need for appropriate care. According to Boland (1997:53) and Heard, Alten and Clardy (2002:752), the challenge that consumers and providers of CPD are faced with is to devise a system and programmes that are wanted and needed.

The format of teaching and the knowledge of effective teaching practice by the presenter of the CPD programme are of the utmost importance. The presenter should have appropriate skills and knowledge to achieve in-depth learning by adults. Therefore CPD programmes should adhere to prerequisites such as the following:

- The programme should employ a variety of teaching methods.
- Issues that facilitate the physician's desired behaviour must be addressed.
- Learning techniques that prove to alter physician's behaviour have to be adopted by the presenter of programmes (Lewis 1998:335; Wilkerson & Irby 1998:389).

It is thus also important that the person developing the CPD programme should

take the domains of learning into consideration. These domains are: the cognitive domain and the psychomotor domain – designed to enhance the acquisition of skills – as well as the affective domain (Lewis 1998:336).

Lewis (1998), as well as Agere and Jorm (2000) also identify the essential elements of effective learning programmes such as: identifying the learning needs of the specified audience. Therefore, the emphasis of these programmes should be on patient needs, the use of small groups and the involvement of the learner's need-identification process and programme planning. The need for clear goals and objectives cannot be stressed enough. The learning to be achieved should be clear to all those concerned. Relevant learning methods should be applied, with the emphasis on participation in the clinical setting. Clinicians must know how to apply the accumulated knowledge. Stronger learner intervention, that is the participation in the mastering of new skills, should mark such educational intervention.

Active participation by the physician attending the programme is essential in the learning process. Effective learning requires a motivated learner, a programme that is convenient and affordable, a competent presenter and/or effective intervention. Repetition is also very useful in the learning process as well as the elimination of structural barriers to the behaviour that is being sought (Lewis 1998:33). The successful outcomes of CPD activities can only be ensured if the essential elements of learning are taken into consideration. The change in

behaviour that takes place after attendance of effective CPD courses could be measured in a practical way.

1.1.1 Methods to determine programme effectiveness

According to Babbie (2004), a variety of acceptable methods to determine the impact and effectiveness of programmes or a combination of these are widely used by medical schools worldwide. The following serves as examples of such methods:

- Cognitive tests of knowledge gained: these could be written or practical tests on new knowledge and are useful to determine prior knowledge and the amount of knowledge added.
- Chart review: the department at the medical school can audit patient charts and feedback can be given to physicians on how to improve patient care.
- Follow-up questionnaires: Questionnaires are completed by physicians on their methods of treatment, or the drugs they prescribe for specific diseases.
- Analysis referral patterns: The idea is to analyse hospital and specialist referrals and to investigate whether referrals will be more informed after a CPD course on that specific speciality. The change in referral pattern should be noticeable in those areas where CPD courses were offered.
- Attitudinal questionnaires: Attitudes towards certain behavioural patterns will be altered after more knowledge has been gained at a CPD course.
- Audience reaction questionnaires: and the main purpose being having a satisfied participant.

- Percentage of programme or course completion: The CPD programme that does not satisfy the physician's needs will have a higher dropout rate than those perceived to address real needs and a gap in knowledge (Stein 1981: 108; Miller 1990: 564-566; Keim, Johnson & Gates 2001:699).

All the evidence mentioned above make it clear that there are effective programmes in CPD, and that most of them involve more than simple lectures. It is important to emphasise once again that these effective CPD programmes involve not only the provision of information that is relevant to the physicians, but also reinforcement or continual reminders of the messages the provider tries to establish and the elimination of barriers to change by facilitating the desired change.

To be most effective, CPD is based on activities of the participants and represent data from their own practices (Lewis 1998: 339; Otteson & Patterson 2000:201). During the planning of CPD programmes, the physician's practice will have to be taken into consideration. Practitioners cannot give education top priority. They have a practice to run, lives to save, patients to treat and pain to relieve. According to Bacon (1999:55) it is important for presenters of programmes to remember that the integration of education into the adult's life begins by recognising that the educational experience is one of many competing demands on the adult's time and resources. All the demands in the physicians' lives lead to criticism of compulsory CPD.

1.1.2 Criticism of Continuing Professional Development programmes

Some programmes are very expensive, and with the rand/dollar exchange rate international programmes are unaffordable for South African practitioners. Another problem with courses is that they update knowledge and present new research results, or promote the use of new drugs available for the treatment of a specific disease, but this information is not applicable to the physicians practice. Practice audits are presently not done in South Africa to confirm that change has occurred in the treatment of patients after the knowledge has been gained. Most of the criticism against the current CPD system in South Africa as well as the rest of the world is that it does not measure change by means of recognised evaluation methods, such as audits on patient treatment data, drug prescriptions and blood test diagnostic requests. It furthermore does not incorporate patient data that could be an indicator of change in behaviour, change in referral patterns or the change in prescriptions for treatment of specific diseases, as part of the point system.

Most of the points are gained by academic activities such as being the promoter/supervisor of master's or doctor's degrees; receiving a doctor's or master's degree; taking part in study groups, journal discussions and so forth. No points are awarded for evaluation to measure the change in behaviour towards the patient, which could be an indicator of better patient care. This seems to be a serious deficiency as millions of rands are spent annually without

evidence that these programmes are achieving what it should. CPD has become a moneymaking business, while for those attending it is nothing more than social networking.

1.2 PROBLEM STATEMENT

With the above perspectives in mind, the research statements for the study come to the fore, namely:

- CPD programmes are ineffective in terms of the implementation of new knowledge, as they only upgrade knowledge (see paragraph 4.12.3 and 4.15).
- Are essential learning elements taken into consideration in the planning of CPD programmes (see paragraph 4.16)?
- Are the presenters of programmes knowledgeable in adult learning methods (see question 16 of questionnaire for presenters)?
- Are follow-up programmes to evaluate the change in performance that occurred after the attendance of CPD adequate (see question 1 under section B in questionnaire for participants)?

1.3 AIMS AND OBJECTIVES

The primary aim of the study is to determine whether CPD programmes currently offered by the various faculties of medicine in South Africa are achieving the expected and intended outcomes, namely to lead to improved medical practices.

The secondary aims are:

- to determine whether CPD courses alter the physicians' behaviour towards the patient; and with regard to the treatment of symptoms (see paragraph 4.12.3);
- whether the courses meet their current need for new medical knowledge and developments (see paragraph 4.11.1);
- to determine what doctors expect from CPD courses (see question 14 section C of questionnaire for participants);
- to determine whether presenters of courses are familiar with methods to enhance adult learning and alter the behaviour of medical practitioners (see question 16 and 17 of presenters questionnaire);
- to determine whether presenters do evaluate the course and learning material afterwards (see question 5 of presenters questionnaire and question 6 section B of participants questionnaire as well as paragraph 4.15.3);
- to determine whether presenters are available for subsequent follow-up support by means of e-mail, telephone or visitation of practice (see question (see question 3 of presenters questionnaire);
- to determine whether attendees have knowledge of the self-assessment methods that they need to be able to realise their shortcomings and to improve these by attending the programmes, (see paragraph 4.15.3, 4.15.4 and question 5 section 5 of participants questionnaire);
- to make recommendations to improve courses that will fulfil the physicians' needs (see question 32 of participants questionnaire).

In order to ensure that the above aims and objectives are met the following research methodology was employed. Some of these objectives will be achieved by means of the literature review, while others will be elicited by means of the questionnaire.

1.4 RESEARCH METHODOLOGY

The way in which research is conducted inevitably determines the findings of a particular study. The purpose of describing the research method is to explain how the research was conducted in this study, and it enhances the reliability and validity of the research. An integrated approach to research was used, as it is becoming increasingly relevant and leads to triangulation and verification of information. Both qualitative and quantitative research techniques were used in this study (Garbers 1996:283; Babbie 2004). Quantitative research was used for the design of the questionnaire to ensure that certain information was obtained. A qualitative dimension was added by including some open questions. Questionnaires were used for uniform data collection and to ensure an unbiased response from respondents (Suskie 1992:33; Leedy & Ormrod 2001:14). The information received from questionnaires was used for making quantitative analyses. The method of this research survey has been aligned with the two paradigms, namely the qualitative and quantitative research techniques, which have dominated the broad discourse of social research in the field of education for decades (Monnapula-Mapesela 2002:219). Both these methods contribute their benefits to the research investigation.

1.4.1 Theoretical perspectives on qualitative research

Implicit to a qualitative investigation is the assumption that participants voice their own thoughts and feelings. According to Imber (1997:14), the assumption is that participation gives adequate voice to diverse constituencies. This is possible, because qualitative investigation lends itself to the description of opinions and attitudes; it tests theories, determines facts and statistical analyses delineating any existing relationship between variables and assumptions (Welma & Kruger 2002:183). In a qualitative investigation, the human being is viewed as a "subject of knowledge principally capable of reflection, rationality, discursive communication and social interaction" (Kelchtermans & Schwatz cited in Waghid 2000:27). In this investigation, the researcher investigates the satisfaction of participants attending CPD courses presented by different universities in South Africa. The assumption is that CPD should keep participants up to date with knowledge as well as alter their behaviour towards patients and diseases. With the use of the qualitative methods in this investigation (for example the open questions), the researcher hopes to arrive at an understanding and gain insight into how physicians perceive the CPD courses as presented by the various medical faculties at universities in South Africa.

Physicians are invited to reflect on, discuss and become rational about the manifold factors that affect them when attending courses, and bring about change in behaviour. According to Waghid (2000:28), when researchers employ qualitative rationale research discourse, they involve both themselves and the

participants in dynamic meaning making within which both of them act as agents of change, suggesting possibilities for renewal and development. In this study, the participants are requested to suggest ways in which factors causing them dissatisfaction could be dealt with in future courses.

1.4.2 Theoretical aspects on quantitative research

Qualitative or phenomenological research methods are used in the field of education, but the quantitative method still stands out as a trusted method that can emphasise empirical quantifiable observations (Mafisa 1999). The objective of the quantitative research approach is to make investigators understand the exact meaning of events, interactions and relationships with and among people in specific situations and specific contexts (Welman & Kruger 2002). This furthermore allows the researcher to understand the behaviour of his/her target population in any given context, as human behaviour is generally shaped by what people experience within certain contexts.

The quantitative domain attempts to prove assumptions based on statistical data inferences. In this type of research, opinions and attitudes are described and their effect in relation to events or other variables are weighed on a scale. Since measuring scales are used to fit the response categories, the results of a quantitative survey can be generalised. This, however, depends on the careful development of the research instruments, its reliability and validity (Mouton 2001:10).

1.4.3 Multi-method approach

Although many researchers regard the qualitative and quantitative research methods as mutually exclusive and often view the qualitative approach as the antithesis of quantitative research (Waghid 2000: 25), the research method of this study combine both these types of research investigations. The conscious decision to combine the methods was brought about by the fact that the qualitative-quantitative continuum can be transcended when the researcher does not view the two methods as competitive, mutually antagonistic and ideal on their own (Waghid 2000). The qualitative component was enhanced through open-ended questions in the research instrument. The objective of the open-ended questions was to provide the respondents with the freedom to provide their own insight into the problem under investigation, revealing how they felt about compulsory CPD, as well as their feeling on the standard of the courses. It is of no value when open-ended questions protect the participants from being forced to respond only to those issues that the researcher considers related to the research problem; the questions should not prompt the respondents.

The fact that the basic premises for these two research methods and procedures cannot be reconciled, because of the qualitative-quantitative divide that might not be implicitly evident at first, does not render the two methods incompatible. It is in effect the same visible inter-phase that renders them potentially compatible, implying that the two systems of investigation could be cooperatively employed in research undertakings to give them more credibility. While Waghid (2000) claims

that neither of these research methods is without its own contradictions and pitfalls, Krathwohl (1998: 621) affirms their positive side by declaring that multiple research methods can strengthen research in a variety of ways. Once the researcher is able to transcend the qualitative-quantitative continuum, the benefits of both approaches can be accrued. This approach, according to which a variety of research investigation is performed, is scientifically known as triangulation. The value of this method is to enhance the interpretability of the research findings, reduce uncertainty and disabuse the investigator of the delusion that the solution or answer obtained is absolutely correct (Masepula-Mapesela 2003). According to Welma and Kruger (2002), any research that employs both qualitative and quantitative research methods to finally effect change, or support the kind of reflection among participants that leads to emancipation during or after the research process, could be considered transformative research.

Transformative research prevents a study from becoming an investigation that is performed only for the sake of compiling facts into a thesis. Schlemmer (1996), as well as Welma and Kruger (2002) advise that research should never be regarded as a mere assembly of information or data. Therefore the investigator should try and communicate their findings to people by means of seminars and workshops; explanatory visits to the decision maker; press releases; and/or presentation of the findings to the relevant institutions with the request that the content be incorporated into their policy documents. The goal of any research

should be to bring about change or solve the problem that initiated the research in the first instance. This is also the researcher of this study's goal therefore, the research findings of this research project will be presented at the Medical Forum of the School of Health Sciences at the University of the Free State as well as send to the Health Professions Board committee for accreditation of programmes. To be able to answer the research question, a planning strategy of the research is essential.

For the study to be effectively planned and executed, a research planning strategy was proposed. This enabled the researcher to conduct the project in a systematic and structured way.

1.4.4 Research Design

In order to arrive at the desired outcome through an active research investigation, the following actions were followed:

1.4.4.1 *Data analysis*

The data is described by means of standard deviations or medians for continuous variables and frequencies and percentages for categorical variables (SAS/STAT 1989), as well as 95% confidence intervals (CI) for the percentages (Altman, Machin, Bryant, Gardner 2001). The analyses were done by the Department of Biostatistics at the University of the Free State (UFS).

1.4.4.2 *Study size*

The participants that attend CPD courses at different universities in South Africa were asked to fill out the questionnaires for the study. The questionnaires were handed out after CPD courses. Presenters of programmes were also requested to complete questionnaires.

Eighty participants attended the course on health management at the University of Cape Town. The course was presented over a period of three days. Forty questionnaires were retrieved. In Pretoria 300 participants attended the one-day dental health course, one hundred and two questionnaires were retrieved. 250 participants attended the course of the Faculty of Health Sciences in Bloemfontein over a three-day period on critical care management. Only 68 questionnaires were retrieved.

630 questionnaires in total were handed out and 210 completed questionnaires were retrieved. A final response rate of 34% was achieved. Thirty presenters' questionnaires were handed out and twelve completed questionnaires were retrieved, giving a 40% response rate. Eight of the presenters were male. The presenters' age varied between 38 years and 63 years of age. All the presenters were involved with medical education of undergraduate students at academic institutions.

The presenters (100%) made use of the monologue method. No participant

assessment, of the new knowledge gained, was done at any of the courses.

1.4.4.3 *Demarcation*

Formal programmes for general practitioners as well as specialists in South Africa, such as the critical care course in Bloemfontein, the dental course in Pretoria and the health management course in Cape Town, form part of this study. The programmes offered at the Universities of Bloemfontein, Cape Town and Pretoria were included in the study. The University of Westville in Natal was not included, as no course with sufficient participants was available at the time of the study. A course presented by Doctor Barrett in Natal had to be cancelled because of a lack of interest.

1.5 SIGNIFICANCE OF THE STUDY

This study will make a contribution by answering some of the questions dealing with uncertainties, concerns and criticism already expressed by physicians about the outcomes and practices of CPD in South Africa (see paragraph 1.1.2 and 1.3).

There is also uncertainty about the course presenters and facilitators responsible for the presentation of programmes and their ability to plan the programme in such a way that the desired change is brought about. Recommendations are made to all stakeholders involved in South African CPD to ensure that the current

system lives up to the expectations of all involved and brings about the desired improvement in practices and behaviour (see paragraph 1.1.1).

Recommendations are also made to the accreditation agencies, such as the accreditation body of the Medical Schools of Bloemfontein, Pretoria and Cape Town, regarding criteria for programmes and a revised point system, based on patient care and patient chart audits.

1.6 STUDY OUTLINE

The study comprises the following chapters:

In this chapter the background to the study is provided, namely to:

- clarify the research problem;
- identify the research questions;
- describe the research methodology; and
- emphasise the significance of the study.

Chapter 2 provides an international perspective on CPD and attempts to draw on the rationale for CPD programmes of various countries as well as the differences and similarities of the various programmes. In chapter three, the South African perspectives are explored, and the legislation influencing CPD is discussed.

In chapter four, attention is given to essential elements of learning and effective teaching techniques, as they play an important role in the outcomes of CPD

programmes. Attention is also given to the way in which the quality and effectiveness of academic and training programmes could be assessed, as well as to the assessment of specific programmes included in this study.

Chapter five describes the research process that was followed to investigate the effect that CPD courses offered by the various faculties of medicine in South Africa has on physicians' behaviour, as well as to investigate the presenters' skills to ensure that effective learning occurs and that the desired change is brought about.

Chapter six draws certain conclusions from the research findings and makes recommendations to the various stakeholders involved in South African CPD.

In order to ensure a common understanding of concepts, the following working definitions are provided for this study.

1.7 CONCEPT CLARIFICATION

The following terms need to be defined to clarify their meaning in the context of this study.

1.7.1 Continuing Medical Education (CME)

CME is defined as an intervention aimed at the improvement of health care outcomes through learning, either by individual efforts or as part of a continuing

education provider. Such learning ought to result in the maintenance or enhancement of professional competence and performance or in health care organisational effectiveness and efficiency. In this thesis, the researcher focuses on the formally structured programme, as presented by the academic faculties of medicine as well as programmes presented by Specialist Societies internationally.

1.7.2 Continuing Professional Development (CPD)

CPD is defined as a process aimed at lifelong learning, either through individual effort or as part of professional development programmes. Learning may result in the maintenance and/or enhancement of professional competence and performance. In South Africa CPD is more frequently used than the term CME, but it refers to the same practice and concept. In this thesis, CPD will be used consistently.

1.7.3 Competence

The term "competence", as used here, represents the attributes (knowledge, psychomotor skills, attitudes and judgement) needed to function as a physician. The practising physician has to have the necessary knowledge, attitudes and judgement to be able to provide the best patient care.

1.7.4 Adult learner

The adult learner can be classified as an adult based on the stage of their life cycle, as

well as acceptance by society that the person concerned has completed his/her degree in medicine, is now fully incorporated into the community, and continues to participate in educational activities (Gravett 2001). Adult learners bring accumulated experiences with them into educational events. In this thesis, physicians are seen as adult learners, but they are also professional adults, who practise a medical profession. Adult learners bring these different roles with them into the educational setting.

1.7.5 Learning

One can distinguish between two types of learning, rote learning (memorisation), and meaningful learning (learning with understanding). When one learns, one makes meaning of something, and develops and builds ideas around it (Merriam & Caffarella 1999).

1.7.6 Teaching

The main purpose of teaching is to assist people to learn, but it is also a process of facilitation, guidance and mediation of learning. Course facilitators have to be acquainted with the different learning techniques to bring about effective learning and behavioural change (Leamnson 1999).

1.7.7 Improvement-orientated

The practising physician has to have the latest knowledge and skills to be able to provide the patient with the best care possible. CPD courses should therefore be

orientated to improve physicians' knowledge and skills in such a way that it can be implemented in their patient treatment practice.

1.7.8 Evaluation

Evaluation is about the determination of the value, merit or worth of a particular object or occurrence in relation to specific criteria, often using measurement in the process. The mode of evaluation can be summative or formative in character. Evaluation can be done internally by colleagues or externally where visiting academic peers are involved (Fourie, Strydom, Stetar 1999: 83). Evaluation determines the standards whereby quality will be judged and whether these standards will be absolute or relative. It applies the standards to the object or occurrence and being evaluated to determine its value.

1.7.9 Assessment

Assessment is aimed at reflecting the overall status of the system on those areas assessed. Individual learner assessment usually diagnoses or compares individuals' performance.

1.7.10 Measurement

Measurement is aimed at simple quantitative description.

1.8 LIMITATIONS OF THE STUDY

As with any other study, this research also has some limitations.

- Some of the literature available on this subject was too expensive to obtain because of the rand/dollar exchange rate.
- Physicians attending courses were not always willing to complete the questionnaires for this study.
- Presenters were not cooperative in answering the questions posed to them on programme planning and adult learning.
- Programme organisers were unwilling to give permission to hand out questionnaires for research purposes. They did not want participants to be burdened with unnecessary paperwork.
- Some of the references used in the study had been published more than five years ago, but were included in this study as they were mainly used for the history of the CPD systems in other countries.

1.9 CONCLUSION

From this chapter it is eminent that the format of CPD programmes is essential to ensure the relevancy and quality of programmes. The aim of CPD, however, should always be kept in mind when programmes are planned. Presenters should be familiar not only with the latest trends in patient treatment and research outcomes, but also with effective adult learning methods that are available. These methods should be used to facilitate learning that will bring about change

in the physician's behaviour towards and treatment of the patient. In this way, better patient care would be ensured.

Continuing Professional Development for physicians is a worldwide phenomenon. It is therefore important to get an international perspective on the importance of CPD in different countries.

CHAPTER 2

AN INTERNATIONAL PERSPECTIVE ON CONTINUING MEDICAL EDUCATION

2.1 INTRODUCTION

We live in an age in which lifelong learning is emphasised. People today (2004) therefore need to accept the fact that all of them, irrespective of profession and training, in an attempt to keep abreast of developments, should become lifelong learners. This is also applicable to physicians who should illustrate the truth of Plato's saying that education is a lifelong process (Fore & Bouis 1987:522). It is thus very important for physicians to learn throughout their professional careers, and not consider obtaining their medical qualification the end of their training.

In this Chapter Continuing Medical Education (CME), as a worldwide phenomenon dating back as far as 1300s, is discussed. The term CME will be used in this chapter, as it is more commonly used in international countries than CPD that is preferred in South Africa. The countries that are discussed in this chapter were selected because of the availability of literature as well as an attempt to provide an overview of events in Europe, the United Kingdom and the

United States of America. Florida in the USA was singled out because of the published historically and current information available on its CME status. CME in some of the countries will be discussed in greater detail, historically as well as from the current view, than others because of the lack of literature and affordability of obtaining literature from abroad. Unfortunately, no literature could be found on the rest of the African continent, except for some programmes on Malaria and Aids. These programmes, however, are not to update the knowledge of physicians, but to inform the public on the prevention as well as the symptoms of these diseases.

2.2 CONTINUING MEDICAL EDUCATION IN EUROPE

During 1993, the World Federation for Medical Education (WFME) conducted a project exploring and promoting the status of CME in Europe. In this project the Association for CME, the Association of Medical Schools in Europe, the Nordic Federation for Medical Education and the European office of the World Health Organisation were found to be the main co-sponsoring bodies for CME in Europe (Walton 1993:68). Some countries in Europe that have made progress regarding CME programmes are Italy, Austria, Belgium, Bulgaria, Croatia and Czechoslovakia. The features of CME programmes in these countries are discussed in the following paragraphs.

2.2.1 Italy and Venice (1300-1800)

The government of late medieval and early modern Venice pursued CME as early as the 1300s. This was in pursuance of maintaining what was considered a minimum standard of professional competence (Ell 1984:752). The state, in playing a major role in this initiative, obliged physicians to attend lectures, dissections and case presentations offered at universities and hospitals from time to time. These rules, enforced on physicians, kept them a step ahead. Documentation, case study reports and operative procedures, proved that these programmes were very successful and that participating physicians were extremely advanced. A number of regulations that impacted on medical practitioners applied to physicians' initial training as well as their subsequent continuing development.

A number of other developments also occurred with the passage of time. In 1348, for example, the Senate of Italy appointed three noblemen to take health measures to ensure that patient care was optimised. In 1486, Venice established a permanent Board of Health for the first time. The Board of Health was responsible for the implementation of laws, giving structure to the medical profession and ensuring optimal medical care to patients by keeping a watchful eye on training and the registration of medical doctors. This was the *status quo* for almost 300 years.

In the 1700's, the Board of Health had a problem, as more than 300 years of laws pertaining to medical training and attending lectures to keep up to date for reregistration as medical practitioners were accumulated on the medical law books. The medical guild and the Board added new laws each year, but they never revised or removed those that had served their time. Some of the laws superseded others. The early effort to certify the ability and training of physicians can be traced in these laws.

The Venetian government took medicine and specifically surgery seriously, and took one of the earliest forays into CME in this regard. In the 17th century, Italy already maintained surgical training in some universities. The Board of Health also required that physicians attend two anatomy lectures or dissections annually as part of their continuing training and development. In 1773, the same Board demanded a letter of participation for attendance, as it became clear that a gentleman's word was not enough.

Even with the defection of Italy to Austria in 1723 the Board of Health did not disappear. In 1801, the requirement for physicians to attend two classes per annum was dropped and with this decision five hundred years of compulsory CME came to an end. Today, there is little differentiation between CME and other post-qualification training in Italy. There is no clear agreement on requirements and standards, as most programmes are planned for certification or as an additional qualification rather than keeping up to date with new knowledge

(Walton 1994:340). Pharmaceutical companies, however, play a large part in organising informal ways of CME. Yet, the National Health Service (NHS) would prefer to reinstall this as compulsory for the reregistration of physicians, but the main barrier is the lack of regulations regarding continual accreditation of professional competence. Although discussions are going on between the various stakeholders, no formal consensus has been reached on the way forward.

2.2.2 Austria

In Austria, no strict regulations for CME exist, although various medical associations play an important role in the provision of CME programmes. Attendance, however, is voluntary. There is much resistance to CME being made mandatory, as the government, on the one hand, does not finance any CME programmes, while physicians use the lack of time for attendance as a reason for being negative. It is nonetheless evident that regulations are necessary, but this will have to come from the medical profession itself. Currently the most popular and best attendant provision of CME, although informal and voluntary in Austria is through conferences and courses offered at medical schools (Holl 2002:335).

2.2.3 Belgium

During the past 40 years, the Association of Former Students of the Medical School at Ghent in Belgium has arranged postgraduate training courses, which

could be considered the equivalent of CME. In five Belgium provinces, there are institutes for CME offered by university staff. The Scientific Association provides training courses for General Practitioners, as well as medical schools in Louvain, Liege and the Free University of Brussels. No assessment of these courses takes place and no part is played by the Ministry of Health or Social Security in providing resources for CME. Most of these courses are free of charge, as pharmaceutical companies sponsor them (Vysohlid & Walton 1990:410).

2.2.4 Bulgaria

Bulgaria is in the process of transforming to a market economy, with consequent problems. The Scientific Association of Medical Education is giving attention to Continuing Medical education, but generally, CME is equated with postgraduate qualifications. It is voluntary and no government funding is available for the provision of CME programmes.

2.2.5 Croatia

CME in Croatia is compulsory, as doctors have to recertify every six years. All Medical groups are involved in CME and the Ministry of Health finances it. Teaching is by courses with both theoretical and practical content, using computer-assisted methods and multi-media centres. Medical school university staff usually does the training (von Engelhardt 1999:2-4).

2.2.6 Czechoslovakia

In Czechoslovakia, there is agreement for the need to ensure good standards for medical doctors. After privatisation of the Health Care services in this country, the control and financing of CME by the state no longer exist. The previous network of CME centres has also been dissolved. Currently universities and medical associations are responsible for providing their members with the necessary CME programmes. Since 1992, CME became a formal part of medical education. The main sponsors for CME, as in many other countries, are pharmaceutical companies, and this is done through conferences (Walton 1994:341).

An important provision of CME in this country occurs by means of video recordings that are used during training sessions by providers of programmes and by study-groups. The video recordings are issued by the Institution for Further Medical Education and can be ordered by post. A strong emphasis is placed on physicians engaging in self-evaluation processes. A recent development in Czechoslovakia is the recognition for greater international cooperation to assist with new interactive methods and promote distance learning and joint medical research.

2.2.7 Denmark

In Denmark CME is voluntary. In contrast with many other countries, universities and medical associations are not involved in the provision of CME programmes.

Physicians have to attend programmes in other countries, or those provided by pharmaceutical companies and specialist societies. Specialist societies and pharmaceutical companies are the main source of funding for CME programmes. There is a move towards legislation to make CME mandatory with the aim of setting standards for health care. Currently, finance and time, as seen before, are also the main barriers to desired progress in this regard (Kaartinen & Diwan 2002:491).

2.2.8 Finland

Legislation obliges employers in hospitals and health centres to provide CME for their own staff. Provision of programmes is usually through one to five day courses and symposia. Some training is done through electronic mail. The trainers are selected through university committees and specialist societies. It is proposed that in future recertification will be required by regulations from the European Union itself.

2.2.9 France

The emphasis of CME in France is on enhancing the quality of medical care. Unfortunately, there is still a gap between aims and actions (theory and practice) in CME. National and regional committees, in cooperation with government bodies, usually design national programmes and allot social security grants, which provides the main funding for CME (Lecoq & Balblanc 1999:719). There are no career or financial benefits for staff that undertake courses, but they are

reimbursed for attending courses lasting for two days and longer. There is a trend to make CME mandatory, but not for reregistration purposes. The main barriers for mandatory CME are the doctors' lack of motivation to participate, and rivalry between professional bodies. A philosophy that is recently being advocated is one of rewards instead of penalties for not attending. It seems as if more innovative ideas and arguments regarding the value of CME is needed from international bodies to convince French physicians of the value of CME.

2.2.10 Germany

The implementation of CME in Germany is the responsibility of the 16 states and one federal chamber of doctors. It is a legal obligation to attend and doctors are responsible for the payment of their fees, although some pharmaceutical companies do assist with costs. There are standard curricula on specific topics, for example first aid and echocardiography. However, it was suggested that the best way to promote CME in Germany would be by introducing recertification (Knuth & Opderbecke 1999:405).

2.2.11 Greece

In Greece, medical staff of state hospitals are allowed time off for CME attendance. The State Health Insurance, which is a large employer of medical staff, does not yet support CME. A lot of funding comes from pharmaceutical companies through product-orientated training. There is, however, no formal organisation of CME. There is a telemedicine CME programme available as well

as medical meetings with lectures and discussions. It has been recommended that in future CME should be a part of organised health services (Walton 1994:340).

2.2.12 Hungary

The Postgraduate Medical University has been responsible for CME in medicine, pharmacy, dentistry and psychology since 1956. CME is compulsory, requiring a two-week course (60 hours) every five years. According to von Engelhardt (1999), the funding for CME comes from the Ministry of Welfare, and programmes are offered at teaching hospitals and medical schools. There are also conferences on specific topics offered by medical associations and scientific societies. The identified drawbacks, in the Hungarian system, are the lack of evaluation of effect on everyday practice and the absence of evaluation at the end of the course, although this is agreed to be vital.

2.2.13 Israel

The organisation of CME in Israel is very inconsistent, because no standards are set for programmes. CME is unlikely to become mandatory or include reregistration. Funding for CME is mainly through the Sick Fund of the General Labour Federation, which reimburses two-thirds of attendance fees. It was suggested that an entirely new approach with contact learning, self-education and well-defined up to date programmes should be implemented as a way of ensuring quality health care.

2.2.14 Netherlands

Although there is pressure from the public and the profession to implement CME in the Netherlands, this initiative does not have enough support from medical educators. Health insurance bodies fund training by reimbursing fees. Unfortunately, CME courses are not frequently attended. The same group of practitioners generally attend CME initiatives. The others will probably attend only if it is made mandatory and leads to reregistration (Montrieux, Collette, van Lochem, Baldewyns & Orban 2000:852).

2.2.15 Norway

Although CME is voluntary, the participation rate for CME in Norway is high. CME is monitored by the Norwegian Medical Association (NOMA) on behalf of, and with some financial support from the government. Regional subcommittees of NOMA organise courses throughout the country. According to Walton (1994), courses are still the main approach, while the content and method for every discipline are well supervised by NOMA and subcommittees. NOMA, with their educational divisions, produces teaching materials to assist educators in providing courses.

2.2.16 Poland

In Poland the entire health care system is currently in a process of transformation because of an array of political changes. Currently, though, the Medical Centre of Postgraduate Education (MCPGE) and its regional bodies are responsible for

CME. The Ministry of Health funds it and legislation is in preparation for CME to become mandatory. The main method of CME is workshops, but EuroTransMed supplies satellite transmissions on medical education for CME that are becoming increasingly popular. Encouragement from international bodies would provide a useful impetus for further and better developments.

2.2.17 Portugal

In Portugal, universities and hospitals provide CME programmes that are mainly funded by pharmaceutical companies. Legislation on CME is very general and unregulated. There is a need for specific legislation on and proper financing of CME, while the involvement of the universities and Ministry of Health is desirable. The main problem preventing effective CME so far was identified as the lack of a body that will take responsibility for coordinating and organising CME. It would be helpful if Portugal could work with other countries and learn from their experiences.

2.2.18 Russia

The Central Institute for Advanced Medical Studies (CIAMS), in collaboration with Institutes and medical schools throughout Russia, is responsible for CME. The Ministry of Health fully funds CME. Recently, private and cooperative companies have started to supply CME material on a commercial basis. Training is done by means of courses and workshops, with many books and journals devoted to CME. There is legislation stating that physicians have to complete a certain

number of courses in a four to five year period. However, a lack of resources is one of the main problems, although doctors will have to be motivated to buy into CME (Anonymous 1993:1503). It is envisaged that future trends will include distance learning.

2.2.19 Slovenia

CME is a particular responsibility of the newly created Slovenian medical system. The medical associations, in association with medical faculties, generally provide CME. There is no coordination of CME on a national level and training usually takes the form of lectures. Although CME is not mandatory, it is speculated that CME will be introduced for reaccreditation in the near future (Manning & Petit 1987:3544).

2.2.20 Spain

In Spain, the National Health System has the main role in CME and supplies the necessary funding. There is support for making CME mandatory, but not for the purpose of reregistration. The latter would probably increase motivation and improve standards of patient care as well as the standard of courses provided. It is advocated that the Medical Task Force should put pressure on the relevant authorities with properly organised CME (Walton 1994:339).

2.2.21 Sweden

The need for lifelong learning in medicine is well accepted in Sweden.

However, there is no legislation on CME in this country, nor is there likely to be in the near future. Teaching is mainly presented by courses and there is very little commercial material available, unlike Norway were educational material is provided by NOMA. No specific person or body is responsible for the formal organisation of CME. There is a lack of resources, as no funds are available that physicians can apply for to obtain financial support for attendance of courses. The need is expressed for a more systematised provision of CME, while there is a need to learn from international, successful and experience organisers of CME.

2.2.22 Turkey

The aim of CME in Turkey is to motivate doctors to become lifelong learners and to keep up to date with new knowledge, as well as to provide adequate training for all physicians. Currently there is no formal organisation of CME. The Turkish Medical Association is working on establishing guidelines for CME. In collaboration with the Ministry of Health, universities and medical societies, there is an anticipated move to establishing a formal programme. In the meanwhile, CME provides an informal source of education to interested doctors (Walton 1994:340).

2.3 CONTINUING MEDICAL EDUCATION IN AUSTRALIA

In the early years of Australian medical practices (1578 – 1657) there were not many licensed physicians. During this period, doctors had to be licensed in order to practice medicine after their internship. By 1614 there were only 30 fellows

registered with the Royal College of physicians of London (RCP), and according to Webster (in Simpson 2000:846), only 41 licensed physicians. This made it a very small elite profession. For the next 200 years physicians remained university graduates, surgeons and apothecaries and continued to learn their trades with qualified professionals, as apprentices, until the tutor was satisfied that the apprentice was able to do the work without supervision. Therefore, they could perform surgical procedures under the supervision of physicians. When Australia was colonised in 1750, most of the first medical practitioners were surgeons educated in this way.

The training model for physicians in Australia was largely influenced by the model followed in the United Kingdom. In the early years, physicians from the United Kingdom (UK) came to Australia, a then British colony. It is therefore necessary to briefly discuss the early history of the UK's training model. In 1800, the Royal College of Surgeons (RCS), in London had been established as an elitist college. It was ruled by a self-perpetuating oligarchy of London surgeons and they claimed the right to examine all general practitioners who wished to practice surgery. In 1843, the RCS legitimised its antidemocratic ideals by creating a fellowship, the FRCS, for the surgical aristocracy. The first 600 Fellows for this diploma were chosen by nomination and their successors by examination. The general practitioners resented this way of decision-making. The education of general practitioners required teaching in surgery and the strengthened RCS regulated this. The society for Apothecaries regulated the teaching in general

medicine and ideally every English general practitioner held both the membership of the College of Surgeons (MRCS) and the apothecaries license (LSA). In reality, however, many held only one of these diplomas. Eventually the RCP abandoned its policy of superb isolation in medical education, and in 1861 this college offered its own diploma, the LRCP. Later, the two colleges offered both diplomas as a conjoint qualification. By then only diplomas were offered, not degrees.

The physicians who wished to establish themselves in Australia were therefore trained and qualified as mentioned in the paragraph above. These physicians soon had to start with the coordinating of CME in the Australian colonies (Simpson 2000:848).

2.3.1 Continuing Medical Education in Australian colonies

As already mentioned, since British colonists settled in Australia and New Zealand it was natural that the members of their medical workforce were mostly products of British medical schools. In 1788, the first eleven medical doctors were brought to New South Wales. All were surgeons and thus had been educated by some form of apprenticeship. An apprentice, a young doctor in training, worked with a registered physician until his practical experience was sufficient to practice without supervision.

Later colonies like New Zealand, Victoria and South Australia recruited their own

medical practitioners. The London elite understandably did not see any reason for them to migrate to the ends of the world. The few that migrated, though, had tuberculosis and had the delusion that New Zealand and Australia were exceptionally healthy for sufferers, as the temperature was higher and much dryer than in the UK. In the nineteenth century, the bulk of the medical force in South Australia held formal English qualifications. In 1952, Anthony Brownless migrated to Melbourne and became the founder of the University of Melbourne Medical School, after which Australian physicians were trained in Melbourne.

2.3.2 Continuing Medical Education in recent days

In the professional colleges, almost all disciplines of medicine are actively involved in strategies where members are required to accumulate a number of points or credits to justify their continued practice. Most of the development involves collection of points/credits over a five-year period, which can be obtained by participation in a variety of CME activities. Such activities include congresses, journal clubs, self-assessment tests, teaching, research, practice audit and even examination. Most disciplines have resisted peer-review or compulsory examinations, although Australian physicians are contemplating a peer review questionnaire and a practice quality review for those who fail to measure up to minimum standards (Nel 1994:463).

2.4 CONTINUING MEDICAL EDUCATION IN FLORIDA, USA

The Florida Medical Association, (FMA) as early as 1958, laid the foundation for the

association's involvement in CME by sponsoring postgraduate courses. The FMA also offered advice and coordination to presenters of courses on programme planning and dates suited for programmes in order to prevent duplication of effort. The association also performed a certain amount of investigation, publicised courses and encouraged doctors to undertake postgraduate courses.

In 1965, the council reported that courses presented during 1964 were not geographically ideally distributed. The western part of the state had fewer courses. The council also recommended closer relationships with medical schools to establish better programmes for CME. In 1966, several proposals were studied to make CME more available, including radio and television links between medical schools and hospitals, travelling teaching teams from medical schools and regional seminars (Fore & Bouis 1987:523).

In October 1971, CME became mandatory in Florida and 30 hours per year were required to maintain membership in the Florida Medical Association. Few institutions were, however, available to produce quality programmes for CME. In March 1974 the Council on Scientific Activities recommended that a plan be developed for the accreditation of CME programmes across all the states and that these programmes need to be evaluated following a request by the sponsoring group.

Mandatory CME made the accreditation of programmes necessary. On March

28, 1974 FMA members and the committee met to instruct their members on the AMA's accreditation programme. The first institution to be accredited was the Halifax Medical Centre, Dayona Beach, in 1974. The accreditation programme continued, resulting in 25 FMA accredited CME providers by 1987. In 1981 the Accreditation Council for CME (ACCME) became the national accrediting body for CME and developed a set of "essentials" for the provision of quality CME programmes (Bouis & Fore 1984:942). These essentials became effective as from January 1, 1984 and were applied to all national and interstate CME sponsors. Today, in 2004, this Council is still responsible for CME in the USA. As the ACCME was coordinating CME in the USA in a structured way, CME in the United Kingdom came under review by medical societies and the Postgraduate Advisory Council, and certain suggestions were made to make this process of coordination of CME possible.

2.5 CONTINUING MEDICAL EDUCATION IN THE UNITED KINGDOM

The history of CME in the United Kingdom can be traced back to the first meeting of the Medical Postgraduate Committee that took place on 11 October 1945. In 1946, the universities in the United Kingdom established another body, the Postgraduate Advisory Council for the coordination of CME, with delegates from all of the South West of the United Kingdom. For years, the council was the forum where progress in medical postgraduate education for medicine was kept under review. The broad structure of postgraduate education, as we know it

today, was designed during the dark days of World War II. According to Cates (1979), each university with a medical faculty should play its part by providing courses in its undergraduate teaching centre and arranging courses in suitable hospitals within the zone of influence of the university (Cates, 1979:7). To give structure and impetus to the process and prevent duplication it was suggested that each university should appoint a special committee or board of postgraduate medical studies and should also deputise a person to undertake the organisation and general supervision of these courses.

As the function of medical postgraduate education became more complicated, its administration had to be divided into several smaller bodies and committees. The usefulness of the Council became less clear and it was dissolved in 1973.

No literature for the period after 1973 could be found to see show how CME developed and whether the same process and rules apply today.

2.5.1 Effect of the health act on Continuing Medical Education

The National Health Service Act of 1946 came into effect in England in 1948. Under this Act the Department of Health promoted that the coordination of CME should be under supervision of deans of medical schools and the postgraduate committees. The Department of Health refunded lecturers' fees, and doctors who attended could claim back their expenses. In 1961, the Health Services and Public Health Act continued these arrangements until today (2004).

2.5.2 The Christ Church Conference

In December 1961, the Nuffield Provincial Hospital Trust held a conference in Christ Church, Oxford. Representatives of the main bodies involved in medical postgraduate education attended. The following recommendations were made:

- Medical education should be viewed as a continuing process.
- All branches of the medical profession should have access to a library and discussion groups.
- All posts in hospitals should be recognised as training posts.
- The basic Regional Postgraduate Training Unit should be located within the district hospital.
- All consultants should recognise the training of their junior staff as one of the most important aspects of their work.
- Time should be devoted to teaching and it was important to promote an educational atmosphere.
- In each hospital, the Regional Committee should nominate a consultant for postgraduate education as Clinical Tutor, with administrative support and secretarial assistance. He/she should see to it that general practitioners had access to the library and participated in conferences.
- There should be certain physical facilities including a library, seminar room, clinical tutor's room, a lunch-room as a focus point where hospital staff could meet and be joined by general practitioners for discussion on medical issues.

- There should be a Postgraduate Dean and a strong Regional Committee for Postgraduate Education (Cates 1979:9).

Since the Christ Church conference in 1961 and a second one in September 1979, 339 centres for postgraduate medical study were erected in England and Wales. The main purpose of these post-graduate centres is to provide for the need for CME of doctors in permanent appointments and in general practices, and for the vocational training of those doctors occupying training posts. It also seemed desirable to widen the scope of these centres to assist in the CME of dentists, pharmacists, nurses and paramedical professions. It was also recommended that the activities of centres be extend to research projects, particularly if related to community health.

In 1968, the Ministry circulated a design guide for postgraduate medical centres that provided two alternatives. This was done to fulfil the prescribed physical needs of the providers in accordance with the Christ Church recommendations:

- Plans for a postgraduate medical centre
- Plans for a hospital education centre to cover the training of nurses and allied health professions as well as doctors.

In 1972, a Postgraduate Medical Centre Group was established. This group produced a report setting out the desired provision of a postgraduate medical centre. The Council for postgraduate Medical Education published this in 1974.

A district postgraduate medical committee (or medical centre committee), chaired by the tutor, was established. On the committee, there are (i) hospital colleagues, (ii) a junior doctor, (iii) a dentist, (iv) representatives from other hospitals and (v) community health doctors. It was suggested that there might be tutors from facilities, colleagues and one or two general practitioners. With the help of the committee, the tutors would plan the following programmes (Cates 1979:6):

- For general practitioners: Lunchtime meetings, study days, a week's continuous course, extended courses, most of these to be held in health centres in the vicinity.
- Trainee courses for general practitioners: Once a week there are "Half-day Release" courses for trainees doing their year in a practice and those doing their two years in hospital posts as part of a vocational training programme. Trainers attend these courses too. The Tutor is concerned with these activities and provides space for the organisers, the lecturers and perhaps secretarial help. The topics addressed are according to the needs of the trainee general practitioners.
- There are activities, theatre lists, patient rounds and literature discussion groups, etc. to arrange for the hospital doctors. Tutors need to arrange for junior hospital doctors to be able to specialise or gain practical experience in their field of interest, aspiring to higher degrees, and there are lectures by external speakers to promote specialisation in his/her field of interest.

Most of the teaching by means of arranged lectures presented by external speakers are performed without financial compensation, though formal teaching on a more permanent basis could earn a lecturers fee. The money comes from the Department of Health Services Studies (DHSS), but for some courses, the attendance fee has to be collected by the tutor. If the Regional Postgraduate Medical Education Committee has approved the course, this fee can be reclaimed from the employing authorities.

General Practitioners may approach tutors, seeking individual attachment to one of the clinical departments, asking them for assistance to obtain extended study leave, work in a practice overseas or study for a higher examination. Married female doctors request the Retainer scheme, which keeps them in touch with medicine after they qualified as physicians. Career guidance is provided in part by clinical tutors. A section of the physicians' curriculum should include information sheets and booklets about career prospects in the medical profession, as well as training requirements. The tutor has to oversee most of the managing of these courses. They have to serve in various committees and confer with each other. In 1968, the University Clinical Tutors formed a national association. Universities were to invite selected general practitioners to become university appointed tutors in postgraduate centres. Sir Frances Jones (1968 in Cates 1979: 9) stresses that teaching and research go hand in hand, because both are concerned with the advancement of medical knowledge. Those hospitals that have been able to provide good facilities for teaching and research

have had the best applicants for posts. This is reflected in a rise in the standard of patient care. This encouraged a scheme for the vocational training of general practitioners.

2.5.3 Vocational training for General Practitioners

An experimental scheme for vocational training began in Bristol 33 years ago. Vocational training was implemented to upgrade the knowledge of general practitioners whilst they were permanently employed by hospitals. By 1970, vocational schemes for general practitioners had started in London. The rotation of GP's in different departments was organised. The training lasted three years, and this was done to upgrade their general practice knowledge by attending patient rounds, and ways of treatment suggested by the tutors. Pickering (in Cates 1979:10) criticised postgraduate education comprising lectures and refresher courses as being of little account. He suggested that educational programmes at postgraduate level should comprise discussions, which may be centred on patients (case studies), ideas or new medical developments. Since then, the Royal College of GP's has done much to advance medical education. Today, seminars, workshops, audits and peer review are widely used methods of learning in vocational training schemes (Walton 1994:342). Trainers are encouraged to use heuristic and Socratic methods rather than didactic teaching, and they are encouraged to undertake research projects.

One of the greatest obstacles for the adoption of a mandatory, time-limited approach for CME in the United Kingdom is the allocation of funds to allow doctors in hospitals and general practitioners sufficient time off to attend meetings, refresher courses and formal educational events. The physicians in the UK support professional reaccreditation and have expressed the view that the profession should lead the process, be educational and take account of a range of professional activities (Nel 1994:167).

In America, the same problems related to the continuing professional development of general practitioners were encountered after the war. All physicians' knowledge required upgrading, and ways of doing so were investigated and proposed by medical societies and the American Health Board.

2.6 CONTINUING MEDICAL EDUCATION IN THE USA

Before 1930, CME in the USA was intertwined with both specialist training and reparative education. The goal of medical education then was to correct deficiencies of graduates, thus making them safer medical practitioners. The problem was that there were no standards for admission; no definite educational programmes for medical training; and the granting of certificates and diplomas was greatly abused, even in specialist training. Many doctors proclaimed themselves specialists after taking only superficial courses (Shepherd 1960:741). Between 1919 and 1934, a list of medical schools was published annually; only seven of the eighteen schools being connected with universities. This implied

that the standard of medical training programmes varied significantly between the different schools. It was not until 1927 that the Medical Board published a list of the approved training programmes in hospitals. At that time, both unacceptable and questionable medical schools still existed, as many postgraduate schools operated outside the university orbit. The training offered was " to teach the trick or to exhibit an instructor in the act of doing it" (Shepherd 1960:742), thus the student played mainly a passive role in the teaching process. The teaching had the air of a handicraft rather than science. Very little was done to interest students in scientific exploration; they only learned what their teachers knew.

Just as the objectives of continuing medical education have been dictated by the needs of the student and hence by the stage of development of medical schools and specialist training programmes, so has the provision of CME programmes been altered. Provision has gone through three stages: The proprietary hospital and graduate and postgraduate school; the medical society and state board of health independent of the medical school; and the medical school as the responsible planner and provider, often in cooperation with a medical society.

Other providers have been extension departments of universities and academies of medicine. For programmes outside medical schools, state medical association committees played leading roles in providing such programmes. The Council on Medical Education and Hospitals fostered the role of the medical society in CME. In 1934, the Council reiterated the importance of encouraging state medical

society courses. Among the effects of World War II was the Council's realisation of the role medical educators should play in CME.

The methods of CME have generally reflected the practices in basic medical education. Lectures and amphitheatre clinics were the most common approach. These lectures had to be paid for by the participants, but it was voluntarily and neither the purpose of gaining points nor for reregistration. As O'Brien indicated in 1947, "in the past all we had were lectures and dry clinics. Patients were brought in and wheeled out; sometimes it was the correct patient for the lecture and sometimes it was not; in any event the patient served as a stooge for an act that gave little to the onlookers" (Shepherd 1960:743). Later years marked the initiation of regional responsibility by three medical schools: The University of Michigan, Albany Medical College, and Tufts University. The University of Michigan accepted the principles that graduate CME should be decentralised and developed around the regional and community hospitals, and those medical education channels should extend from the medical school, through such hospitals to the rural physicians.

The Albany Medical College had the following objectives: The first was to design a medical programme that would ensure better medical service to the people of this region, particularly North-Eastern New York State. The second was to determine whether a medical school could not legitimately aid practising physicians to pursue lifelong education, which is the mark of the good physician.

The College initially comprised need surveys, a medical school service rendered by placing physicians in communities of upper New York State lacking medical service. Periodic visitation of faculty members to regional hospitals, and courses for practising physicians at the medical school formed part of the college's responsibilities.

The Tufts Medical School in Maine had a broader objective that integrated the improvement of regional and community hospital services with an educational programme for their staff. Appropriate personnel gave medical technologists, nurses, dieticians, record room librarians and administrators in service training at the regional and community hospitals. Later the programme was expanded to include hospitals in Western Massachusetts.

The Commission on Medical Education compiled a report on CME in the 1930s. This report contained one of the earliest proposals that compulsion might have to be used to enforce the CME of all physicians. In this regard the American Board for Urology issued a certificate that stated that this qualification was subject to revocation in the event of the physician neglecting to maintain a degree of competency in the practice or refusing to submit to re-examination by the board.

Youmans, director of Postgraduate Education at the Vanderbilt University School of Medicine, Tennessee, started a unique postgraduate course. What distinguished it from others was the attempt at follow-up evaluation for more than

twenty years. Before starting the course, initial questionnaires were distributed, and on this basis, they were graded on their practices. Youmans found that practical training was superior to didactic teaching (Shepherd 1960:744). Educational programmes initiated by the above-mentioned universities were exceptions rather than the rule in terms of the total education activity, which was largely under the control of medical societies.

The USA played a leading role in the development of CME programmes and a considerable amount of research has been done on CME since it started.

2.6.1 Research on Continuing Medical Education

The first nation-wide study of CME was published in instalments in *The Journal of the American Medical Association*. Following this report, the Council began to publish periodic listings of postgraduate courses. In 1939, there were 109 opportunities for practising physicians to engage in continuation study. The Commission on Graduate Medical Education, headed by Rappleye, published a follow-up report in 1940, which contained innovative ideas that are still being reiterated.

The report stated that courses should appeal to the practitioners and be well adapted to their requirements. In the development of courses, graduate medical education should be taken into consideration. The unification of programme requires far-sighted planning by medical educators so that physicians may have

appropriate educational opportunities from the time they enter medical school until they retire from active practice. Too often postgraduate instruction has been given solely by didactic lectures. Demonstrations and conference teaching were not feasible, because of the size of the audience, the lack of suitable physical facilities and the absence of clinical material. While didactic lectures are valuable, demonstrations, first hand experience under supervision and conferences are the most successful forms of teaching.

Before the recommendations of the report could make an impact, World War II began. In the years between 1941 and 1945 physicians in the armed forces became dissatisfied with their own lack of graduate medical education. They then realised the tangible benefits of board certification. The physicians also became aware of their limited medical experience when they awaited discharge into the civilian life. Once again, the attention was turned to the need of refresher courses.

According to Shepherd (1960:747) the Council on Medical Education and hospitals reported in 1944 that refresher courses, review courses, postgraduate lectures, clinic series, internships and residencies should develop in many fields. This initiative gave fair promise of meeting the needs of medical officers – as physicians were known during the war, as well as the more recent graduates who were not on active duty during the war. In an effort to ascertain the potential post-war educational load of physicians returning from military service, a

committee on which the Council of Medical Education and Hospitals served conducted a survey of the opinions and wishes of a large sample of the physicians in the Army, Navy and United State's Public Health Service. This survey revealed that nearly 60 percent wanted to take extended upgrading courses comprising 6 months or more. About one-fifth of the group indicated a need to take short courses. 19% of the respondents wanted no further training, while about 63% expressed a desire to become certified specialists. Nearly 40% came from private practice to military service, 22% from internship and nearly 10% from residencies. This gave an indication of the desire physicians had to upgrade their knowledge after the war, be it by short courses or an additional qualification.

In order to provide physicians with the necessary upgrading programmes, medical schools and hospitals were asked to estimate the number of additional "house officers", physicians appointed on a permanent base, but who worked under supervision, they could accommodate. Organisations were urged to plan review and refresher courses in anticipation of possible demand. The Council, however, maintained that basic science should be emphasised and that high minimum standards should prevail. The Council then published lists of available programmes to inform physicians of their options regarding attendance of courses they needed to upgrade and refresh their medical knowledge.

Long before the Vietnam War ended, the Kellogg Foundation was considering its possible role in a broader approach to CME. The broader approach involved encouragement of and initial subsidy for medical school regional education efforts in relation to the profession in practice. The year 1947 was notable for two conferences that brought together leaders in postgraduate medical education and the American Academy of General Practitioners. A constitutional requirement is that each member must have at least 50 hours of formal postgraduate education (called category I) every three years as well as 100 hours of informal education (called category II) in order to maintain membership. Such requirements set a new precedent for medical society membership. Continuing education was the godfather of the journal Postgraduate Medicine, which first appeared in January 1947 as a monthly publication by the Postgraduate Medical Association of North America. Although much of the basic material initially consisted of addresses from the annual meetings of the Association, it was planned that new material originating from postgraduate courses would be printed.

In 1948, a new method of communication came to the attention of the medical profession at the annual session of the American Medical Association in Atlantic City. In 1949, with the installation of close circuit television in two medical schools, colour television became medical education's newest toy. This innovation was used for CME with great success. Close circuit television made it

possible for large groups to observe procedures performed in theatres that were too small to accommodate large groups of participants.

As one of their plans, the Kansas Rural Health Plan in 1948 proposed the provision of CME to practitioners. This was done to maintain practitioners' competencies and prevent professional isolation despite rural practice. Implementation of this proposal, by appropriations from the state legislature to the medical school, attracted additional money from a foundation and private sources, making expansion of the physical plant, facilities, faculty and budget possible. These funds made it possible for the medical school, in cooperation with the state medical society, to have a CME programme, subsequently placing the Kansas School of Medicine on a par with other medical schools. Notable features of the programme were a willingness to try innovations and publish studies in an attempt to gather useful data for the future.

Another important development in 1948 was that the House of Delegates of the American Medical Association approved a survey of CME hospitals and the Association of American Medical Colleges. The report of this survey recommended that CME courses should take place in medical schools or medical centres. Three of the other recommendations were that courses should be designed in such a way that physicians could actively participate and their accomplishments and understanding of medical practice could be evaluated. It was also suggested that medical school facilities should be increased in order to

meet the present demands of CME and that the costs of CME should be determined. At that stage, it was impossible to know what the fees would be, and funds from medical associations and foundations or other sources would have to be generated to meet these costs. The Committee warned against the dilution of undergraduate teaching and recommended additional faculties for CME training to avoid weakening of the programme for medical students.

In 1949 the Committee on Postgraduate Instruction of the California Medical Association began to present two to three day programmes in cities in the centre of a seven to eight county territory. Since then, it has expanded and is still being followed today.

2.6.2 Indiana State

The Indiana State Medical Association undertook an experiment on CME in 1951. This was done by distributing a monthly programme by private telephone line from one central meeting to 92 county society meetings throughout the state. Each county arranged for a private line and a public address system to its meeting place. Listeners were provided with a brochure containing short biographies of the speakers, an outline of each address and suitable visual aids. The special Committee for Postgraduate Work of the Texas Medical Association arranged a similar programme for 55 county societies in February 1952. These activities were discontinued after a trial period. Problems occurred with the

satellites and bad reception made it difficult for participants to follow the speakers.

From 1951 to 1952, a survey was done for the Kellogg Foundation on postdoctoral medical education in the USA in eighteen medical schools that had been recipients of post-war grants for developing and strengthening programmes. The study combined questionnaires and personal visitation of the institutions involved. Its objectives were to check the effectiveness of the overall programme of grants in the field, ensure an estimate of the performance of each participating school and use such evaluations in planning future activities of the Kellogg Foundation. The major interest of the foundation was to encourage long-range postgraduate programmes for physicians in regional areas. The survey revealed that nearly every medical school appointed a committee with a director in the faculty as the responsible individual. There was, however, no single, universally applicable pattern of the CME administration process. Most of the medical schools regarded the state and societies as capable in supporting CME activities administered by medical schools. Personal interviews indicated that faculties supported postgraduate programmes more enthusiastically than CME courses. The survey also found that the clinician with a good working knowledge of basic science (not a specialist in the sciences) is more successful in presenting an integrated curriculum for CME than a basic science teacher. Unfortunately, a dearth of such clinicians was noted in the school faculties.

Certain educational trends related to CME were pointed out, including adaptation of the clinical residency to the postgraduate level; broader use of seminars and conferences; increasing use of audio-visual aids; adaptation of electronic devices for teaching purposes; use of well planned syllabi in courses; adaptation to classroom use of modern “quiz audience participation” (Shepherd 1960:752); and “stump the expert” types of activities. All instructional programmes benefited from increased personnel, reorganised departments and the stimulation of new instructional duties. In certain geographical areas, definite problems arose from a lack of coordination, duplication of efforts, overlapping of interest and conflicting schedules. Thus, it appeared that although CME has been an avenue for strengthening the understanding and support of all medical school activities, it has also been a source of irritation.

2.6.3 Examination of Continuing Medical Education in the United States of America

In the spring of 1952, the Council on Medical Education and Hospitals had appointed Vollan to concentrate on CME. The following was asserted: "Examination of CME from the 1960's described CME as a form of remedial medical education" (Lewis 1998:335). This was exactly why CME was initiated in the USA after the war, namely to offer remedial education to medical officers who came back from the battlefield where they did only life-saving surgery, amputations and crisis medicine, rather than practice medicine. The report recorded the quantity and type of CME in the United States.

Vollan (in Manning & Petit 1987:42), states that reading, conferences and communication with colleagues were the main methods of CME in the USA. These methods still remain popular today. Vollan emphasised the use of methods other than the lecture to reach large audiences. In a survey done by him, physicians ranked the small-group discussion or seminar highest as learning method. Individual supervised clinical casework, lectures, panels and demonstrations were considered next most effective (Shepherd 1960:753). Then and now, medical school faculties have been the main source of CME. The report of Vollan recommended the development of a national advisory council and postgraduate medical education to establish standards of evaluation and accreditation, to develop methods of inducement for participation and to coordinate. Some mandatory form of accreditation was suggested for organisations that provide CME.

2.6.4 Approaches to centralizing Continuing Medical Education in the United States of America

In 1961, the founding of a National Academy of Continuing Education was proposed in the USA to enable physicians to attend programmes to update their knowledge and improve patient care, but it was never formally developed. However, in 1962 the Dryer Report: *Lifetime Learning for Physicians: Principals, Practices, Proposals* (in Manning & Petit 1987:3543) made recommendations for a system in which educational technology could be used for CME. The major goal of the plan was to make continuing education practice-related. Almost from

the beginning, there was considerable opposition to the use of tax dollars for supporting continuing medical education. The likelihood of the implementation of a centralised approach, designed to provide CME without funding, was very slim.

The method of recertification chosen by the specialty boards provides a central influence for CME. CME cannot be effective if accreditation of the programmes is not done, as the accreditation of programmes is a necessary prerequisite for quality assurance.

2.6.5 Accreditation of course programmes

As early as 1957, the Council on Medical Education and Hospitals in the USA (United States of America) developed *"A guide regarding Objectives and Basic Principles of Continuing Medical Education Programmes (*in Manning & Petit 1987:3544*).* However, in 1977 accreditation of CME only became part of a broadly sponsored group, the Liaison Committee on Continuing Medical Education. This concept could not be sustained either and the Accreditation Council for CME (ACCME) now carries out national accreditation of CME. The ACCME in addition has a strong monitoring role. It developed seven essentials that must be met by any institutional purveyor of CME. What the seven essentials are were not found in the literature.

Subsequently, these seven essentials resulted in common language and understanding for the planning of CME programmes. The accreditation

measures have resulted in better regulation in the field and have improved the quality of CME organisations and preparations. The ACCME has emphasised methods that provide the opportunity for more active participation in classroom programmes through question-and-answer sessions, panel discussions and group discussions. However, presenters of effective CME programmes in the USA still require methods to assess and evaluate physicians' needs (Manning & Petit 1987:3544).

2.6.6 Mandatory Continuing Medical Education

In 1947, the American Academy of General Practice established mandatory CME requirements in its founding bylaws. In 1965, the Oregon Medical Association adopted a recommendation that minimum requirements be established for the physicians of the association. The American Medical Association (AMA) and many state medical societies continued to insist that participation in CME should be voluntary rather than compulsory. Nevertheless, licensing boards of several states developed CME requirements for relicensing. In 1987, mandatory CME, as a prerequisite for relicensure, was authorised in 27 states and implemented in 22 of these. Mandatory CME, which focuses on attendance of courses, may have impeded development of other types of CME that would be more individualised and would aid physicians to learn more from their clinical experience as well as directly benefit patient care (Manning & Petit 1987:3545). Although CME is still mandatory in the USA today (2004), there are certain concerns about mandatory CME.

2.7 CONCERNS ABOUT MANDATORY CONTINUING MEDICAL EDUCATION

According to Boland (1997:54), the following concerns regarding mandatory CME are often expressed:

- CME programmes should be evaluated in terms of their effects on patient care.
- Accreditation of institutions lends credibility to standard types of courses, lectures, panels and seminars certifying that such activity has value. These programmes usually produce no significant change in the behaviour of physicians or improvement in patient care.
- Self-help, problem-solving and patient care improvement educational systems are not currently accredited by certifying agencies.
- In requiring attendance at standard CME programmes, physicians are forced to attend accredited CME programmes that are ineffective in improving patient care.

It could be deduced that the main aim of CME will be missed if physicians do not improve on patient care after attending a programme. Therefore, programmes have to be planned to suit physicians' needs and the programmes have to be presented within the necessary didactic environment for maximum learning. This is echoed by Cantillon and Jones (1999:1267) who indicate that: "In an evidence-based medical world it would seem prudent therefore for those planning general practitioner's [*sic*.] education to choose educational methodologies that have

been shown to work, and to evaluate those who have not". In the absence of the necessary evidence it would be foolhardy to demand that busy physicians participate in programmes only to gain CME points for registration purposes. The efficiency of formal courses are therefore of the utmost importance.

2.7.1 Efficiency of formal courses

Many educators question the value of conventional classroom CME. Evaluation of classroom CME has shown that conventional, formal CME - unless focused on specific behavioural objectives - does not alter physicians' practice measurably (Manning & Petit 1987:3544). Most CME programmes are designed for groups and therefore do not address the individual physician's specific need or problem. According to Stein (1981:110), CME helps the physician to maintain an awareness of the current state of medical practice, which is also a necessary function of CME programmes. The implications of the statements mentioned above are that the purpose of the CME programme must be clear before the format of teaching is finally decided on. Conventional classroom CME is of value if the purpose of the programme is only to maintain the physicians' awareness of the current state of medicine. However, if the purpose of the CME programme is for example to master a new operating skill, or to change behaviour, an alternative way of educating is required. Effective CME programme leaders will thus need the expertise of leaders in the education profession.

Already in 1956, the Council on Medical Education and Hospitals in the USA decided that it should have the continuing advice of leaders in the profession who have a diversity of background and viewpoints on medical education and practice. Physicians have no problem with the principle of CME, but with the learning methods being used and the outdated way in which CME is presented. The committee adopted an agenda, which proposed that the ideal objectives of CME programmes should be ascertained and implemented by devising criteria or standards that are compatible with the above objectives for acceptable educational courses. It was requested that the Council develop and publish a guide setting forth and explaining objectives and criteria of acceptable programmes and distributing such guides to all institutions and organisations known to be concerned. In addition, methods should be devised to evaluate courses.

Based on the foregoing, only courses meeting the criteria of acceptable standards should be published in the *Journal of the American Medical Association.* All physicians in the CME programmes also suggested that a suitable reward or compensation should be devised to stimulate regular participation. Insofar as any consideration of compensation is concerned, this necessarily must follow the establishment of a sufficient number of suitable educational programmes in the USA.

In June 1957, the Council submitted the guide for approval by the House of Delegates of the American Medical Association. The statements submitted were purposely of a general nature in order that the published document might encourage well-considered educational innovations and permit flexible interpretation rather than restrict experimentation. Although these recommendations and proposals for effective CME programmes had already been implemented in 1957, few CME programmes implement all of these proposals.

In response to the Council of Medical Education and Hospitals' request for CME programmes, 72 schools of Medicine indicated that their educational efforts would include CME.

2.8 CONCLUSION

From Chapter Two it became clear that effective CME involves not only the provision of information that is relevant to physicians, but also reinforcement or continual reminders of the message and the elimination of any barriers to change. However, many factors can contribute to change in doctors' behaviour and practices. These include educational, personal, patient-based and economic factors. Factors such as the relative advantage the innovation offers existing practice, its complexity and trainability are all important considerations. In the USA, experience has shown that CME must be based on the daily, vocational activities of the participants and must represent data from their own practices to

be effective. Vocational training should also be relevant to the major health problems of the day. More research in general practice and primary care would also raise the standard of patient care. As research increases knowledge and fosters a critical attitude to existing patterns of care and treatment, clinical research should be accepted as part of postgraduate education. Clearly, effective CME requires a great deal of energy and resources, which have been indicated by most of the countries to be a problem. Mandatory CME should be a way to motivate physicians to attend CME programmes. Only America, Germany, Croatia, Finland and Hungary have legislation as far as CME is concerned. However, in many of these countries CME is still not mandatory for reregistration.

In chapter three the current South African CPD system is discussed in detail.

CHAPTER

3

CONTINUING PROFESSIONAL DEVELOPMENT WITHIN THE SOUTH AFRICAN CONTEXT

3.1 INTRODUCTION

The maintenance of professional competence had until recently not featured prominently for most South African general practitioners. Today (2004), many doctors still do not see the necessity for keeping up to date with medical advances by means of a formal CPD system. Until recently the most popular CPD activities were product promotional events sponsored by pharmaceutical companies, where doctors came together to build networks and professional engagement (de Villiers & de Villiers 1999:719).

On 1 January 1999, the Interim National Medical and Dental Professions Board of South Africa (INMDC) announced a system of CPD for all medical practitioners and dentists. The implementation of the system was not a bureaucratic decision taken by the INMDC - it had the wide support of most professionals. The Council consulted extensively with the entire medical profession regarding the introduction of CPD (*Citizen* of 12 November 1998:23).

Naina Exelby, journalist for the Natal Witness, quoted Blitz as saying that: "The prime goal of CPD is to improve the quality of the care that patients receive and it is hoped that doctors will view it as a means of bettering their practice rather than undermining their credibility" (in *Natal Witness of* 8 February 1999:9). Although the prime goal of CPD programmes are to improve patient care, it is no longer for the physician to decide when it is needed in his or her own practice, as it is mandatory to gain at least 75 points per year or face the loss of registration to practice as a medical doctor (Nel & Kent 1994:463). South African doctors who do not keep up to date with changes and advancement in medicine may be barred from practice. Those who fail to comply with the requirements of the CPD legislation will be subjected to a series of disciplinary steps that could result in deregistration. The intention of CPD is to encourage ongoing education for practitioners to the benefit of the patient. Doctor Neethianan Naidoo, Chairman of the SA Academy of Family Practice, maintains that it is unethical to practice [*sic*.] medicine without some form of self-assessment or peer review" (*Sunday Tribune* 14 March 1999:1).

Despite CPD being received in some medical spheres as a major breakthrough, there seems to be ambivalence regarding its implementation. This chapter provides an overview of the development of CPD in South Africa and its current status.

3.2 THE ACCEPTANCE OF CPD IN SOUTH AFRICA

There are mixed feelings regarding CPD as indicated by the Natal Witness of 8 February 1999 (Natal Witness, 8 February 1999:9). Some practitioners feel threatened that the quality of their practices is being questioned. However, as they become more familiar with the idea, CPD is becoming more acceptable to them.

"Workshops and conferences are the bone of productive people everywhere. To make them compulsory cuts into work time, thus reducing income" (*Citizen* of 6 November 1998:6). The Medical Association of South Africa (MASA), welcomes CPD as a dream come true, reasoning that the system will compel doctors to keep up to date. "Indeed, the authority to compel others may be every bureaucrat's dream" *(Citizen of* 6 November 1998:6). Some medical practitioners believe that if they are qualified and serving their patients successfully, they should not have to be subjected to unnecessary red tape. Many physicians are of the opinion that CPD is an inappropriate prescription for a profession already under stress.

Doctor Julia Blitz, Head of the CPD Task Group for South Africa's Academy of Family Practice, maintains that the medical profession is supportive of the principle behind CPD, but practitioners are not convinced yet of the outcome. According to her, it is one of the most important policies to date that will put pressure on some doctors. However, it should be viewed as a necessity, as it

engages doctors in lifelong learning. Medicine, just as any other discipline should be viewed as evolving science (*Sunday Tribune* of 14 March 1999:1).

3.3 CHARACTERISTICS OF CPD IN SOUTH AFRICA

The current South African CPD system has been developed in such a way as to be user-friendly. The CPD system is administered by the Medical and Dental Professions Board under jurisdiction of the Health Professions Council of South Africa (HPCSA). To stay in business as registered physicians, doctors need to obtain 250 points in a cycle of five years. It is an average of 50 points per annum and a maximum of 75 points that are to be obtained in one year. Points may be accumulated through conference attendance or presentations, lectures, small group discussions, journal clubs where journals are discussed, and short-term study. Conferences and small group activities account for one point per hour; individual learning for an additional qualification earns one point per day; authors of articles receive 15 points; lecturing to peers is worth between five and ten points; completing a diploma course earns a doctor up to 40 points; while the completion of a doctor's or master's degree would earn 50 points (*Daily News* of 5 November 1998:6).

The idea was that practitioners should submit documentation to the Council regarding their CPD portfolio on a prescribed form annually, but not later than 31 March of the following year. Certificates issued by providers have to be enclosed as proof of attendance or participation. The Council would then log, analyse and

record the points achieved. Hereafter practitioners are advised of the number of points recorded and of their CPD status. However, as the system progressed, many changes had to be implemented. Due to the magnitude of the system, administrative problems were bound to develop. In March 2003, a consultant was contracted to evaluate and redress the system (Mkhize 2004).

Most of the problems encountered by physicians in the present system were with the HPCSA website and the inaccuracy of the attendance data. The solutions proposed in the new system are the following:

- Providers will submit their activities to the accreditors for accreditation.
- Providers will be obliged to provide Certificates of Attendance to all attending physicians.
- Providers have to submit attendance data with the points to the accreditors within a month of the activity.
- The accreditors will submit these points electronically to the HPCSA after verification for correctness.
- The previous Period Based System will be replaced by a Continuing Points system.
- All points accrued will be to the credit of the physician for two years from the date of the activity attended and will then lapse.
- Computer checks will ensure that all data is verified and corrected.
- Physicians will be able to check the status of their CPD points at any time.
- The HPCSA website will become more functional and user-friendly.

The new programme is bound to become operative during the first half of 2004. The status quo will remain until the specific date for implementation of the new system is announced by the HPCSA.

All Professional Boards are using the same CPD system. The Executive Committee of the Council approved a CPD Committee comprising one representative of each Professional Board. The CPD Committee are responsible for decisions and guidelines pertaining to the implementation of CPD by all Professional Boards.

The effect of the new system on the physician will only be a simplification of procedures. CPD activities will, however, have to be attended just as in the past. In the new system, physicians will no longer have to submit their own CPD-1 forms and certificates. The Providers of the activities will submit attendance *via* an accreditor. Points accumulated during 2003 and 2004 until the new system is implemented will be integrated in the system in the new format.

Compliance will no longer be based on a specific point in time (midnight 31 December), but on a continuing basis. All points accumulated will remain active for a period of two years. Compliance with CPD requirements will be determined by maintaining a continuing CPD level.

The HPCSA website will allow practitioners to view their compliancy status on a daily basis. There will be a facility available on the website for the physician to report any inaccuracy in their status. For this reason it is important for the physician to retain certificates for attendance of activities.

It is important for physicians to know how points will be allocated in the different categories of activities.

3.4 ALLOCATION OF CPD POINTS

Points are allocated for the following activities:

- The basic premise of point allocation for activities is that one-hour equals one point.
- A maximum of 80% of the points may be accumulated in any one of categories one, two and three of the specified CME categories (see paragraph 3.5).
- A minimum of 10 points in professional ethics is required from doctors in each five-year cycle (see paragraph 3.5.4).
- A maximum of five points may be obtained in non-clinical but health-related activities in any one year (see paragraph 3.5.5).
- Any relevant educational or developmental activity that does not fall within the listed categories may be submitted to the Board for approval and, if agreed to, will be accredited.

3.5 SPECIFIED CPD CATEGORIES

CPD activities are grouped into different categories and points are allocated to each category as follows:

3.5.1 Organisational activities

Organisational activities are seen as national and international congresses and conferences, large group workshops, lectures, seminars, refresher courses, and departmental meetings. Attending or lecturing at these activities will gain points according to the duration, as the points are allocated per hour.

3.5.2 Small group activities

Participation in small group activities is credited with one point per hour. An additional one point is granted for presenting such activities under category three. These activities include, but are not restricted to small group workshops, lectures, courses, departmental meetings, teaching work groups, journal clubs, and small group discussions.

An appropriately structured small group workshop should comply with the following requirements: The group has to reflect a spectrum of expert opinion, the meeting may not be promotional and an identifiable organiser as to be responsible for administration (*Booklet 4* November 2002:4).

3.5.3 Individual activities

By taking part in this category of activities as individual, as discussed below, points are allocated to the activity. The intention is to accredit only activities that can be reasonably monitored.

3.5.3.1 Self-study

Self-study activities evaluated by an approved provider will count only for self-study credits. These activities include studying of journals (see Appendix 6), as well as electronic computerised material for which an approved method of assessment is in place. Providers will have to provide reasonable proof that credits applied for are justified.

3.5.3.2 Individual learning

This is accredited with one point per hour. These activities include skills training, endoscopy, and short-term study at university departments. Prior approval of these activities will have to be obtained and attendance verified before points for reregistration will be gained.

3.5.3.3 *Research and publication in peer reviewed/CPD journals*

Being principal author of a research article earns 15 points, while co-

authors are accredited with five points per published article.

3.5.3.4 *Teaching and/or training activities of undergraduate students, postgraduate students and/or peers*

The lecturer/teacher of these activities earns one point per hour.

3.5.3.5 *Paper/poster presentations, lectures to peers and short papers* (*less than 20 minutes)*

These are credited with five points. Co-authors of short papers are credited with two points and co-authors of posters are credited with three points. Long paper presentations (more than 30 minutes) are credited with 10 points. Co-authors of long papers are credited with three points.

3.5.3.6 *Relevant additional qualifications*

A completed six-month diploma earns 10 points, a completed one-year diploma accumulates 20 points and a completed two-year diploma 40 points. A completed Master's or Doctor's degree is credited with 50 points. The points are added to points obtained during the study period. The above points are allocated only on awarding of the qualification and during the year of the award.

3.5.3.7 *Examinations, evaluations and assessments of courses*

The examiner, assessor or evaluator of these activities is credited with one point per hour and these will include, but are not restricted to undergraduate and postgraduate examinations. Evaluations and assessment of theses or scripts undertaken on behalf of the registering authority – in this case the Medical and Dental Professions Board – is also credited with one point per hour.

3.5.3.8 *Supervision of candidates for higher degrees*

The promoters, mentors or study leaders of Master's or Doctoral qualifications are credited with 15 points per candidate per year.

3.5.4 Professional ethics

A minimum of 10 points will be required in each five-year cycle for programmes attended in professional ethics.

3.5.5 Non-clinical but health-related activities

A maximum of five points per annum may be obtained in this way (for example by attending a mini-symposium on the effective management of a medical practice or how to keep a medical practice in a healthy financial position and so forth).

In cases where it is rather difficult to obtain the necessary points for registration or where registration is ended, arrangements can be made with the Board under certain circumstances for a period.

3.6 DEFERMENT

Practitioners may apply for deferment of CPD. The Board will review each application individually and the reasons must be acceptable to the Board. Deferment will not be granted to practitioners who are retired, non-practicing because of ill health, or medical/dental administrators. The Medical and Dental Professions Board is establishing a separate register for these categories.

Practitioners abroad will not be granted deferment. Documentary proof of compliance with CPD requirements in any particular country where such requirements apply will be accepted for CPD purposes in South Africa. In the absence of such proof of activities attended outside South Africa, evidence will have to be submitted to an official who accredits CPD activities in South Africa. The specified CPD points will be awarded if the activities are approved.

Registrars, senior registrars and full-time students in Family Practice will automatically be awarded the required CPD points on each year of full-time study and registration with the Board as a Registrar or Senior Registrar.

Practitioners who are involved in internship or community services are not required to comply with the requirements relating to CPD during that particular year.

3.7 NON-COMPLIANCE

In the event of practitioners failing to comply with the requirements, the Council may impose any one or more of the following conditions:

- Requirement of one additional year, on condition that the next five-year cycle will commence in that same year.
- Requiring of the doctor to write an examination as determined by the Board.
- Registering the practitioner in a category of registration that will provide for supervision considered appropriate by the Board.
- Removing the practitioner's name from the register of medical practitioners or dentists (Booklet 4 November 2002:4).

3.8 PROVIDERS OF CONTINUING PROFESSIONAL DEVELOPMENT

Providers of CPD must be registered as a CPD provider on the electronic CPD data system before an application could be logged on. The Accreditors will assist the provider in this regard. Providers of CPD are required to submit their proposed programmes of activities to a relevant CPD Accreditor in order to

assess the professional content and the value of its CPD points. Only on approval of the activities and on receipt of a Board-allocated reference number, may the provider publicise the proposed activities as approved for CPD purposes and the value of its points.

The evaluation for accreditation and points allocated occurs in accordance with the HPCSA guidelines. New guidelines appear annually and are available on the Internet website of the HPCSA (Guidelines for Providers of CPD activities June 2003:1). The criteria and guidelines for approval of CPD activities and guidelines for accreditors as compiled by the Forum of Accreditors are available from accreditors.

Providers should make sure that they are aware of the requirements regarding presentation of CPD activities, attendance control and evaluation before applying for accreditation.

The provider is responsible for submitting the attendance data to the accreditor in the format specified by the accreditor. This should be discussed and agreed to in advance. As from July 2004 onwards, all attendance data should be submitted electronically to the HPCSA, according to the information supplied by the provider. Submission of the attendance data to the HPCSA is the responsibility of the accreditors. The attendance data have to be verified by the relevant accreditor before submission.

3.9 ACCREDITORS OF CONTINUING PROFESSIONAL DEVELOPMENT

The responsibility to accredit and review CPD activities according to the Council's criteria and guidelines will be delegated to professional societies and associations, medical and dental faculties and other professional bodies, such as the Colleges of Medicine of South Africa and the Academy of Family Practice/Primary care as Accreditors of CPD activities (*Citizen* of 10 March 1999: 11: *Booklet 4* of 4 November 2002:2).

It is the responsibility of the Accreditors to receive and assess applications by providers for approval of CPD activities. Assessment is based on the criteria provided in terms of the professional content. After positive assessment, the application has to be referred to the Board with a recommendation of approval and the proposed value of the activity. Should the Board agree, a reference number is allocated to the CPD activity for easy reference and administration purposes. The Accreditor will communicate the approval number to provider bodies.

3.10 IMPLICATIONS OF CPD FOR INCOME TAX

CME activities are tax deductible under the Income Tax Act (RSA 2000). This makes it more cost-effective for physicians to attend CME courses, as they are allowed to deduct course expenses from their income tax. Physicians in the

government service, however, are not allowed to deduct CPD course expenses (Income Tax Act RSA 2003).

3.11 CONCLUSION

The South African policy on CPD that has been formulated, will govern re-certification – and indirectly CPD – for future decades. Policy-makers have to make sure that these policies will enable physicians to utilise their time efficiently in pursuit of improved patient care. The present challenge to the medical profession, therefore, is to ensure that new knowledge will improve physicians' performance optimally. CPD activities should therefore include activities that add value to the practise of the profession. This can be achieved by *inter alia* enhancing personal management and growth, knowledge and attitudes; increasing awareness of ethical issues; facilitating multidisciplinary learning; providing managerial and organisational skills.

The South African CPD system is well defined and should therefore be successful in keeping physicians up to date with the latest scientific developments in medicine. South Africa, as well as the United States of America realise that CPD systems could not be successfully implemented if the system is not mandatory. A limitation in the current system of CPD in South Africa, however, is that it is points-driven. The physician's practice, patient diagnoses and care have not been taken into account in the allocation of points. A system/model still has to be developed to reach the primary goal of mandatory

CPD, namely to improve patient care and not only to gain knowledge in a classroom system/model – something we are not yet sure of.

The next chapter on adult learning and the planning of CPD programmes, may assist in developing a classroom model to improve patient care and not only to gain knowledge.

CHAPTER 4

ADULT LEARNING AND THE PLANNING OF CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMMES

4.1 INTRODUCTION

Early researchers in adult development came from a variety of professional backgrounds such as psychology, sociology, medicine, social sciences and biology. There is a growing concern for adult educational opportunities that will meet the demands of an increasingly changing society and the creation of new knowledge, as knowledge only has a short life expectancy. However, adult learning acknowledges the assumption that adult learners bring with them different expectations and needs that do not fit the mould of younger students (Rabbit 1999:169). This alerts us to the fact that when programmes for adult learners are being developed, specific aspects should be taken into account. Therefore, adult development concepts based on adult stage development, physiological

development and cognitive development have to be taken in consideration when applying theory to the learning environment.

In this chapter adult learners are physicians who have finished their basic training. An overview of major adult development concepts is provided and the relevance of adult learning to programme planning and the utilisation of physicians' accumulated experience are analysed. The implications for the teaching practice are also referred to. This overview provides basic knowledge and a foundation for the practical ideas that follow.

4.2 STAGE THEORY IN ADULT DEVELOPMENT

Adults bring to the learning environment knowledge based on a wealth of past experiences in professional and personal development, which influence their values and morals or ethical beliefs. Since an individual's sense of morality is the foundation for attitudes, beliefs and personal goals, which in turn affects learning, moral sensibility is an important variable to consider. To learn what techniques are best utilised in adult learning and what the facilitator needs to bring to the learning process, a careful review of current techniques, facilities, attitudes and knowledge based on what is known about adult developmental theory is warranted.

Current and future development theories must address such phenomena as changing attitudes towards career shifts, including educational needs that

concern job obstacles, women's new roles in the work-force, and coping with changing family values. Lifelong learning not only involves the ability to learn new skills at an advanced age, but also requires adjustment and an understanding of the adult's physical development, needs' and learning processes (Heard, Alten & Clardy 2002:208).

4.3 PHYSICAL DEVELOPMENT

Physical decline may not be as important to the learning environment as the psychological damage that may result from to the aging process (for example a lack of confidence, frustration and anxiety). On the other hand, determination can help the adult learner to overcome diminishing physical abilities and perform exceptionally well in a learning situation. However, adult learners often have difficulty overcoming emotional distress and lack of confidence. These problems can be effectively dealt with when the educator is aware of the adults' emotional distress and lack of confidence, and establishes an optimal learning environment and delivery mode to compensate for the physical as well as psychological problems (Williams, Konrad, Linzer, McMurray, Pathman, Gerrity, Swartz, Scheckler & Douglas 2002:131). Although physical decline is common during the ageing process, it does not mean that a decline in intelligence is age-related.

4.4 COGNITIVE DEVELOPMENT

Intelligence was once believed to reach a peak around the age of eighteen to twenty-one and then to gradually decline. This early notion does not hold up to

modern findings. Results of longitudinal studies show only slight declines in intelligence based on age. Araya, Akrami and Ekehammar (2003:439) point out that longitudinal studies generally conclude that there is a rise in intelligence until the mid-forties.

Most contemporary researchers (Araya *et al.* 2003; Andrews & Halford 2002; Zhang 2002) are more interested in investigating various forms of cognitive function over differences in IQ scores based on chronological scores. One theory in cognitive abilities that has produced a great deal of interest is the examination of crystallised and fluid intelligence. *Crystallised intelligence* refers to the abilities learned through formal and informal experiences. *Fluid intelligence* is based on constitutional factors such as memory, creativity and cognitive style.

Evidence indicates that fluid intelligence, being dependent on neurological efficiency, reaches a peak in the twenties and then declines. It is argued that crystallised intelligence increases as fluid intelligence decreases (Brewin & Beaton 2002:925). Crystallised intelligence is augmented as the individual gains in experience over the maturation process, which also develops increased problem-solving abilities. These abilities are often referred to as “wisdom”. Physicians taking part in CME may vary in age, but are a group of highly intelligent professionals, who bring a lot of practical medical experience to the programmes that they attend. Their problem-solving abilities may also be highly

developed, as they are confronted with problem situations during their daily treatment of patients.

The mature physician is subject to stress, because of all the different life roles – as practicing professional, family man/woman and member of society.

4.5 STRESS, COPING AND ADULT EDUCATION

With the proliferation of adult education programmes and their focus on adult development it seems natural to include the effect of stress in a study of this nature. The adult ability to cope with frustration, pressure, conflict and positive and negative life events is often an important aspect of their success and satisfaction. To date, little is known on the role of stress in adult education or its relationship to adult development.

The profile of physicians show a great resemblance to the above-mentioned, as they have to cope with frustration, pressure, conflict as well as positive and negative life events, for example the loss of a patient or the pleasure of a newborn (Visser, Smets, Oort & De Haes 2003:274). These factors play an important role in their job satisfaction and their success as a physician. In concord, Frankford, Patterson and Konrad (2000:710) affirm that adults succeed in situations where they are highly motivated, where they can participate in the learning process and where learning content has practical applications. Adults want to know exactly what is expected of them. They want opportunities to

practice their newly acquired skills and want immediate feedback on their learning progress.

Most adult learners are also full-time workers, family members, members of religious, social and civic organisations. These multiple roles add to the everyday life stress of individuals as students and as adults. The constant reaction to stress can either contribute to or detract from the learning experience. Stress can be intense enough to keep the adult learner from succeeding or it can motivate academic accomplishments. However, stress in adult learning and development appears to be necessary (Dowell, Westcott, McLeod & Hamilton 2001:542).

Those who plan and provide adult education and development programmes can benefit from understanding how stress is conceptualised. According to McClary, Pyeritz, Bruce & Henshaw (1992:71), strategies that are responsive to existing information about stress include the following:

- A programme designed to be responsive to stress factors that influence students.
- Orientation sessions to acquaint students with the effect of stress and how it can be managed in the learning environment.
- Individualised programmes based on personal contact of commitment and intent.
- The integration of the programme into students' work and lives.

- Providing personal attention, advice and mentoring along with social support.
- Providing an academic challenge for adult learners.

The definition of stress as explained by Williams *et al.* (2001:7) is considered any event that strains or exceeds an individual's ability to cope. As a part of understanding coping and stress, research has suggested particular personality characteristics that are associated with a high risk for stress. The most notable characteristic is the type A personality. Such a person is competitive, rushed, driven, hostile, aggressive and loud. This is a personality that reflects habits of behaviour that are developed over time. Typical of this personality, other internal factors involve the intended ability to resist stress, cognitive abilities that contribute towards creative problem solving, attitudes and values that allow the reframing of negatives into positives, and possibly developmental factors that faster coping. Other personality types, (for example type B) according to their particular personality characteristics, are not associated with a high risk for stress.

Stress is a function of internal personality, cognitive and biological factors and external resources and supports. The outcome of stress is one of three possibilities: No change, psychosocial or psychological growth, or adverse health and emotional functioning. The result of stress is seen as neutral, positive or negative. The definition of coping is a concept that focuses on the conscious

reactions an individual displays in response to stress (Brewin & Beaton 2002:926).

CPD programmes can assist physicians in reacting positively to stress, as the updated knowledge will lead to confidence, contribute to problem-solving and form a platform for new relationships with specialists who could lend assistance in problem situations.

4.6 RELEVANCE OF STRESS TO ADULT EDUCATION

Adult education has been designed to be responsive to the particular needs and characteristics of adults. Developing these programmes for traditional learning, as with any product in the market, new ideas need to be investigated and incorporated if the product is to keep up with the times.

If adult educators are really interested in a student-centred design for learning, it is important for them to consider the nature of stress, as it is a major factor in student satisfaction and learning success. Stress can be productively used in the learning process; however, it can overload some students. It must therefore be dealt with in order to clear the way for learning. Taking stress factors into consideration may show the willingness of programme developers to meet new knowledge as it is accumulated through research on stress and the learning process. It may also model a willingness to put theory into practice, which has

been a foundation of adult education. When stress is taken into account in the planning of CPD programme(s), it has a number of practical implications.

4.7 PRACTICAL IMPLICATIONS FOR CPD PROGRAMMES

Programme designers can begin by looking at staff and administrative innovations, designed to reduce the time and effort it takes adult students to move through the system of application and registration for CPD courses. Programme designers, for example, should look at their instructional delivery system. Courses should ideally use a variety of modes of delivery in order to be more flexible for adult learner needs. The different formats include weekly classes, independent study, weekend intensives, videotapes and electronic learning by satellite. A variety of instructional systems will make sure that practitioners can take advantage of a format appropriate to their individual educational needs and time constraints. An educational delivery system suited to the physicians' personality type and lifestyle can help them with stress management (Parker, Taylor & Bagby 2001). Close relationships also contribute to successful stress management and therefore there is no reason to maintain a formal distance between student and advisor.

4.8 IMPLICATIONS FOR PHYSICIANS IN WORK-BASED LEARNING

Practitioners should have access to advisers or instructors when needed. Practitioners should be encouraged to find peers with whom they can talk about concerns and to whom they can turn when they need academic help or advice. Encouraging a broader personal network of social support can increase the practitioner's level of coping. Getting the programme into written form also helps to establish a sense of security that is often desired. Physicians know exactly what is expected of them as a participant and if they do not have the appropriate background required for the programme, literature on the programme subjects can be obtained. The physician can also keep the written notes for future reference.

Integrating education into the physician's life begins by recognising that the educational experience is one of many competing demands on his/her time and resources. This has implications for stress management. Practitioners find it difficult to give education top priority, as they have a practice to run, lives to save and patients to treat. Adult educators should recognise that expecting practitioners to make CME programmes top priority in their life is unrealistic. Allowing practitioners to claim from work experiences is an important element in non-traditional programmes. This is an example of educators' recognition that education takes place in many contexts. The experiences that practitioners bring to the programme during discussions are equivalent to college credits. Allowing

practitioners to use projects accomplished in their work settings as part of their course work can be a valuable strategy for reducing stress. Work based projects link their education to the real world and support the notion that education is for life. It also increases the motivation to perform research and investigation.

The integration of education into the work of practitioners helps to validate lifelong learning. When the learning process is valued and positively assessed, it is easier to cope with. Advice and support from specialist physicians is important for physicians in private practice, as this allows them to be in control of their educational processes. Practitioners are given an opportunity to compare their ideas with some situation they have experienced in practice. Educators can build credibility by practising what is preached and be available as mentors. Having professional mentors who are able to guide and support practitioners as they move through educational programmes, builds a team that produces successful, satisfied practitioners and instructors. "Developmental tasks associated with adult learners include a desire for intimacy, motivation to ensure career competence, motivation to be productive followed by renewed creativity and vigour" (Armstrong, Doyle, Bennett 2003:706).

To summarise, stress research and information for adult education programmes is of considerable importance. It is of the utmost importance to keep in mind that programme design and implementation strategies should be learner-centred. Educators need to provide challenging academic programmes that are relevant

and applicable to practice. Programmes designed with stress theories taken into consideration might include personalised counselling, individualised programmes of study, and support for building social support relationships with peers and professionals. Study programmes should be incorporated into the practitioner's work. Human behaviour is not easily segmented into work, play, challenge, crisis, learning, teaching, stimulation and alarm.

Educators should also inform adult learners that the traditional views of intelligence has given way to the pluralist theories of intelligence, thus putting their minds at ease about their capabilities as adult learners. Pluralist theories accept the existence of multiple intelligences.

4.9 CONTEMPORARY VIEWS ON INTELLIGENCE

Earlier psychologists of intelligence such as Terman and Merill (1937) conceptualised intelligence as a single, general capability. However, this conceptualisation of intelligence has increasingly been challenged by the pluralist theories (Gravett 2001:2). Pluralist theories deny the existence of a single, general intelligence. Two influential pluralist theories on intelligence are:

- Gardner's theory of multiple intelligences: Gardner identified eight intelligences, indicating that there is a possible ninth (Gardner 1993:XIV). He defines intelligence "as the ability to solve problems, or to create products, that are valued within one or more cultural settings". According to Gardner (1998:21) all people possess these intelligences. However,

people have different profiles of intelligences in that some of them feature more prominently in some people than in others.

- Gardner's eight intelligences are:
  - Linguistic
  - Musical
  - Logical and mathematical
  - Spatial
  - Bodily kinesthetic
  - Naturalist as well as two personal intelligences
  - One directed towards other people (interpersonal)
  - One directed towards oneself (intrapersonal).

  Gardner calls his newest form of intelligence "existential" intelligence (Gardner 2000).

These multiple intelligences will thus be part of the different physicians attending CPD courses and will therefore play a role in their ability to solve problems or to create products that will better patient care. These intelligences could also play a role in their communication skills, management of unknown diseases and so forth, thus their professional behaviour towards patients.

As research on adult learning and intelligences is performed, new forms of intelligences are discovered. These are factors that will alter ways of planning and presenting programmes to the adult learner. A variety of learning activities

will have to be built into the presentation modus. The diversity of the participants taking part in the programme has to be reflected in the variety of methods used during the presentations. New learning theories will probably come forth from research on adult learning.

4.9.1 Steinberg's triarchic theory

Steinberg's triarchic theory consists of three sub-theories which comprises the following:

- Componential – focuses on the internal analytical mental mechanism and processes involved in intelligence.
- Experiential – deals with how persons' experiences combined with insight and creativity affects how they think.
- Contextual – involves the ability to adapt to and shape the environment to select a better environment or to shape the environment so that better suits one's skills, interests and values.

Steinberg has developed his research further into what he terms "Successful intelligence" (Merriam & Cafferella 1999:180). According to Steinberg, to be successfully intelligent is to think in three different ways: analytically, creatively and practical. *Analytical thinking* is necessary to solve problems and to judge the quality of ideas. *Creative intelligence* requires the formulation of problems and ideas and their analysis in an effective way in one's everyday life. *Practical intelligence* is needed to use the ideas and their analysis in an effective way in

one's everyday life. According to Tennant and Podgson (1995:42), practical intelligence may be the centrepiece of intelligence in the adult years, because it is based on prior experience. Matthews, Zeidner and Roberts (2002:256) further extended the boundaries of research on intelligence with their notion of emotional intelligence. They insist that we have two different ways of knowing - the rational and the emotional, and these are intertwined because feelings are essential to thought and vice versa. They argue that emotional intelligence is the major determiner of success in life. They propose five major domains of emotional intelligence:

- Knowing one's emotions
- Managing one's emotions
- Being self-motivated
- Recognising emotions in others, and
- Handling relationships.

All these domains of emotional intelligences will play a role in physicians' health practice and thus have an influence on patient care. Self-motivation, for example, is very important for lifelong learning. Keeping up to date with the latest trends in medicine, recognising the patient's emotions that are not verbally mentioned and being able to treat the underlying problem as well, all contribute to a demanding everyday life.

As mentioned previously in paragraph 4.3, many studies of adult cognition show that cognitive functioning does not necessarily diminish with age and that experience-related intelligence assumes a more dominant role as a component of intellectual functioning. According to Matthews *et al.* (2002:273), experience-related intelligence refers to the knowledge, strategies and experience that accumulate with age and are reflected in judgment and wisdom.

4.9.2 Intelligence and cognitive functioning in the adult years

Many adults who re-enter education experience learning difficulties. "These difficulties can often be ascribed to anxiety and a lack of self-confidence, resulting in the underestimation of their learning ability" (Matthews, Zeidner & Roberts 2002:467). Thus, educators can help learners by sharing with them research findings that prove ageing does not necessarily impact negatively on learning ability.

The traditional view of intelligence as a general single capability has given way to pluralist theories of intelligence. Many studies on adults' cognitive function showed that cognitive growth does indeed occur in the adult years and that the growth is based on the experience of dealing with concrete problems from the life world of adults. In the adult learner these intelligences are sometimes well developed and put to use in their professional life. The adult learner includes a collection of norms, experience and values and is therefore multifaceted.

4.10 THE ADULT LEARNER

The physicians who attend CPD programmes are adult learners, as they are mature, experienced, postgraduate and professional people. There are certain characteristics that are representative of adult learners.

4.10.1 Generalised characteristics of the adult learner

As already implied, adult learners bring accumulated experience with them into educational events and their readiness to learn is linked to their roles and life tasks. They are responsible for their own lives and decisions, coupled with a need to be seen and treated by others as responsible human beings (Knowles, Holton & Swanson 1998; Armstrong *et al.* 2003:704). The ideal adult teaching-learning transaction will accommodate the learners' adult attributes, preferences and psychological needs, as well as the adult educator's expertise and guidance. This requires a teaching approach that confirms and promotes adulthood by fostering independence, responsibility and self-direction.

4.10.2 Adult learners and life experience

Adult experiences can serve as a rich resource for learning. However, experience can sometimes also be an obstacle to learning. Adults often have well-established attitudes, convictions and thinking patterns. Therefore, they may find it difficult to learn new ways of thinking and doing if these contradict their beliefs and experience. Course structures and procedures, as well as ground rules for interaction should be explicitly stated and discussed. If this is not done,

participants whose expectations are not met are likely to become confused and resistant. Educators should thus establish a cooperative learning climate for participants, thus enabling them to contribute with their useful experience and insights.

4.10.3 Adult learning is limited to life roles and tasks

As identified by Liberman, Rotarius and Fottler (2001:249), the orientations of the adult learner are:

- Activity-orientated: They pursue learning activities out of social or personal growth needs. They experience the satisfaction of their needs in the activities.
- Goal-orientated: They wish to use education to achieve some definite external objectives, such as a certificate or promotion, or to solve an immediate problem facing them.
- Learning-orientated: They seek knowledge or skills for its own sake, because it interests them.

The adult teaching-learning methods will have to link the orientations of the adult learner to the planning of programmes. This will be possible by meeting physicians' needs in the programme activities and thus solving immediate problems facing them, by gaining knowledge or skills necessary to do this.

From the literature (Long 1998; Leamnson 1999; Knowles *et al.* 1998) it is clear that it is not possible to identify an encompassing reason why adults become involved in organised learning if the learning can be linked to some perplexing circumstances in their life-world-problems, challenges or needs arising from social or vocational roles (Knowles *et al.* 1998).

According to Parker & Pevrikh (2001:365), adults enhance their identity through learning that further develops their competences. Adults generally involve themselves in educational activities to pursue their personally relevant goals. They want to be able to apply what they learn in their life-worlds. They want to experience the immediate usefulness of new learning. This also applies to situations in which participation is not voluntary, for example work-related training. If learners doubt the relevance of training, they will see it as a waste of time.

4.11 IMPLICATIONS FOR TEACHING PRACTICE

As already implied, the educator of CPD programmes should be aware of the fact that adult learners wish to apply their updated knowledge, and therefore programmes should be planned that are relevant to physicians' needs.

4.11.1 Addressing learners' needs

It is often stated in adult education literature (Rogers 1993, Knowles *et al.* 1998, Gravett 2001) that adult learners seek education in order to address problems,

challenges or needs arising from their life roles. Flowing from this, the operative question for an adult educator is whether and how learners' perceived needs should be met. The idea is advocated that adult educators should ask learners what they think their needs are and then focus on those needs.

Critics of the "meeting needs" view, however, maintain that the perceived needs of the learner cannot and should not determine course content and educational processes. The critics of this view globally, but especially in South Africa with its political background, ask the question: what about the needs of the community, the economy and the employer? Others argue that individuals are often not the best judges of their own needs. Candy (1991:170) quotes Larson in this regard, remarking that what has not yet been learned is not yet known and the potential learner can only at best dimly perceive what they want to know more about.

Heard, Alten and Clardy (2002:753) warn that teaching to meet learners' declared needs may condemn these learners to stay within their own familiar and comfortable but narrow ways of thinking and acting. Heard *et al.* (2002) remarks that educators have an obligation to take learners beyond where they are now in their recognition of what they want to learn. If educators are expected to suppress their own convictions about what learners need, they are denied their active and initiating roles in the educational process, or if educators deny their own visions, aims, convictions and ideals and never "challenge learners' desires based on fundamental values and beliefs, then they cease to be educators at all"

(Brookfield 1992:13). The deduction could be made that *needs* refer to discrepancies between "an actual condition or state and a desired standard" (Queeny 1995:3). *Wants* on the other hand, imply the interest and perhaps the motivation of the learner. *Felt needs* are in the conscious awareness of the learner – his or her wants, desires and wishes. *Prescribed needs* are premised upon educators' beliefs concerning the skills, knowledge, behaviours and values that they feel adults should acquire, and also include the needs identified by other stakeholders, for example employers. Determining learning needs should therefore be "a transaction between learners and educator, and also employers in work-related learning programmes" (Brookfield 1992). Educators should address the felt needs of the learners, but the educational encounter cannot become slave to the expressed needs of learners. Hence, both *felt needs* and *presented needs* should feature in programmes for adult learners.

Course contents should always be made relevant to learners by linking the content to their current knowledge and perceived needs. A needs analysis enables one to do that. Steps of a typical needs analysis include the following (Heimlich & Norland 1994):

- *Identifying the desired state*: This implies that the participant should ideally be able to think, feel or do. The participant should have the opportunity, during or after the course, to answer or ask questions on the new knowledge acquired, or should be able to demonstrate the newly acquired skills.

- *Identifying the existing state*: To what extent do learners already possess the desired abilities? The presenter of the programme should be knowledgeable about the participants' current state of skills or knowledge to be able to build on this as a foundation for progressive learning.
- *Assessing the gaps:* Assessing the extent to which the existing situation matches the desired state. If no gaps exist, no educational activities are needed. Gaps will vary in size, importance and immediacy. If the presenter has identified the gaps that exist, these gaps can be filled with the necessary educational activity.
- *Prioritising the gap*: Translating the gaps into the needs that should be addressed by educational programmes. The presenter will be able to fill the gaps, if a needs assessment has been done. The assessment will give the presenter the necessary information on where to start with the programme, in order to prevent duplication of information already acquired.

Needs analysis for work-related training and development could involve three levels of assessment, namely: organisational, work-operational and employee performance (Zohar 1997; Frankford, Patterson & Konrad 2000:711). A needs analysis of the learners should be done before a course is planned. The first session of a course should include some form of needs assessment, be it formal or informal. Formal procedures for data collection such as the following can be used: questionnaires, individual interviews, focus group interviews, observation

checklists, surveys and self-assessment diagnostic instruments. An informal way of needs assessment is by telephoning a sample of participants prior to the course, and asking them to provide their reasons for wanting to attend the course and explain their expectations of the course, or to provide a list of important course topics. Participants are required to prioritise the topics to indicate which topics they consider important.

4.11.2 Utilising learners' accumulated experiences

In the educational setting, the life experiences of learners function in several ways. Firstly, the adult learners' experience can serve as a rich resource for learning, both for them and their fellow-learners (Vella 2000; Merriam & Caffarella 1999). However, experience can sometimes obstruct learning. Adults often have well-entrenched attitudes, beliefs and thinking patterns. If these convictions and thinking patterns are contradicted, questioned or disputed, it becomes difficult for adults to detach themselves from and reflect critically on their beliefs with a view to transforming them. It is thus evident that learners' existing knowledge and experiences play a crucial role in learning. Adult experiences can be utilised and affirmed in several ways as will be discussed below.

4.11.3 Exploring participants' existing knowledge

Participants' existing knowledge and experiences serve as an interpretative framework for learning. Therefore, to promote meaningful learning, existing

knowledge related to the learning content should be lifted to the conscious level and be explored and clarified.

Existing knowledge can be lifted to the conscious by using techniques such as the following: Learners are invited to explain their current understanding of key ideas of the learning content in questions, either individually or in small groups. One member of each group is then invited to express the consensus view of the group. Learners are invited to hypothesise by virtue of their experience. Learners receive frequent feedback on their performance. This includes affirmation of progress as well as an indication of knowledge or adequacy gaps that remain. This promotes a questioning attitude that is conducive to learning.

4.11.4 Linking new learning content to existing knowledge

Many adults engage in educational events with a view to acquiring and extending their knowledge, attitudes and skills. Participants should be invited to point out the connections between the learning content and their prior experience. In this way, experience is also available to fellow-participants as a resource of learning – this could be termed peer learning. Educators can link and get participants to link learning activities to their current life experience. Educational activities appear to be linked to problems or challenges arising from their social or vocational roles, therefore they want to be able to apply what they learn. Adult learners' need for immediacy has several implications: Adults are motivated to learn what learning content they believe to be relevant and beneficial to their life

situation. Therefore, attention should be given to the application value of the learning content. Illustrative examples should bear upon the life-world of the adult (Gravett 2001: 14).

However, as pointed out in paragraph 4.12.2, experience can sometimes be an obstacle to learning. Opportunities should be afforded to reflect on misconceptions, and to scrutinise convictions. Confronting anomalies and discrepancies in learners' existing views can accomplish this.

4.11.5 Assisting learners to learn from experience with a view to personal or professional transformation

There are several ways in which learners can formalise their experiences into real learning. The following serves as examples.

- Talk about experiences – physicians' peers can benefit by discussions, where the practical experiences are taken into consideration for future reference. Learners should be invited to indicate how new knowledge can be applied.
- Analyse experience individually or collectively – the presenter can lead the discussion by pointing out the benefits as well as the misconceptions of patient treatments, surgical procedures and/or drug use for example.
- Identify the implications of what is revealed and act on these implications - the presenter of the programme can identify the implications of the physicians' acts on the experience under discussion. The implications of

the practical experience can be discussed and the presenter can use the opportunity to broaden the participants' knowledge by giving more options of treatment for the mentioned experience.

- Authentic assessment tasks are provided - learners must demonstrate where they would use the acquired learning (Colquitt, LePine & Noe 2000:680).

In assisting learners to learn, it is important to understand what the learning process entails.

4.12 THE LEARNING PROCESS

The main purpose of teaching is to assist people to learn. The process and creation of an environment conducive to learning demand an understanding of what the learning process involves. Therefore, it is imperative to examine the concept of learning. When learning is discussed, it is important to distinguish between rote learning (memorisation) and meaningful learning. To memorise knowledge means repeating it until it is committed to one's memory. Thus, rote learning does not require active thinking by the learner. Unfortunately, many adult educators, often unconsciously, equate learning with memorisation. However, according to Sprenger (1999), isolated pieces of information that are memorised are often forgotten because they are not placed in a meaningful organised structure in the brain. On the other hand, when information makes sense to a learner, it is categorised and placed in an organisational structure.

Therefore, learning with understanding can be contrasted to rote learning. The former is meaningful learning that is rich with connections, and a prerequisite needed for insight and the lively and flexible use of knowledge (Perkins 1991: 5; Liberman, Rotarius & Fottler 2001:249).

Learning with understanding is a complex process that is not easily defined. Furthermore, it is problematic to translate knowledge of the learning process directly into teaching practice. Many factors impact on learning, including varying levels of motivation and expectations of educators and learners, as well as the institutional settings in which learning takes place. Knowledge of the learning process can be used fruitfully to delineate actions of adult educators and circumstances that in all probability would have enhanced learning.

The aim of the following paragraphs is to briefly discuss some temporary views on learning and to indicate broad implications of these for teaching.

4.12.1 Constructivism

The term constructivism is used for a cluster of related views, (radical constructivism, social, socio cultural, emancipatory) that all rest on the assumption that learning is a process of constructing meaning. Constructivists argue that learners are not passive beings that respond to “stimuli”, and that learning is not simply a process of acquiring knowledge that is stored in the brain for retrieval at a later stage. Learning is an active process of constructing

meaning and transforming understanding in interaction with the environment. When one is confronted with new information, meaning or sense must be made of it and ideas built around it. This new information is understood and learned *via* the learner's pre-existing cognitive structures, that is, *via* one's existing framework of knowledge. Thus, new learning builds on, and is constructed through the learner's existing frames of reference. Existing knowledge consequently plays a very important role in understanding new information. The better a person's knowledge is organised or structured (connected) the more effectively it can be accessed when needed. Experts know more than novices, but their real advantage lies in their ability to access what they know. Their knowledge is organised in a more connected fashion. Experts in a discipline develop more concepts and interconnections between the concepts than novices do (Brandford, Brown & Cocking 1999). As a result, experts have richly connected and finely integrated conceptual frameworks.

When learning (the construction of meaning) occurs, learners actively connect new information to their existing knowledge. If learners can link new information to their existing framework, and construct new meaningful interconnections so that their existing concepts are enriched, only then can conceptual change occur. The construction of meaning can be an individual process but is often a social process leading to shared meaning or co-constructing of knowledge. For example: during a discussion where different people contribute to the discussion and one leaves the discussion with changed ideas, one has constructed new

meaning. This construction of meaning has not been an individual process, but a social process, since new understanding has been constructed in interaction with other people. This interpretation of constructivism is termed "social constructivism. Constructivist views influenced by Piaget place more emphasis on mental processes of the individual, not paying much attention to the context in which the individual learn. A proponent of this view is von Glaserfeld (1995), whose view is termed “radical constructivism” because the mental processes are emphasised in the learning process. Social constructivism locates knowledge-making of individuals in a dynamic social context. Furthermore, they emphasise the role that language, dialogue and social understanding play in learners' constructions (Stage, Muller, Kinzie & Simmons 1998; Donovan, Hutchinson & Kelly 2003:126).

Social constructivists claim that the meaning-making activities of the individual do not take place in isolation but in a context shaped by societal influences. According to Vygotsky, the father of social constructivism, a mental function is external (inter-mental) and therefore social before it is (intra-mental) internal (Wertsch & Toma 1995; Liberman, Rotarius & Fottler 2001:242). Learning is viewed as a movement from the external to the internal through the process of internalisation mediated by tools and signs of which language is the most important. Thus viewed from a social constructivist perspective, learning is a process wherein complex psychological intra-action (i.e. thought) is mediated by

social interaction (i.e. speech, social activity). For obvious reasons, this has implications for teaching practices in CPD.

4.12.2 Implications for adult learning practice

Candy (1991: 275; Bransford, Brown & Cocking 2000) indicates that teaching and learning, especially for adults, is a process of negotiation, involving the construction and exchange of personally relevant and viable meanings. Prawat (1992:380) also uses the term "negotiation" to describe the type of social interaction that is needed to assist meaningful learning. The term "negotiation" can be defined in two ways, namely: reaching consensus on important matters and skilfully overcoming obstacles. Reaching consensus serves two important functions (Pereles, Lockeyer & Fidler 2002:210):

- To establish norms of interaction that may govern how members of the group relate to one another. When constructivist thinking informs teaching, norms of interaction that have to be established are that individuals feel free to explore ideas, ask questions, critically discuss and make mistakes.
- Helping learners, by means of reasoning together, to move towards the view of reality shared by those who are considered experts in the field of inquiry.

Teaching, as the negotiation of meaning, implies that the educator's role can be seen as an experienced guide that leads the traveller in territory that is too

demanding to transverse on their own. The guide will indicate direction and provide the necessary information regarding the terrain, pointing out the taxing aspects of the terrain and sometimes supporting them when the terrain is very demanding.

The constructivist perspective highlights the crucial role of the learners' existing knowledge in learning. Teaching should therefore be structured in such a way that learners' existing views can be used as a basis for teaching. Only knowledge that is well organised and structured (connected) can be accessed readily and thus serve as a basis for reasoning and problem solving. The constructivist theory called "transformational learning", is based on the constructivist perspective.

4.12.3 Transformation learning

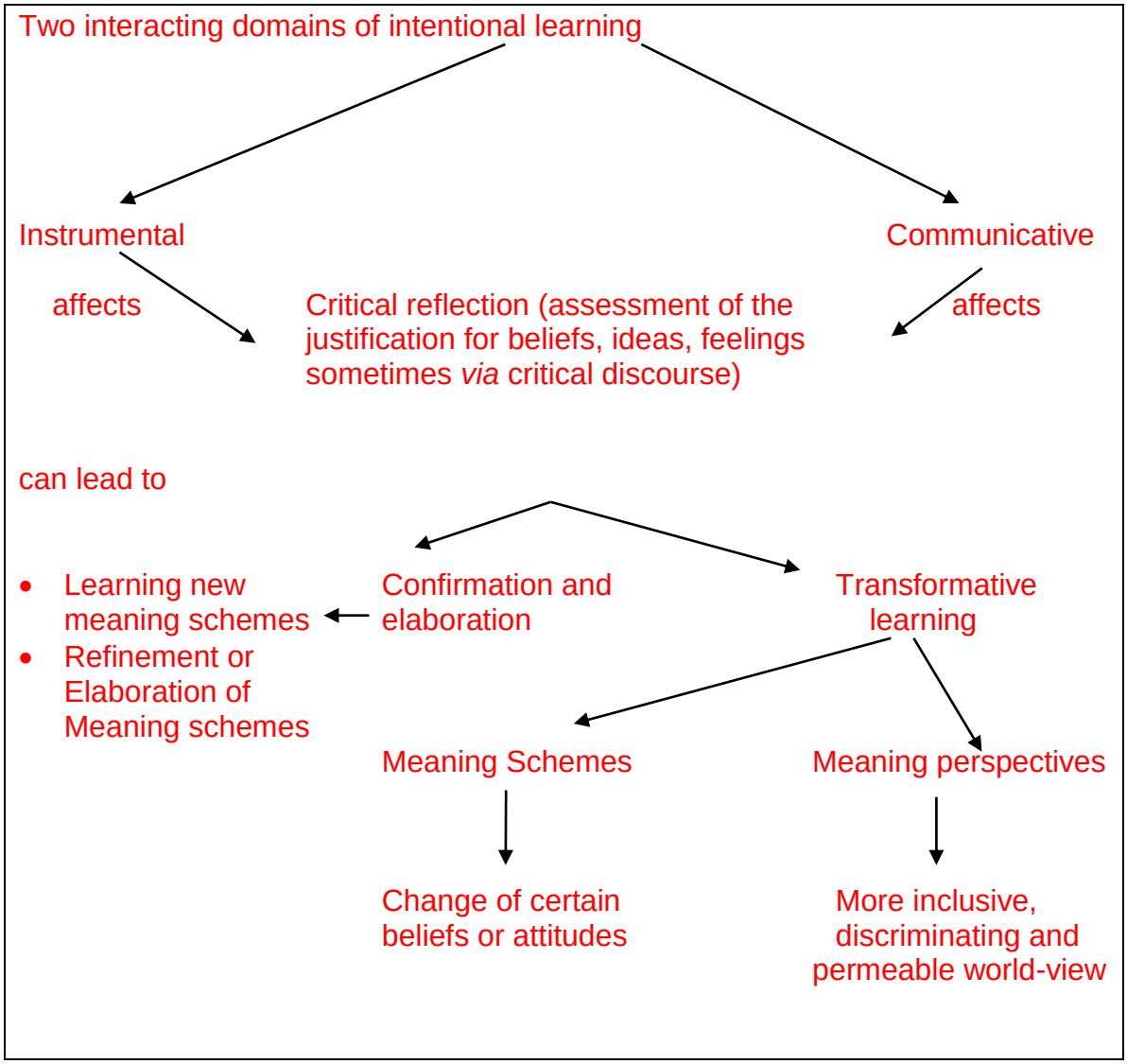
Mezirow's theory, transformational learning, is a constructivist theory, focusing specifically on learning in adulthood. Mezirow (1997:6) defines learning as a social process of using "prior interpretation to constitute and appropriate a new or revised interpretation of meaning of one's experience in order to guide future action".

According to Mezirow, our meaning structures (frame of reference) consist of two dimensions, namely:

- *Meaning perspectives* – habits of mind, general frame of reference, cognition, world-view, personal paradigm and cultural habits of expectations.
- *Meaning schemes* – specific knowledge, specific beliefs, value judgment and feelings evoked in making interpretation. Brookfield (1995) states that our meaning perspectives, if not questioned, can therefore lead to "cognitive imprisonment" in that they can limit new meaning-making.

Mezirow further distinguishes between two domains of learning, communicative learning – how to understand something, and instrumental learning – how to do something. Most learning involves elements of both the communicative and the instrumental. Within the domains of instrumental and communicative learning, four kinds of learning can be differentiated, the last two being transformative (Mezirow 1991; Armstrong, Doyle & Bennett 2003:702). Figure 1 illustrates how Mezirow perceives learning in adulthood.

Fig 4.1: Learning in adulthood, according to Mezirow



The ideal conditions for fostering transformative learning are those that allow full participation in discourse. Discourse is described by Mezirow (1998:196) and Pereles *et al.* (2002:210) as that special function of dialogue devoted to presenting and assessing the validity of reasons by critically examining the widest possible range of evidence and arguments in the context of attempting to find understanding and agreement on the justification of beliefs. According to

Taylor (1998), discourse is the medium by which critical reflection can be put into action to promote and develop transformative learning. Ideally, participants in discourse will (Pereles, Lockyer, Fidler 2002:211):

- have all the information at their disposal to enable informed participation;
- be free from coercion and distorting self deception;
- be open to alternative points of view and care about the way other feel and think;
- have equal opportunity to participate (including the chance to challenge, question, refute and reflect, and hear others do the same);
- be willing to accept an informed, objective and rational consensus as a legitimate test of validity until new perspectives, evidence or arguments are encountered and are subsequently established through discourse as yielding better judgment.

The ideal conditions for discourse should thus serve as a yardstick for judging educational effort and setting educational norms.

4.12.4 Broad implications for teaching practice

The goal of a learning intervention is to effect profound change in peoples' ways of thinking and doing. Such an intervention needs to commence with a process that would allow participants to articulate their existing assumptions in a non-threatening, yet challenging environment. Critical discourse should then be stimulated to assist learners in reappraising these assumptions, as well as

determining their root and consequences. Only then should the critical dialogue move towards exploring alternatives allowing for assessment of evidence for and against competing viewpoints.

The above process requires that the adult educator create a context conductive to transformative learning. It implies that the adult educator should engage in dialogue and negotiations with learners.

4.13 LEARNING AND THE BRAIN

No direct educational application, based on assumed factual knowledge about the brain is possible at this stage. However, current knowledge of the functioning of the brain does provide a broad guiding hypothesis about ways in which learning may be best facilitated.

4.13.1 Functioning of the brain in the learning process

Two points of significance for educators can be derived from the fact that the brain consists of neurons or nerve cells that communicate *via* neurotransmitters to form complex networks or circuits. Learning occurs when synapses and neural networks in the brain are formed and stabilised (Genesee 2000). The more the brain accesses the neural network, the stranger the connections become. Once stabilised, these hard neural paths activate spontaneously when needed to cope with new situations.

The first point of importance is that the multiple connections between neurons allow perception and thought. Secondly, neural connections are promoted and stabilised by experience and sensory interaction with the environment. The frequency with which the synaptic pathway is used determines whether it will stabilise or not. Furthermore, the greater the number of neural connections that are formed as the brain searches the associations with existing synapses, the more firmly the information is neurologically woven in.

The brain attempts to convert information into meaning by seeking links between the incoming information and one's existing experience and knowledge. When the brain discerns a pattern it results in meaning. Isolating information from its context makes it more difficult to learn. Caine and Caine (1994:81) as well as Bransford, Brown and Cocking (2000) assert that the brain is designed to perceive and generate patterns, and it resists having meaningless patterns imposed on it. Meaningless patterns are isolated pieces of information, unrelated to what makes sense to the student. The more links the brain can make with existing knowledge and experience, the easier it becomes for the brain to make sense of the information and the better it will be remembered. Patterning is enhanced when the brain is confronted with a variety of complex and concrete experiences. The more complex the challenge to learn, incorporating a variety of modes of delivery and learner activities, the better the learning. Writing and talking about what one is learning, promoted patterning.

Emotions also play an important role in the way the brain reacts to the learning process.

4.13.2 Emotions

Research focusing on learning and emotions confirms that emotions impact directly on learning (Reardon 1999:12; Matthews, Zeidner, Roberts 2002:256). While rote learning can take place under stress evoked by threat, meaningful learning is inhibited by it. However, while learning is inhibited by threat, it is enhanced by challenge and perturbation. Consequently, learners have to be moved beyond their comfort zones without feeling threatened. From the above it can be deduced that the ideal state of mind for optimising learning is when learners experience a low degree of threat and a sense of well-being, in combination with moderate to high challenge – a start of "relaxed alertness" (Caine & Caine 1994:70; Matthews, Zeidner, Roberts 2002:286). Learning is optimised when attention is given during the teaching process.

4.13.3 Learning and attention

Current research indicates that constant attention is impossible and undesirable because the brain needs time to process the information. The "break" in learning need not be a total break, but an alternative way of engaging in the learning content, such as a brief discussion with a co-learner or a writing exercise. Learning involves both focused attention and peripheral perception (Reardon 1999:11). This implies that the adult educator's enthusiasm and attitude towards

the learning content will give signals to the learners about the value of what is being learned. These signals can inhibit or enhance their learning on an unconscious level.

4.13.4 Learning and retention

The brain has at least five memory pathways – semantic, episodic, procedural, automatic and emotional (Sprenger 1999). The most powerful learning takes place when multiple memory lanes are activated. In addition, existing knowledge and experience play a crucial role in what the brain chooses to remember. If new knowledge can be linked to existing knowledge and life-world, it is easier to remember. On the other hand, separating learning content from prior learning and experience will lead to rote learning. The longer the cortex region of the brain is activated, the easier it is for the brain to remember. Activation is prolonged by:

- Linking with personal knowledge
- Repetition (particularly in different ways)
- Positive emotions
- Focus and concentration
- Feedback.

The more complex the encoding of information (*via* a combination of vision, sound, smell, movement, talking, writing) the easier it is to translate the information.

4.14 IMPLICATIONS FOR TEACHING PRACTICE

Some implications for teaching practice can be highlighted from the above discussions.

- **Learners' existing knowledge**

  It is important to use learners' existing knowledge for teaching and helping them to link what they learn to their existing knowledge.

- **A positive, challenging learning environment**

  A positive, challenging, respectful and engaging environment encourages risk-taking, as learners feel psychologically safe. The learning environment should evoke positive emotions, such as interest, enthusiasm and enjoyment. However, learning should never be entirely comfortable. Learning should challenge the brain to create new synapses or use unused synaptic pathways rather than just use previously well stabilised synapses.

- **Active involvement**

  Learning depends on the active involvement of learners and learner activity that requires verbal thought: in other words, learners engage in activities that aim at eliciting coherent speech and writing. Such activities convert “fuzzy associations” in the brain into formed verbalised ideas (Leamnson 1999: 66). This implies that learners summarise their thoughts about what they are learning in their own words, orally or in writing.

4.15 APPROACHES TO INTENTIONAL LEARNING

The concept of learning approaches emphasises the relationship between learning intention, learning process and learning outcomes in a specific context – a person will approach learning in a particular way as a result of how he or she views the subject and the demands of the learning situation. According to Vella (2000), it must be emphasised that a learning approach is not a permanent characteristic of an individual learner. Learners' approaches to learning are largely influenced by their perceptions of educators' expectations and evaluation demands. The research on learning approaches has established a link between the depth of learning outcome and the learning approach used by learners.

Deep learning is enhanced when learners:

- find what they are learning interesting and derive enjoyment from carrying it out;
- intentionally search for the meaning inherent in the learning endeavour (such as purpose);
- intentionally seek links between aspects or parts of a learning endeavour, thus looking for the "whole picture";
- personalise the task, making it meaningful to their experiences and to the real world;
- see the relationship between the learning content and their existing knowledge;
- try to theorise about the task, that is, try to go beyond the information given (Gravett 2001: 34).

4.15.1 Implications for teaching practice

Educators can influence learners' approach to learning (Lohse, Nitzke & Ney 2003:1021). Educators often promote surface approach to learning by un-intentionally giving the message that rote learning is required for survival. This message is communicated when educators assume the role of unilateral authority – the role of an expert transmitter of knowledge to ignorant and passive learners. This message can also be transmitted by evaluation requirements.

Deep holistic learning will be promoted by:

- Trying to stimulate interest.
- Emphasising the purpose of engaging in specific learning content.
- Trying to make learning content meaningful to learners by attending to their perceived needs and invoking their life-worlds.
- Moving between whole pictures and detail.
- Creating opportunities for learners to engage in provocative conversation with the educator and co-learners.
- Using evaluation procedures that reward thinking and understanding (Schlomer, Anderson & Shaw 1997:250; Daniel 2001:54).

4.15.2 Dialogue teaching

Dialogue refers to a respectful relationship with participants (educators and learners), thinking and reasoning together. Dialogue as a communicative educational relationship is characterised by the following: The typical tone of the dialogue is exploratory and interrogative. The purpose of the dialogue is to break

through to new insights. The dialogic process implies cooperative and reciprocal inquiry by putting forth questions, responses and redirections, and building statements that form a continuous and developmental sequence. Dialogue teaching requires a commitment to dialogue. This commitment does not necessarily precede the dialogue, but is gradually established through the creation of a context that fosters engagement in the educational setting. The dialogue is marked by an attitude of reciprocity among participants underpinned by the interest, trust, respect and concern they share for one another, even when disagreeing or encountering misunderstandings. It is important for learners to make sense of learning material. Meaningful, significant learning material is coded at a deeper level by learners and placed in an organised structure, therefore it can be recalled more easily (Meriam & Caffarella 1999; Pereles, Lockeyer, Fidler 2002:211). Isolated and factual information, as well as information that does not relate to the individual's organised knowledge structure, is easily forgotten (Rybash, Hoyer & Roodin 1986; Deary 2000:271).

Ageing indeed influences the speed of learning negatively (Rabbit 1999), particularly when the material does not relate to adults' experience, or conflicts with their existing knowledge. However, when new material relates to adults' field of expertise, they tend to learn fast (Rogers 1993). The average older adult observes, thinks and reacts more slowly than the average younger person. Educators should not confuse learning speed with ability. Even older adults have a remarkable ability to learn (Rabbit 1999). New forms of intelligence emerge

during adulthood and old age, such as wisdom, practical intelligence and the development of expertise.

The implication dialogue teaching has on CPD is that it engages its participants. When CPD is approached dialogically, participants and presenter cooperatively inquire into reason about the learning content or public knowledge. The presenter and participant become jointly responsible for a process in which all those involved can grow. Cooperation of participants is important for dialogue teaching. By means of open questions to participants cooperation elicits summaries of subject matters or comments on participants' contributions. By means of dialogue, reflections of experiences are communicated, forming part of self-assessment.

4.15.3 Student self-assessment

Self-assessment can be described as a special type of study skill. It falls under meta-cognition – the capacity to reflect upon one's own thinking, and thereby managing it (Greeno, Collins & Resnick 1996: 19; Downe, Macnaughten & Randall 2000). A wide variety of self-assessment formats have been used in college classes, one of the more common being *the reflective process*, where the practitioners-in-training pause and think about their experiences shortly after they have taken place. Making decisions in complex situations is seen as an activity that cannot be mastered by rules and prescriptions to be learned before entering the situation. It appears more meaningful to reflect about it afterwards in an

attempt to extract meaning that can be used in similar situations in the future. Keeping self-reflective journals about one's experience is seen as a helpful instrument for long-term improvement in complex skill domains. Different forms of self-assessment exist.

- *Course-specific self-assessment* (Angelo & Smith 1993) technique of focused autobiographical sketches: this technique is proposed only as a starter for discussion and is recommended for one-time use.
- *A reflective learning log* (Brown, Race & Smith 1996; Tousignant & Desmarchais 2002) where students are asked to keep a log for a two-week period. They are asked to regard their feelings about effective and futile learning experiences and what they found out about themselves in each case. Self-reports make the students feel empowered. The reports make them think about the course or CPD programme. It makes them feel in control, as they can disagree or disapprove and write about it. Learners are able to express their opinion and compliment the things they thought positive. The reflective papers are reflections on the course and its instructional elements. They are asked to evaluate its usefulness. This is, however, a very labour-intensive format for students as well as instructors and not well suited to the average course.

Hewson, Copeland and Fishleder (2001) developed a self-assessment procedure that involves three short reflective papers on questions such as the following:

- How do your personal goals for this course relate to the course goals outlined in the programme?
- What are one or two areas in which you need to improve and which particular step can you take to make such improvements?
- What kind of new questions about the course content have you developed by now that you would not have thought of before the course?

To make this self-assessment meaningful, reflections have to be specific and not to please the presenter. The above-mentioned three questions seem to be appropriate and useful to ask the participating physicians after every CPD programme. It is easy questions and not time consuming to answer. The presenter of the course can also benefit, because if the participants' goals are not met, different ways of presentation might make it possible in a follow-up course.

4.15.4 Functions of self-assessment

It is possible to distinguish at least four different functions that self-assessment can have in the classroom. First there are reflections about long-term goals and development. This helps students define broad areas of personal strengths and weaknesses. They synthesise and integrate knowledge and skill domains from different areas of study and they clarify overall directions towards a career and general place in life. There are reflections that people experience as they enter a new field of practice. According to Hansen (1998: 21) the function here is to digest experience from the field and to translate these into insights that can be

used in similar situations in the future. A third category focuses on one particular area of competence. The learner reflects on the effectiveness of certain processes, variables that hinder or promote the satisfactory acquisition of this competence. Finally the self-assessment serves the function of goal definition for the improvement of particular skills or learning behaviour.

Hewson, Copeland and Fishleder (2001) describe six important qualities that characterise self-assessment as a vehicle for the teaching and learning of critical thinking. Based on the researcher's analysis, self-assessment involves the following:

- An aspect of inquiry: Physicians are challenged to see the assumptions and implications of the course material.
- Integration of learning: CPD programme participants are asked to link what they have learned to previous learning or their own experience.
- Meaning and relevance: The physicians' effort to integrate new learning, thereby illuminating the meaning of that learning and its relevance to their lives.
- Voice and authority: Allow participating physicians to develop and exercise their own voices and assume greater authority for what they know.
- Self-directness: The increased awareness of themselves, which allows them to identify the questions that are relevant to them in their practices.

- Learning as a transaction between self and world: When physicians begin to connect their education more actively with the world outside themselves as agents of effective action (Hansen 1998:23).

For self-assessment to be effective, participants of CPD programmes have to be ready to think critically about themselves and their learning progress. It calls for admission of personal weaknesses and the acceptance of accountability for one's own learning. Medical practitioners need to practice enjoying the discovery of wrong assumptions about external phenomena before they can accept the challenge of discovering unsettling truths about themselves. Only then will it be possible to make teachable moments last beyond the initial experience of wonder and disbelief. The true importance of self-assessment is as a tool of active learning and as a part of an integrated strategy for affecting physicians' attitudes about the entire intellectual process of creating knowledge.

After all this has been said about learning and teaching an important question to ask is: What are the main considerations that have to be taken into account when planning a CPD programme?

4.16 CONSIDERATIONS FOR PROGRAMME PLANNING

The following should according to Dommisse (1997: 41:40) be considered before embarking on the planning of CME programmes. Firstly, a clear understanding of what the programmes aim to achieve is essential to direct productivity towards

the projective. Secondly, the programmes must be designed to meet the needs of the identified group.

Thirdly, there is unlikely to be much learning or retention of knowledge if assessment of learning is not ongoing. Fourthly, evaluation is essential to assess whether the programme is meeting its objective. The fifth important consideration is that all materials used for the programme, should be subjected to peer review and the material should be updated regularly. Materials should be adequately referenced and project different points of views. Written permission for the use of material should be obtained before it is included as programme material. Material provided should have a broad viewpoint and avoid narrow guidelines on protocols.

A recurrent problem is the initial enthusiasm of experts, who then become increasingly tardy in meeting deadlines. Compensation by means of momentary awards may obviate some of these delays or problems. Dommisse (1997) also said that CPD is too often dependent on the expertise available rather than the needs of the target group. Dommisse recommended that the requirements of physicians attending CPD programmes could be assessed by consultation or electronically.

Computer-assisted learning should be spelled with a small “c” and a big “L”. Computer programmes take time to design and are expensive to produce and

utilise. A successful CPD programme should become self-supporting. Sponsorship and advertising may be used to accomplish this.

The principles that have to be considered as stated by Dommisse are in line with education principles for adult learning (see paragraph 4.12.1 on learner's needs, paragraph 4.16.3 on self-assessment and evaluation). Unfortunately, no mention is made of the implementation of different teaching methods or the use of dialogue teaching (see paragraph 4.16.2 for effective learning). The participating physicians' current knowledge and personal relevance are also not mentioned by Dommisse, and both these principles play a crucial role in the learning process (see paragraphs 4.12.4 and 4.12.2).

After Dommisse (1997:42) made these suggestions at a conference in Washington DC, in 1997, the following principles emerged from the conference discussions. These principles were set to serve as guideposts for educators (not blueprints) to improve CPD in their institutions. These eight principles to guide CPD were:

- *CPD planning and programme development should be based on needs' assessment, including outcomes data.* CPD should be approached systematically to be most effective and give value to modern medicine. The quality of medicine itself is at stake when CPD is planned around available expertise, basis of interest and preferences rather than real needs. One effective way to ensure that learners' needs are taken into

consideration is by involving them in programme planning. Touch-pad technology can be used with great success for this purpose.

- *The goals of CPD should include the development of skills necessary for lifelong learning, the exercise of clinical reasoning, an understanding of the decision-making process, and specific content acquisition.* Often CPD programmes only concentrate on expanding physicians' knowledge without instructing them about how to use the knowledge to solve clinical problems. Learning demands the acquisition and retention of knowledge, accompanied by the development of reasoning skills. This will enable the physician to apply the knowledge effectively. Self-assessment, problem–solving, informed decision-making and the exercise of clinical judgment are the skills that will be nurtured by well-designed programmes.

CPD programmes should start will familiar material and progress to the unfamiliar. Self-assessment encourages critical thinking (problem-solving) and reinforces the goal of lifelong learning. The capacity to critically evaluate one's skills and knowledge plays a central role in learning. A central aspect of clinical reasoning is to be able to weigh evidence, recognise biases and reach an informed decision. To enhance this process, decision analysis should be taught. Decision analysis involves a formal, scientific approach to decision-making in which the value (goodness or badness) of each of the decision's possible consequences are multiplied by the probability of the consequences, thus arriving at a score for each outcome (Arnold 2002). Using this method, the likelihood of a

decision achieving a positive outcome and avoiding a negative outcome becomes clear.

Decision analysis also teaches that there tend to be three obstacles in the way of effective decision-making. They are bad data or a lack of data, ignorance of decision-making concepts and intuition that seems to impede effective decision-making. Decision-making can serve as a useful tool to integrate current knowledge and make the transition to evidence-based practice.

- *The multiple goals of CPD should be reinforced by the appropriate choice of learning methods.* Learning, rather than teaching, should become the focus of a CPD programme. It must also take into account that no two people learn in the same way, neither at the same pace from the same set of stimuli. There is over-dependency on the lecture as the standard instructional format, without regard for the learners' needs, skills development, or for their preferred learning styles (Arnold 2002).

  The ability to direct one's own learning will be the key to mastering the information overload. The capacity to critically evaluate their own knowledge and skills is essential for managing the explosion of scientific information that confronts them on a daily basis. Although a good deal of self-directed learning may be independent learning, not all of it should be undertaken that way. CPD appears most likely to affect outcomes when discussed and reinforced in groups. Problem-based learning (PBL) holds several

advantages as a CPD method, in that it encourages self-directed learning within a group or case-management approach. PBL also exercises an assortment of skills that go beyond knowledge acquisition yet are essential to learning and clinical proficiency, such as self-assessment, information management, the exercise of clinical reasoning and a collaborative, team management approach. PBL fulfils the need of learners, by individualised education and relevant material, as well as support and feedback that facilitate the adaptation of learning into practice. The administrative advantage of PBL is that it is cost-effective and lends itself to customisation. To date, however, PBL has not been evaluated sufficiently to determine whether it hold the potential to change physicians' behaviour. Thus, concurrent to the introduction of PBL learning programmes, practicing physicians must be educated about the rationale behind the new educational approach.

- *Incorporation of new instructional technologies should be based on their intrinsic strengths as learning tools after thorough evaluation.* There is a rush in medicine to become technologically adept. This contributes to the risk of embracing new technologies not based on merit, but out of novelty or promise. The strength of particular education technology should thus be measured not only according to content, but also whether the process of learning was taken into account during the design of automated programmes (Bell, Fonarow, Hays & Mangione 2002). Without insight, computers can

wind up functioning as electronic page-turners and offer little advantage over book learning.

A wealth of computerised educational programmes already exists, and these are available on compact disk (CD) and the Internet. These hold great promise for CPD, especially for learners in remote locations, as it makes learning accessible and affordable. The quality of material, however, varies and the effectiveness of computer learning applications is still being weighed. The major drawback of computerised education is that it is still orientated towards providing information and falls short of helping physicians cultivate other skills, such as problem-solving and clinical reasoning (Draper 1999:603). In addition, over-reliance on computer-based CPD programmes as currently structured, threatens to make learning a solitary activity.

Future applications of computer technology include electronic media that serve to merge the classroom to the patient's bedside. One example of such a tool is where a patient chart is connected to one side of the screen giving all the information on medication, hospitalisation, clinical tests and the facts on the patient's clinical condition. Beyond extremely concise data presentation this tool prompt sand cues physicians to seek more information. For their effort, the physicians are then given credit in minutes rather than hours. Currently only a fraction of physicians have access to such technology, but within a decade and hopefully eventually, every hospital room may allow

access to a computerised relational database (Bell, Fonarow, Hays & Mangione 2000:940).

Computer-based decision-support systems that replicate medical decision-making are not likely to reduce the demand for CPD. Its application is too limited and the development of such programmes very costly. Randomised trials show that there is a small incremental value to the regular use of such tools for diagnostic assistance. However, in the rare cases where they uncover certain diagnoses that may not have been considered, such tools could have important consequences.

Computer-based interactive learning attempts to conduct PBL through the Internet. There has been too much time that elapse between case presenters and group responses, leading to disinterest. These problems might be overcome by developing greater interactive capability through the use of instructional intranets.

Screensaver technology has been widely employed in other professions, where its successes in encapsulating and displaying vital information have been demonstrated. Its ease of access could prove an advantage, but its utility would be limited to small bits of information.

- *Faculty development is important within CPD and should include exposure to new learning methods (theory and application), enabling faculties to translate*

their content expertise into formats more appropriate to learners' needs. Departments of Medical Education are relatively new structures of medical schools. It became imperative that CPD lecturers should present their material in ways that will maximise learning. Failing to train providers of CPD in the content of the education process is tantamount to ignoring its existence.

- *Educational activities should be supportive of and coordinated with the transition to evidence-based medicine*. There is a need to achieve outcomes and develop standards for quality of evidence-based care. Therefore, CPD planning should be undertaken in concert with the development and implementation of evidence-based clinical standards and guidelines. CPD programmes should complement these goals.
- *Professional and interdisciplinary interaction should be given priority in CPD programming*. The assumption that knowledge alone can change physicians' behaviour is probably wrong. There is evidence that practice styles are based on physicians' habits and attitudes and may be difficult to change. Clinicians tend to be heavily influenced by their colleagues in a group experience. Research suggests that CPD outcomes are more strongly influenced when programme content is discussed and reinforced in a group setting (Green, Grosswald, Suter & Walthall 1984:36). The technologies seem to have the least effect on behavioural change. Therefore, there is an urgent need to instil collegiality, interaction and collaboration into the learning environment. Interactive case discussions on the Internet will to some extent create such opportunities.

- *Outcomes-based measures of CPD effectiveness to some extent and research should be introduced into the determinants of physician's practice behaviours.* All too often, the success of CPD has been judged by its attendance. The standard of CPD must grow to incorporate whether the programme changes physicians' practise behaviour and how it affects clinical outcomes. Objective measures are necessary to provide information on long-term returns. Currently pre- and post-tests are used to confirm that something was indeed learned from the CPD experience. However, the knowledge learned must be implemented in practice and these new behaviours should make a difference to patients' lives for CPD to reach its goal. The success of a CPD programme should thus be measured by means of controlled sample populations. It is admittedly very difficult to change physicians' behaviour and therefore the effect of CPD has been disappointing. The reason for this may be that the information gained is insufficiently practice-based, or it has no effect because the new knowledge is not consistent with the physicians' pre-existing habits and/or beliefs. Additional research should be undertaken to determine the motivating factors behind physicians' behaviours and practice styles.

4.17 CONCLUSION

The different ways in which learning occur are of importance to educators if their goal for CPD programmes is for meaningful learning to occur. Furthermore, it is important that the brain forms associations with existing synapses to make

retention of new knowledge possible. The more links the brain makes, the better the information will be remembered. When learning is connected to the learners' experiences, meaningful learning will takes place. Emotions also play an important role, as meaningful learning is inhibited by stress; learners thus have to be moved beyond their comfort zone without feeling threatened.

The depth of learning outcomes is dependent on the learning approach used by the learners, but the educators influence the learning approach. The concept of learning approaches emphasises the relationship between learning intention, learning process and learning outcomes. The learning outcomes of effective CPD programmes should alter the physicians' behaviour in such a way that patients benefit from the best care available.

In the implementation of effective CPD programmes, presenters should learn from the experience of others and incorporate some of the principles and ideas that are based on discussions with several directors of CPD programmes, for example in the USA or United Kingdom. They are a good way ahead of South Africa at this stage, and therefore their expertise could come in handy.

Evaluation of some kind should always be part of a CPD programme, as this is the only way to establish whether the programme had any effect on the physician. Self-assessment is also a very important tool, for not only does it affect cognitive views, but also understanding of oneself. Self-assessment,

therefore, not only preserves the outcomes of the teachable moment, but also contributes to a long-term transformation of the learner and thus becomes an instrument for an attitude of intellectual development. Given the desirable qualities, it is not surprising that self-assessment has become increasingly popular as a tool to foster active learning.

To embrace and incorporate needs assessment and outcomes-based evaluation, and to make and apply appropriate choices of learning methods and technologies, CPD educators and faculty members must be brought up to date. PBL is one of several instructional methods, the application of which in CPD should be further explored.

Changing the content and format of CPD alone, without studying physicians and looking at what motivates their behaviour, cannot achieve all of CPD goals. Since it is not always possible to change behaviours effectively, physicians must be instructed in the process of decision-making itself, because the ability to weigh evidence, recognise biases and reach an informed decision is one of the most useful components involved in the exercise of good clinical judgement.

The goals of CPD, namely behavioural change of the physician in order to better patient care, will not be achieved if effective learning techniques are not used. Presenters must be knowledgeable in the different ways to bring about effective learning. Physicians' assessment after CPD programmes of whether desired

outcomes have been reached should be standard procedure. CPD can only be of value to the patient and physician if it is done for the correct reasons and not merely for reregistration.

CHAPTER 5

AN IMPROVEMENT-ORIENTATED EVALUATION OF CONTINUING PROFESSIONAL DEVELOPMENT PROGRAMMES IN SOUTH AFRICA

5.1 INTRODUCTION

The preceding chapters provided an exposition of the global and South African CPD systems as well as the factors influencing adult learning. An exposition was provided on teaching methods that contribute towards meaningful learning. There is evidence from the amasses corpuses of literature that issues in adult learning impact not only on lecturing methods, but also on the outcomes of CPD programmes. However, the assembly of literature in the foregoing chapters is not an end in itself, but exists to serve as a point of departure for establishing the cause and effect of CPD on physicians, particularly in South Africa.

The empirical investigation undertaken in this study was aimed at determining the exact implications of CPD on physicians and its effect on patient care. The

researcher hopes that findings from the study will avail an opportunity to probe and gain insight into the feelings, attitudes and perceptions of educators and physicians on the current CPD system nationally.

The aims of this chapter are to:

- describe the research methodologies used; and
- analyse the research findings on CPD programmes nationally.

This chapter therefore commences with the theoretical foundations of the study based on an integrated research design that utilised the qualitative and quantitative research methodologies. Aspects such as the nature of research, research methods and procedures, sampling, the aims and objectives, methods of data collection and analysis and research ethics are discussed as important factors that form the foundation of any research.

5.2 THEORETICAL PERSPECTIVES ON THE RESEARCH METHOD

The method of this research survey has been aligned with the two research methods that have dominated the broad discourse of research in the field of education for decades. Both these paradigms contribute their benefits to this investigation.

5.2.1 Qualitative research

This method has been found suitable for this study since its purpose was not to prove any hypothesis, but to generate and analyse data, to uncover and understand the phenomenon under investigation. This study was also done to explore new insight into the experiences, perceptions and expectations of physicians in a compulsory CPD system. A qualitative approach was followed in compiling the questionnaire. Both closed and open-ended questions were used in the designed research questionnaires to participants and presenters of CPD programmes. The researcher hopes to arrive at an understanding and gain insight into how physicians perceive CPD programmes. Physicians were given an opportunity to reflect on and make recommendation to the HPCSA on the current system and how CPD affects them and their medical practice. When the researcher employed qualitative rational research discourse, she involved the participant in meaning-making within which they acted as agents of change who suggested possibilities for renewal and change (Waghid 2000:28). In this study, the participants were requested to suggest ways in which factors that cause them dissatisfaction could be dealt with at the HPCSA (see question 32 of participants' questionnaire).

However, the growing interest in the utilisation of qualitative research techniques, which arose from the realisation that there are fundamental differences between the study of natural objects and humankind, does not prevent the researcher from continuing with the use of quantitative research techniques. This is because

quantitative research methods do possess benefits of their own which cannot be overridden by that of the qualitative research methods (see paragraph 1.4.1).

5.2.2 Quantitative research

The quantitative domain attempts to prove assumptions based on statistical data inferences (Babbie 2004:86). Since measuring scales are used to fit responses of a large population into predetermined response categories, the result of a quantitative study can be generalised. This, however, depends on the careful development of the research instrument, its reliability and validity (Mouton 2001). Babbie (2004) postulates that quantitative research tests theories, as well as determines facts and statistical analysis in order to illustrate relationships between variables and prediction. In this postulation, qualitative research is based on the assumption that if a person knows exactly what ailed mankind, they could control and effectively combat and avert all evils and defects (Babbie 2004). The merits of the two approaches encourage researchers to opt for their collaborative usage.

5.2.3 Multi-method approach

Despite the fundamental differences in the premises and the epistemological traditions of the qualitative and quantitative research methods, the two methods should not be seen as opposing or mutually exclusive. Any scientific study that involves both qualitative and quantitative methods stand to produce results that would otherwise be unattainable with a single method. Some methods

counteract the limitations of others, thereby limiting errors that oftentimes emerge from method shortcomings. Waghid (2000) alludes to this foregoing contention, claiming that by employing both methods in research undertakings, more credibility is given to findings.

Kratwohl (1998:621) affirms the positive sides of the two methods by declaring that multiple research methods can strengthen research in a variety of ways. Once the researcher is able to transcend the qualitative-quantitative continuum, the benefit of both methods can be accrued. The approach, where a variety of research methods are employed in a single research investigation, is scientifically known as method triangulation. The value of this method is to enhance the interpretability of the research findings, to reduce uncertainty and to remove from the researcher the delusion that the solution or answer obtained is absolutely correct (Monnapula-Mapesela 2002:223).

The implementation of both the qualitative and quantitative methods was not done only for the two methods to compensate each other, or to assess and identify the *status quo* regarding physicians' satisfaction about a compulsory CPD system, or to prove a hypothesis. The ultimate goal upon gaining insight into the opinions of the physicians was to make recommendations on how physicians' views can be used to improve CPD programmes. Babbie (2004) describes any research that employs triangulation to finally effect change or

support the kind of reflections amongst participants that leads to emancipation after the research process as transformative research.

Transformative research gives the researcher the opportunity to contribute to changing CPD programmes and practices or solve the problem that initiated the research. The ultimate goal of any investigation is to utilise change or solve the problem, by communicating the research findings to the people by means of seminars, press releases and presentation to the relevant institutions. This specific study was initiated by physicians' antagonism towards a mandatory CPD system that according to the physicians participating in CPD programmes was not effective in changing behaviour (Grobler 2001). The possible cause of the problem was investigated in this study and the possible solutions will be communicated to the statutory bodies involved with CPD.

5.3 RESEARCH DESIGN

In previous sections (sections 1.4, 1.4.4.1, 1.4.4.2 and 1.4.4.3), a theoretical frame of reference for the research design and methods used in the study was provided. The ensuing sections will, however, provide the practical component of the research, its purpose, the method of data collection, development of the research tool (questionnaire), piloting of the instrument, its validity and reliability, sampling techniques, data processing and analysis.

5.3.1 Purpose of the study

The main objectives of the investigation were:

- To determine whether CPD courses altered the physicians' behaviour towards the patient, and with regard to the treatment of symptoms (see paragraph 4.12.3).
- To determine whether the courses meet their current need for new medical knowledge and developments (see paragraph 4.11.1).
- To determine what doctors expect from CPD courses (see question 14 section C of questionnaire for participants).
- To determine whether presenters of courses are familiar with methods to enhance adult learning and to change the behaviour of medical practitioners (see questions 16 and 17 of presenters' questionnaire).
- To determine whether presenters do evaluate the course and learning material afterwards (see question 5 of presenters' questionnaire and question 6 section B of participants' questionnaire as well as paragraph 4.15.3).
- To determine whether presenters are available for follow-up support afterward by means of e-mail, telephone or visitation of practice (see question 3 of presenters questionnaire).
- To determine whether self-assessment methods are known to participants, for them to be able to know what their shortcomings are and to improve these by attending the programmes they need (see paragraphs 4.15.3, 4,15.4 and question 5 section 5 of participants' questionnaire).

- To make recommendations to improve courses that will fulfil the physicians' needs (see question 32 of participants' questionnaire).

5.3.2 Method of data collection

As already implied, this study integrated a qualitative and quantitative research methods. This involved the use of both closed and open-ended questions in personally designed research questionnaires for participants and presenters of CPD programmes. The main part of the research instrument comprised structured items formulated mainly on the basis of the literature amassed, while a smaller portion of the instrument comprised open-ended questions. According to Mouton (2001:100), data collection is one of the most important steps in undertaking research, and advises that a valid research instrument is imperative for researchers.

5.3.2.1 Research instrument

As indicated in an earlier section (see section 5.3.2), the study integrated the qualitative and quantitative research methods. This entailed the use of both closed and open-ended questions in personally designed research questionnaires for participants and presenters of CPD programmes. Researchers have the autonomy either to develop a questionnaire from scratch or to adopt or alter an already existing one to suit their purpose of their investigation and the research content. Both these types of questionnaires have advantages and disadvantages (Mouton 2001). An already developed

questionnaire is timesaving, cost-effective and high in validity, but unfortunately it sometimes fails to test what the researcher wishes to investigate.

Although it takes time to construct one's own questionnaire, and it may have flaws and limitations, it addresses what the researcher set out to investigate. In the research problem that was studied, two self-constructed questionnaires, one for participants of CPD programmes and another for presenters of the programmes, were used to determine the strength and weaknesses of the current CPD system for South African doctors and presenters.

For this study, the information in the literature (see chapter 4) served as an adequate and relevant backup for the development of the questionnaires to determine the strengths and weaknesses of the CPD system in South Africa.

The purpose of the questionnaires was presented as to investigate whether:

- CPD programmes are effective in terms of the implementation of new knowledge, as they only upgrade knowledge (see paragraphs 4.12.3 and 4.15).
- Essential elements for learning are taken into consideration in the planning of CPD programmes (see paragraph 4.16).
- The presenters of programmes are knowledgeable in adult learning methods (see question 16 of questionnaire for presenters).

- Programmes are followed up to evaluate the change in performance that took place after the attendance of CPD (see question 1 under section B in questionnaire for participants).

The research questionnaire for participants of CPD programmes (see appendix 1) was designed to comprise 32 questions divided into two sections, namely Section A comprising Biographical details of the participants and section B general questions (open-ended and closed) under nine different headings relating to CPD programmes. The questionnaire for presenters (see appendix 3) of CPD comprised 17 questions (open-ended and closed) divided into two sections namely section A for the biographical information of the presenters and section B comprising 17 questions on general information. The questionnaire gathered two types of information, firstly factual data through the use of closed predetermined questions and secondly, open-ended questions that required participants to give their opinion about strengths and weaknesses of CPD as well as make recommendations to better the current system.

The different closed questions were answered by *yes* or *no,* because the questionnaire had to take up as little as possible of the participating physicians' time to complete and in this way definite positive or negative answers were obtained. Physicians as well as programme planners made it clear that no questionnaires would be distributed amongst the participants and presenters if it took more than five minutes of the participants' time to complete. Participants

were supposed to indicate by simply making an X in the appropriate block provided next to the *yes* and *no*. In each category, open-ended questions were asked to prompt participants' feelings and to elicit factors that were not mentioned by the researcher in the questionnaire. The questionnaires for participants of CPD programmes were concluded with suggestions for CPD in South Africa.

5.3.2.2 *Open-ended questions*

The open-ended questions were asked intentionally to elicit more interpretive answers to the questions and thus enhance the response of the participants and presenters of CPD programmes. Open-ended questions, unlike closed questions, do not prompt the participants that completed the research questionnaires, but allow them to voice their opinions unrestrictedly and freely. The concern in presenting a research questionnaire comprising open- ended and closed questions are that participants completing questionnaires tend to answer the closed questions and avoid the open-ended ones as they feel under no obligation to attempt them. In a sense, it defeats the purpose of the open-ended questions and that of the instrument.

5.3.2.3 Piloting the questionnaire

According to Babbie (2004), it is important that questionnaires are tried and improved repeatedly during the developing stages. This needs to be done until the instrument can serve the purpose that it was meant for, namely to determine

the strengths and weaknesses of CPD in South Africa. The questionnaires used in this study were informally piloted (Mouton 2001) by distributing these amongst local physicians attending an accredited programme, being a weekly event of the Department of Obstetrics and Gynaecology at the University of the Free State. The presenter of the programme also completed a questionnaire for presenters. After the questionnaires were completed, suggestions could be made to better the format and formulation of questions. The pilot study consisted of five physicians and one presenter and therefore the results were not formally analysed. The purpose of the pilot study was not to draw conclusions, but to test the understanding of the questions asked and the time it takes to complete the questionnaire. The time was important, as the programme planners would not allow distributions of the questionnaire if it took more than five minutes to complete.

In this investigation, the researcher took the questionnaire through several stages of development before it was finally accepted as suitable for the purpose of the study. The researcher had an opportunity for upgrading the questionnaire through regular consultations with the promoter, and afterwards the research instrument was handed to physicians in the Department of Obstetrics and Gynaecology at the Faculty of Health Sciences at the University of the Free State, to complete for pilot purposes. These knowledgeable colleagues commented on the content, clarity and relevance of questions asked in the questionnaire and even proposed that questions needed to fulfil the purpose of

the investigation. The researcher made changes accordingly. According to Waghid (2000), this form of piloting is still worthwhile as it enables researchers to judge the feasibility of their investigations and make modifications accordingly.

The research questionnaires were edited for language and grammar, and translated into Afrikaans. The translation of the questionnaires was deemed necessary for making the questionnaires easier and more accessible to the Afrikaans-speaking physicians and presenters of CPD programmes in South Africa. The questionnaires were translated by a professional language practitioner and were checked by the promoter to ensure that the English and Afrikaans versions were similar in information and meaning. During this study, only five Afrikaans questionnaires were requested by participants of CPD programmes.

5.3.2.4 Validity

Validity has to do with whether the issues under investigation relates to the researcher's methods, techniques and approaches (Babbie 2004). Ensuring the validity of the study, the researcher reviewed a wealth of literature pertaining to adult learning, cognitive development theories, learning activities as well as CPD globally. The literature served as a premise and a better understanding of the problem under investigation. According to Mills (2000), engaging in a literature examination gives the researcher an opportunity to gain knowledge and information that already exist, to reflect on new research problems and align

one's own research with existing corpuses of knowledge. The self-constructed questionnaires were therefore developed based on the literature and the preset aims and objectives of the study. It was geared towards answering the questions that the researcher has identified. The physicians in the Department of Obstetrics and Gynaecology of The Faculty of Health Sciences at the University of the Free State, who completed the questionnaires as part of the informal piloting, were all participants of the weekly CPD programme in the Department and were presenters of CPD programmes as well. The promoter, a researcher and academic at the Centre for Higher Education Studies and Development, was the expert in the field of higher education and made suggestions and changes to the questionnaires used in the study. By taking part in the process, they also verified the validity of the content.

5.3.2.5 Reliability

Reliability refers to how well the research was done as well as the repeatability of the research. Repeatability refers to whether similar results would be obtained if other researchers, in a comparable setting, did the same investigation. The interpretation of the outcomes, however, may differ. Research that complies with the foregoing aspects is regarded as reliable. In this study, the development of the questionnaires based on existing literature on CPD and adult learning ensured reliability.

5.3.3 Sampling and site selection

In this study, the researcher opted to undertake the investigation nationally. It should be noted, however, that only three of the Faculties of Health were included in this investigation namely at the University of the Free State, the University of Cape Town and the University of Pretoria. Although attempts were made to include the University of Westville, the CPD programmes offered at these institutions were cancelled because of a lack of interest.

The researcher requested the scheduled dates for CPD programmes from these universities where at least 100 delegates were expected to register for the course. The questionnaires were disseminated to the participating physicians and presenters of the programmes beforehand.

5.3.3.1 Dissemination and retrieval of the questionnaires

All the questionnaires were disseminated personally by the researcher to the physicians attending the programmes as well as to the presenters of the programmes. The questionnaires were collected on the last day of the course. The participants were given the duration of the programme to complete the questionnaires and hand them back afterwards. The researcher coded the retrieved questionnaires and handed them to the Department of Biostatistics for analysis. In order for the researcher to ensure a high return rate, participants were reminded of the questionnaire before each tea break and before the end of the programme. At the University of the Free State in Bloemfontein, 250

questionnaires were disseminated and 68 were retrieved, giving a retrieval rate of 27%. In Cape Town, 80 questionnaires were handed out and 40 were retrieved. The retrieval rate was 50%. The university of Pretoria handed questionnaires to 300 participants and 102 were retrieved, giving a retrieval rate of 34%. An overall response rate for this study was 37%. The retrieval rates were low, but according to Jamieson (2004), a retrieval rate of 15% for door-to-door questionnaires are deemed high in South Africa, unlike in Japan were door to door retrieval rates are 97%.

5.3.4 Ethics

Gaining access to programmes for measurement of strengths and weaknesses of the CPD system in South Africa proved very difficult. Each university is cautious of criticism of programmes as it may cause lower attendance of future programmes. They also wanted the assurance that any information regarding their programme will be confidential and readily available to them before being released to the media or authorities involved in CPD.

Research involving people directly and investigating controversial issues such as strengths and weaknesses of a compulsory CPD system for physicians, tend to raise ethical issues. According to Mills (2000), there are four ethical principles that researchers in the social sciences must adhere to, namely:

- Ensuring that the identities of the participants are protected so that the information gathered does not embarrass or harm them in any way.

- Treating the participants with respect and seeking their cooperation in the research.
- Negotiating permission to do a study, explicitly stating that the researcher will abide by their terms of contract.
- Telling the truth in reporting the research findings.

In this particular study, the researcher ensured that these principles were adhered to and the participants could even opt for anonymity. A personal request was made by the researcher for the physicians to support the investigation by participating in the survey handed out to them. It was clearly stated that their identities would be kept anonymous, while the results of the study will be handled with the utmost confidentiality. The participants were treated with respect and courtesy and they were given a choice of language in which to complete the questionnaire.

5.3.5 Data-processing and analysis of the questionnaires

The responses in the questionnaires were coded by hand and the questionnaires were then analysed by the Department of Biostatistics at the University of the Free State. The researcher then identified patterns in the data and interpreted the data in order to report the findings and offer recommendations.

5.4 PRESENTATIONS, ANALYSIS AND INTER-PRETATION OF THE RESEARCH DATA

The data presented in this section were analysed by the Department of Biostatistics at the University of the Free State.

5.4.1 Findings from the participants' questionnaire survey

630 questionnaires were handed out to participants nationally. A total of 210 questionnaires were retrieved after the CPD programmes. This gives a response rate of 37%. It must be noted that the physicians were reminded of the questionnaires at least twice a day, every day for the duration of the programme. However, the effort was in vain. The possible reasons for the low response rate could be that physicians feel that they do not benefit from these research studies because they are not informed of the results, or the results are not published for their information, and authorities do not change their policies according to the outcomes of research findings. If visible positive actions follow research findings based on scientific principles, it may motivate participants to complete questionnaires to bring about the desired change.

In this research, it is important to note that the utilisation of the quantitative method serves an important purpose, as it is employed to emphasise quantifiable observations. The quantitative method should not be viewed as a way of presenting the number of physicians that feel negative and thus complain about

the weaknesses of the CPD system in South Africa. Rather this approach should be seen as a strategy to gain a broad spectrum of perspectives of the physicians concerned, and this was indeed achieved. On that account, the participation of 37% of physicians and 40% presenters is not seen as an impediment to the research investigation.

The researcher established the biographical information of the participating physicians by requesting the completion of Section A. This was done to establish the demographic representation of the participants as well as their academic status and vocational practice. Their age was also noted.

5.4.2 Biographical information of the respondents

This investigation included biographical information on the respondents that will be mentioned in the forthcoming sections.

5.4.2.1 Town/City of practice

The respondents originated from 49 towns and cities throughout South Africa. Twenty-eight of the respondents did not specify their town or city of origin. Twenty one percent of the participants came from Johannesburg, 9.89% from Bloemfontein and Cape Town respectively, 9.4 from Pretoria and 3.3% from East London and Kimberley respectively. The rest (45%) of the participants came from smaller surrounding towns namely Douglas, Bultfontein, Virginia, Bloemhof, Christiana, Ladysmith, Durban, Westville, Amanzimtoti, Richardts Bay, Margate,

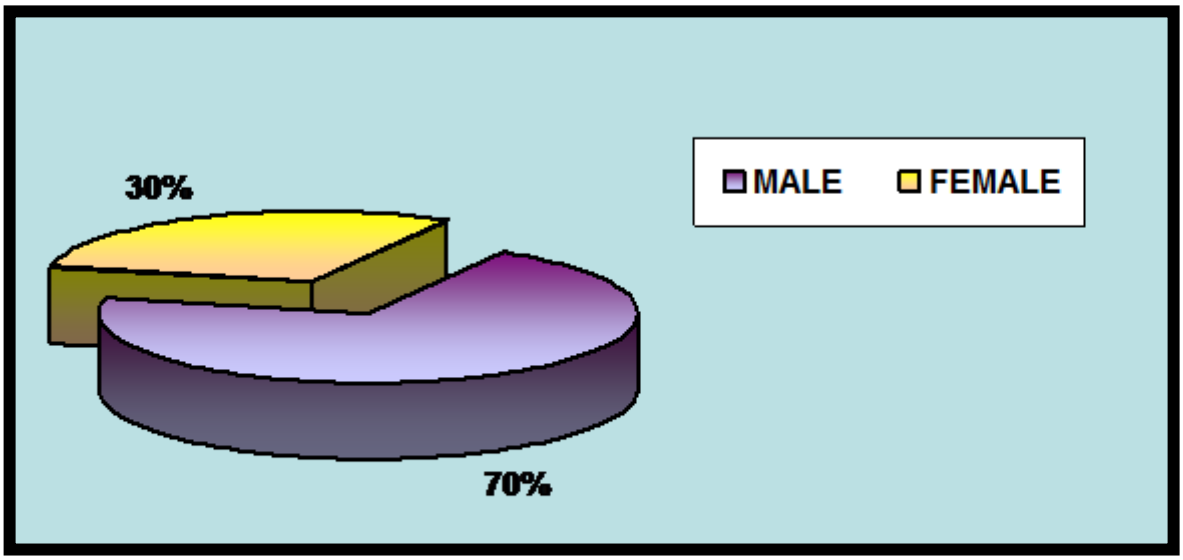
Port Shepstone, Colesberg, Mosselbaai, Aliwal North, Uitenhage, Worcester, Port Elizabeth, Klerksdorp, Fourways, Krugersdorp, Rustenburg, Kemptonpark, Ermelo, Alberton, Standerton, Nylstroom, Nelspruit**,** Boksburg and Botshabelo, and respectively they represented 0.5% of participants. Randburg, Limpopo, Naturena, Bethlehem, Roodepoort, Welkom, Thaba Nchu, Kroonstad and Stellenbosch 1.65% respectively, Witbank 2.2%, Van der Bijlpark 3.3%, Vereeniging and Sasolburg 1.1% respectively.

The larger towns were represented by more physicians than the smaller towns. This is probably because of the percentage of physicians that practice in cities in relation to smaller towns.

5.4.2.2 Gender

As far as gender is concerned, 70 percent of participants were male and 30 percent were female. The possible reason for the lower percentage of female respondents could be that fewer females qualify as medical doctors annually (Grobler 2001:47) or it could be that females don't practice as doctors after they have children. Figure 5.1 illustrates the gender distribution of the participants.

Figure 5.1: Gender distribution of participants



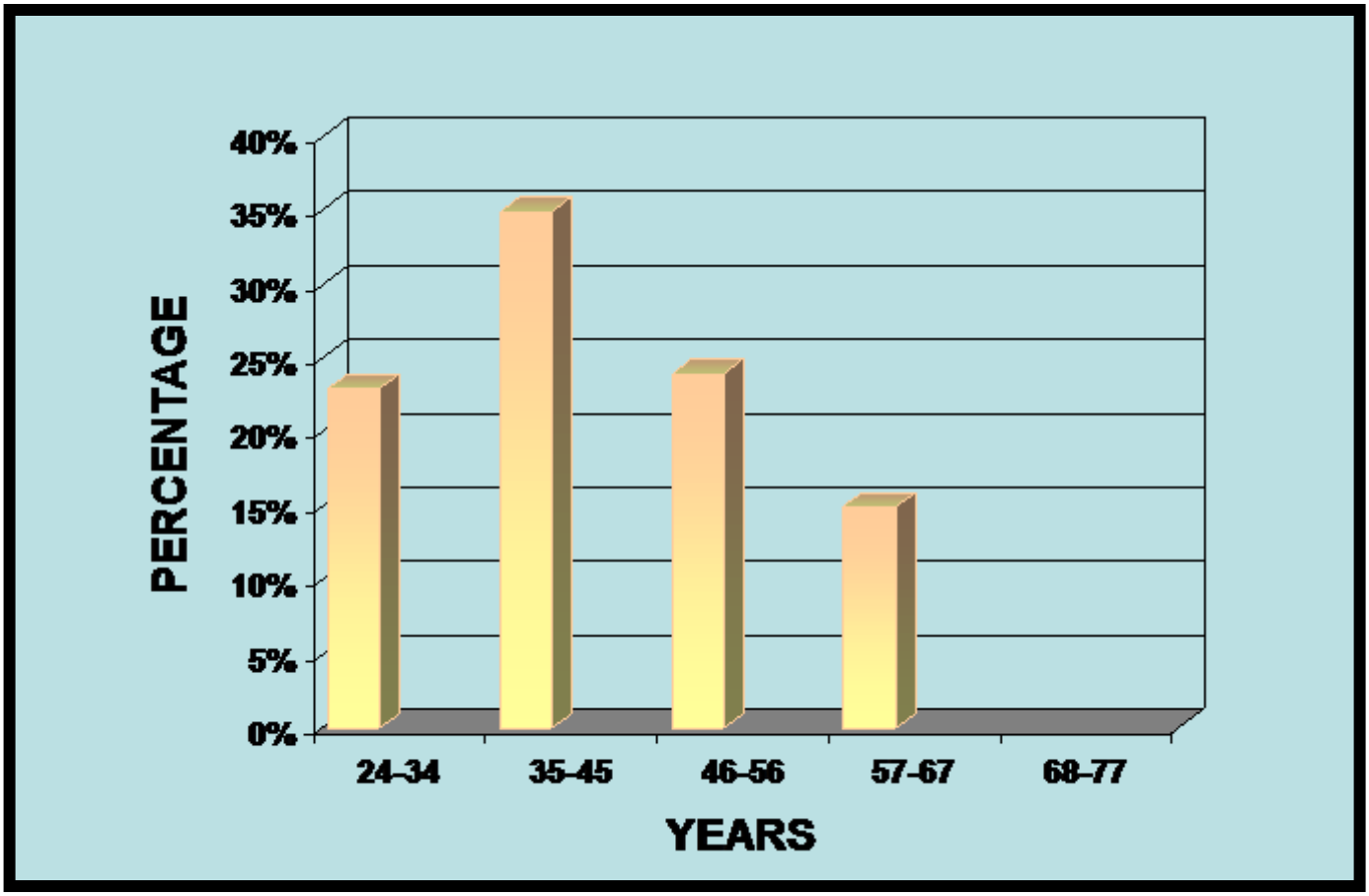
5.4.2.3 Age

Eight respondents preferred not to answer this question. The age of respondents who answered the questions varied from 24 to 77 years of age with an average of 43.8 years (standard deviation=11.5).

A slightly higher percentage of participants were between 35 and 45 years of age. This may be because they are still building their practices and are eager to gain new knowledge.

The following graph illustrates the age distribution of the participants.

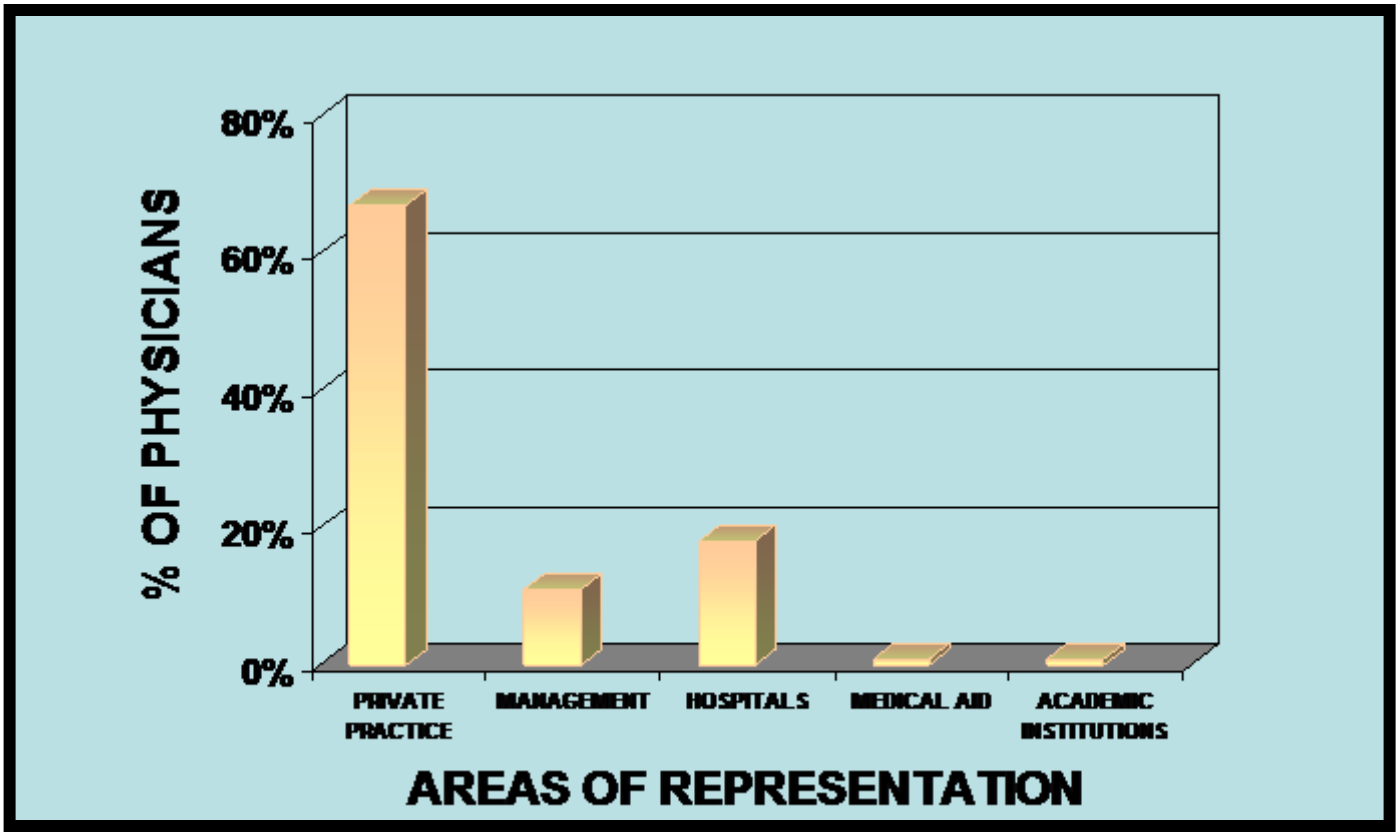
Figure 5.2: Age distribution of participants



5.4.2.4 Type of practice

The respondents represented a variety of areas of practice. These areas of practice were private practice, management of medical facilities, hospital (government), academic institutions and medical aids. Figure 5.3 gives an illustrated perspective of participants' sites of medical practice.

Figure 5.3: Detailed information on areas of representation of respondents



Most (68%) of the participating physicians were from private practice. It seems as if they are more motivated to better patient care by keeping abreast with the latest trends in medicine. However, it could also be because they have more funds available to attend these programmes than hospital physicians do.

5.4.2.5 Qualifications

The participating physicians were all qualified in the Health profession, and 26 different qualifications were mentioned in this survey. The qualifications are as follows: M.B.,Ch,B, DCHSA, DTMOH, BPH, DHSM, MD, M.Fam.Med., MA RCNBPO, M.Sc.(Med), M.Fos, FFD.SA M.Fos, FCP(SA), M.Med. MBA, B.Sc.,

MCHD, BCHD, PDD, BDS, PPM, MDS, M.Com, Hdip Dent, DA, FCP, PHD, M.Prac.Med.

The qualifications were obtained from 13 different universities worldwide. The universities were: University of the Free State, University of Natal, Medunsa, Stellenbosch, Wits, University of Pretoria, University of Cape Town, Potchefstroom, University of IASUASO, USSR, University of Zanzibar, Unisa and College of Medicine. Only 14,5% of participants had international qualifications.

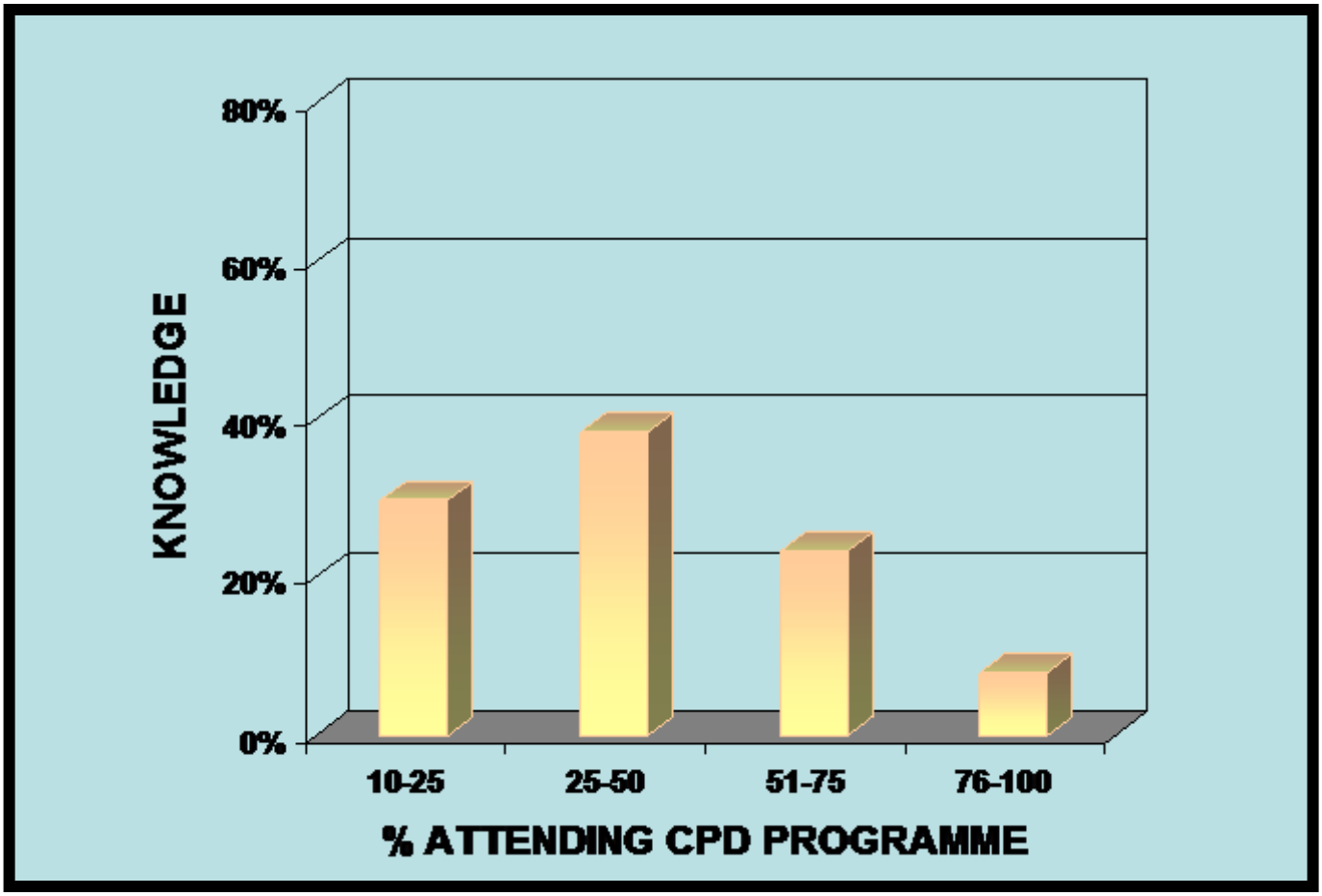
5.4.3 Findings from the questionnaire survey

The results of the questionnaire survey of the participating physicians are presented in tabular (quantitative component) and graphic form. The open-ended questions are done in a descriptive manner.

5.4.3.1 Application of upgraded knowledge

It is important to note that the main aim of CPD is to better patient care (see paragraph 2.7.1) and not only to upgrade knowledge. Therefore, this is an important component of the survey. Question one of the questionnaire asked the participants to estimate the percentage of knowledge that they will apply after the CPD programme they attended. The following histogram (figure 5.4) graphically illustrates the percentage of knowledge that, according to the participants, is applied in practice after a CPD course was attended.

Figure 5.4: The percentage of knowledge applied in practice after attending a CPD programme



According to the histogram, 29.9% participants apply 10-25% of knowledge. 26-50% of knowledge is applied by 38.5% of physicians attending the programmes, and 51-75% of knowledge is applied by 23.5% of participants. Only 8% participating physicians implement 76-100% of the knowledge gained. Retention of knowledge depends on variables such as type of learning material, level of motivation of participants, language of presentation, presenters' skills and other

situational variables. These factors may be possible reasons why only 8% of participants apply 75-100% of new knowledge in practice.

The highest percentages of physicians (38%) apply 26-50% of new knowledge in practice. The possible reasons for this may be that only 26-50% of the physicians' needs where met by the CPD programme, or the knowledge was not practice orientated and too academic in nature. As indicated in this study the main purpose of CPD is to change behaviour, and therefore the participants' estimation of the knowledge that will be implemented in patient care is very important.

5.4.3.2 Needs fulfilment of programmes

The statistical analyses, namely the 95% Confidence Intervals (CI) for the percentages, revealed that 70% of physicians' needs, namely to upgrade their knowledge, were met by the programmes (see paragraph 4.11.1) with the 95%CI value between [63.8 ; 76.1]. The 95% CI value correlated with the percentage of knowledge alleged to be implemented by physicians. The low percentage of needs met by CPD programmes might thus be a possible reason for the low percentage of implementation of new knowledge by participants in their practices (see paragraph 5.4.3.1). According to Boland (1997:54), the CPD programme should reflect the needs of the physicians. If CPD programmes fail to meet their needs, physicians will question the use of mandatory CPD. Programmes should have validity and relevance to ordinary practice.

Physicians who responded to open-ended question three gave reasons why their needs were not met, thereby providing important and interesting trends. It seems that physicians feel that attending courses does not have the necessary effect, because the number of participants attending the programmes are too large, thus making hands-on programmes difficult and even impossible (see paragraph 4.14). The monologue way of presentation does not alter or improve quality of health practice (see paragraph 4.15.2). According to 31% of participants, the fact that CPD is mandatory results in attendance being mainly for reregistration purposes. According to the 11.9% respondents whose needs were not met and the 18.1% that were unsure whether their needs were met, this was owing to the programmes being too academic in nature and they would prefer it to be more practical.

Physicians (57%) felt mandatory CPD is not cost-effective, because the physicians in private practice have to pay another physician to be available for their patients for the duration of the course. They do not generate an income during this time and they have the expenses of the programme registration, travelling and accommodation fees. The loss of income leads to stress and stress leads to less effective adult learning (see paragraph 4.5).

Self-assessment regarding their medical practice and patient care regimes can be described as a special type of study skill (see paragraph 4.15.3). The functions of self-assessment are to assist the physician in identifying personal

strengths and weaknesses, digest experience and translate this into insights that can be used in future situations. In addition, it serves to define goals for improvement of particular skills or behaviour (see paragraph 4.15.4). The survey revealed that only 57.5% of physicians is familiar with self-assessment with regard to their practice and patient conduct.

It thus seems that there is a lack of knowledge on self-assessment amongst physicians. The acquiring of self-assessment skills serves as a useful tool to identify personal strengths and weaknesses as well as to define skills that need improvement. This improvement of skills can then be acquired by attending CPD programmes that address that particular skill, hence making CPD worthwhile.

5.4.3.3 Evaluation of new knowledge gained

Only 18.9% of CPD programmes included some form of evaluation. The method of evaluation was in the form of questionnaires on the programme content that had to be completed, which did not serve to determine the percentage of new knowledge gained. The participants were not positive about the value of this method. By excluding evaluation after programmes, the effort to integrate new learning and thus making it relevant to practice is not established. Evaluation is the only way to establish whether any knowledge is retained for implementation in practice. It is important to remember that the aim of CPD is not to gain enough credits for reregistration, but to change behaviour for better patient care (see table 5.2 number iii). Physicians agreed that new knowledge leads to better

patient care. If physicians' practices and thus their patient care benefit by the effect of CPD programmes, positive attitudes toward the system come about and this encourages learning (see paragraph 4.13.4). The lack of evaluation after CPD programmes thus seems to be one of the points that need attention.

The participants were requested to specify the nature and scope of the evaluation. The evaluation was limited to the opinion of the participant on the presenter's skills and knowledge. The participants were thus not evaluated at all on their knowledge gained.

5.4.3.4 Reasons for attending CPD courses

The closed questions eight to thirteen are tabulated in table 5.1. The percentage of respondents that valued these reasons for attending the CPD course are also stipulated in the table.

The table clearly indicates that CPD helps doctors to keep abreast of the latest medication and treatment methods, as 90.5% of participants stated that this was the effect of the CPD courses that were attended, followed by the change that occurs in the treatment of diseases. Bringing about change in patient care is the main aim of CPD programmes. Thirdly, it builds confidence and improves diagnosis of diseases. The fourth important reason for attending CPD programmes is that it contributes to the improvement of diagnosis of diseases and thus benefiting the patient, as better care can be rendered when the correct

diagnoses are made. Finally, it is a platform for sharing problems and experiences in practice. This platform makes it possible to reason and think together to solve problems (see paragraph 4.15.2) and thus acts as a communicative educational relationship. From this table, it seems that CPD programmes do fulfil their objective, namely to change the treatment of diseases to the benefit of the patient in terms of better care.

Table 5.1: Reasons for attending CPD

QUESTION		YES	NO
8	Had there been a needs assessment of possible themes prior to the course?	21	48.7
9	Do CPD courses build your self-confidence with regard to patient treatment?	81	13
10	Do CPD courses contribute to the improvement of your diagnoses?	78.8	9.3
11	Could CPD change your treatment of particular diseases?	86.2	5.3
12	Is this a platform for sharing your problems and experiences in practice?	75.5	24.2
13	Do you think CPD would help doctors to keep abreast of the latest medication and treatment methods?	90.5	3.4

Unfortunately, the table also reveals that needs' assessment as low as 21% was conducted prior to the programme. As mentioned in paragraph 5.4.3.2, fulfilling the needs of physicians is very important for adult learning (see paragraph 4.11.1). Even though 70% of participants' needs were meet, only 21% indicated

that a needs' assessment was done before the programme was planned. The fact the participants' needs were still met might be because they opted to attend the course after being familiar with the content of the programme.

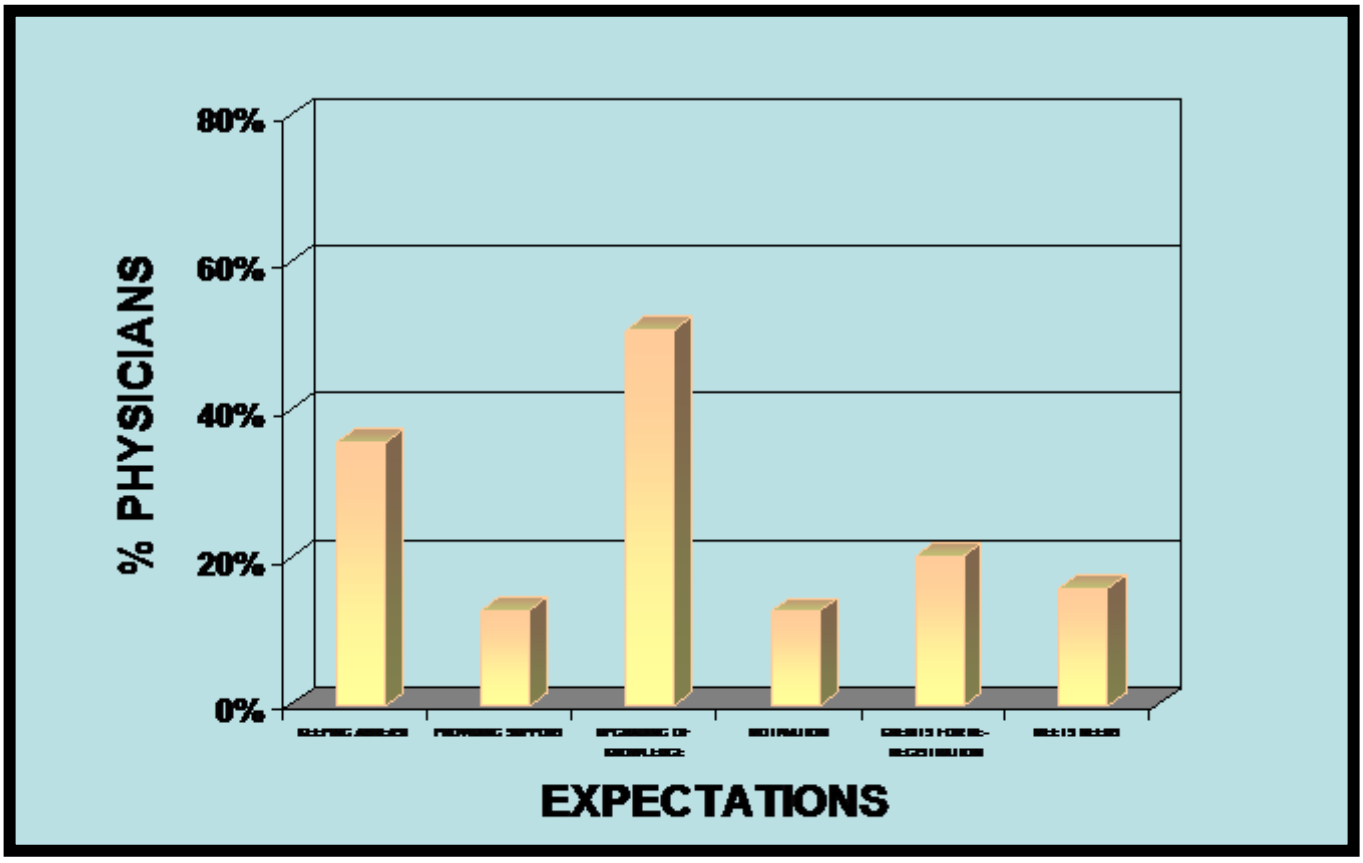
The purpose of the open-ended question 7 was to establish whether physicians had reasons for attending CPD courses other than those mentioned in the questionnaire. The reasons they gave, however, only accentuated those mentioned in the questionnaire. The reasons given varied from:

- to remain registered;
- to gain points;
- for networking and to share experience;
- to gain new medical insight;
- to keep up to date;
- to improve health practice and apply knowledge;
- for personal improvement;
- good speakers;
- interesting course content;
- enjoy interaction and socialising;
- to a more negative reaction; or
- was sent by the company to attend the course.

5.4.3.5 Expectations regarding CPD courses

The physicians' expectations with regard to the CPD course were illustrated in the histogram (figure 5.5) below. The physicians were also asked to prioritise the expectations on a scale of 1-6. The percentages below represent only those that prioritised this expectation as the most important, thus giving it a value of one. Unfortunately, some participants added a weight of importance to the expectations and gave a value of one up to three to the expectations. This happened because physicians did not read the question properly and thus misunderstood the intention of the question, namely to be able to determine the number one expectation of CPD programmes.

Figure 5.5: Physicians' expectations regarding CPD courses



According to the histogram, most of the physicians firstly expect of CPD courses to upgrade their knowledge and keep them abreast of developments in health sciences. Gaining credits from courses for reregistration seem to be the third expectation of participants. Surprisingly only a few (below 20%) participants indicated that they expected of CPD courses to meet their health knowledge needs. The CPD courses were least expected to motivate them to deliver better care or to provide support for future problem solving or treatment of diseases.

The percentage of physicians that gave expectations of CPD programmes a value of 1-3 is given as positive and those from 4-6 is given as negative as tabulated in table 5.2. This was done to attempt once again to establish the most important expectation of CPD courses by participants.

Table 5.2: Value of expectations of CPD programmes

	EXPECTATIONS	YES	NO
i	Keeping abreast of the latest scientific information.	76.3	23.6
ii	Providing a supportive environment for medical professionals in practice.	46	54
iii	Upgrading your knowledge and thereby improving patient treatment.	79.8	20.2
iv	Providing motivation for lifelong learning.	38.3	62.2
v	Obtaining credits for reregistration.	45.8	54.2
vi	Themes on the programme interest me and meet my practice requirements.	53.8	46.2

When the weights were added to the expectations and tabulated in this way it is clear that firstly, the upgrading of knowledge and thereby improving patient treatment was the most important expectation of physicians attending programmes, and secondly, keeping them abreast of the latest scientific information was expected of programmes. From this it seems that most of the physicians attend the programmes with the correct expectations as a reason for attending the course, but whether these expectations are met by CPD programmes remains to be seen.

5.4.3.6 Effect of the size of the group of participants

In the participants' questionnaire the effect of the size of the group with regard to certain criteria as stipulated in table 5.3 were questioned. The criteria possibly affected by the size of the group were knowledge gained, motivation for lifelong learning, improving patient care, creating a support system for practicing doctors and merely retaining your registration.

Table 5.3: The effect of the size of the group attending the programme

Criteria effected by group size	yes	no	95% CI for percentage
Knowledge gained (n=204)	76.96	23.04	70.7 ; 82.0
Motivation for lifelong learning (n=203)	68.47	31.53	61.5 ; 74.1
Improving patient treatment (n=203)	73.89	26.11	67.4 ; 79.5
Creating a support system for practicing doctors (n=203)	67.49	32.51	60.8 ; 73.6
Merely retaining your registration (n=196)	55.61	44.39	48.6 ; 62.4

According to table 5.3 the knowledge gained and the improvement of patient treatment were the two criteria that were affected most by the group size. Retaining of registration was effected least by the size of the group attending CPD programmes.

Group size was not the only criteria that affected the knowledge gained as well as the improvement of patient. The method of instruction was also an important factor for effective learning that brings about change (see paragraph 4.11.5).

5.4.3.7 Instructional methods

Table 5.4 reveals the instructional methods that were used during the different courses that were evaluated. This question was included in the questionnaire, as instructional methods are important because learning is induced by certain instructional methods. Meaningful learning takes place when dialogue teaching is used as instructional method (see paragraphs 4.12.3, 4.15 and 4.15.2).

Table 5.4: Methods of instruction used during CPD programmes

Instructional Methods	Percentage	95% CI for percentage
Monologue (n=202)	68.6	61.3 ; 75.1
Group work (n=194)	34.5	27.8 ; 42.0
Seminar (n=195)	72.7	65.6 ; 78.9
Workshop (n=195)	48.5	41.1 ; 56.0
Lecture (n=210)	92.3	87.6 ; 95.4
Practical Work (n=205)	45.7	38.5 ; 53.1

The table reveals that most of the presenters, 92.3%, of programmes still make use of the lecture method. This method does not advance adult learning (see paragraphs 4.13.4, 4.14, 4.15 and 4.15.2). The majority of the physicians felt very negative about this method of teaching. They indicated that too many statistical data were included in some of the lectures and sometimes the lecture material was on a research basis and not yet applicable to better patient care.

There was collective feedback among the participating physicians that diversity of instructional methods is of the utmost importance for quality teaching and transformative learning. The major concern raised by the physicians was that the

accreditation of programmes did not include the instructional/facilitation method, leading to ineffective CPD programmes, and neither was the presenters' educational status known. This factor endangers the quality of education and outcomes of programmes, as physicians leave courses without benefiting, except for the credits gained for reregistration.

5.4.3.8 Obtaining points

Table 5.5 illustrates the views of physicians on credits awarded to specific CPD activities.

Table 5.5: Physicians' views on points awarded to specific activities

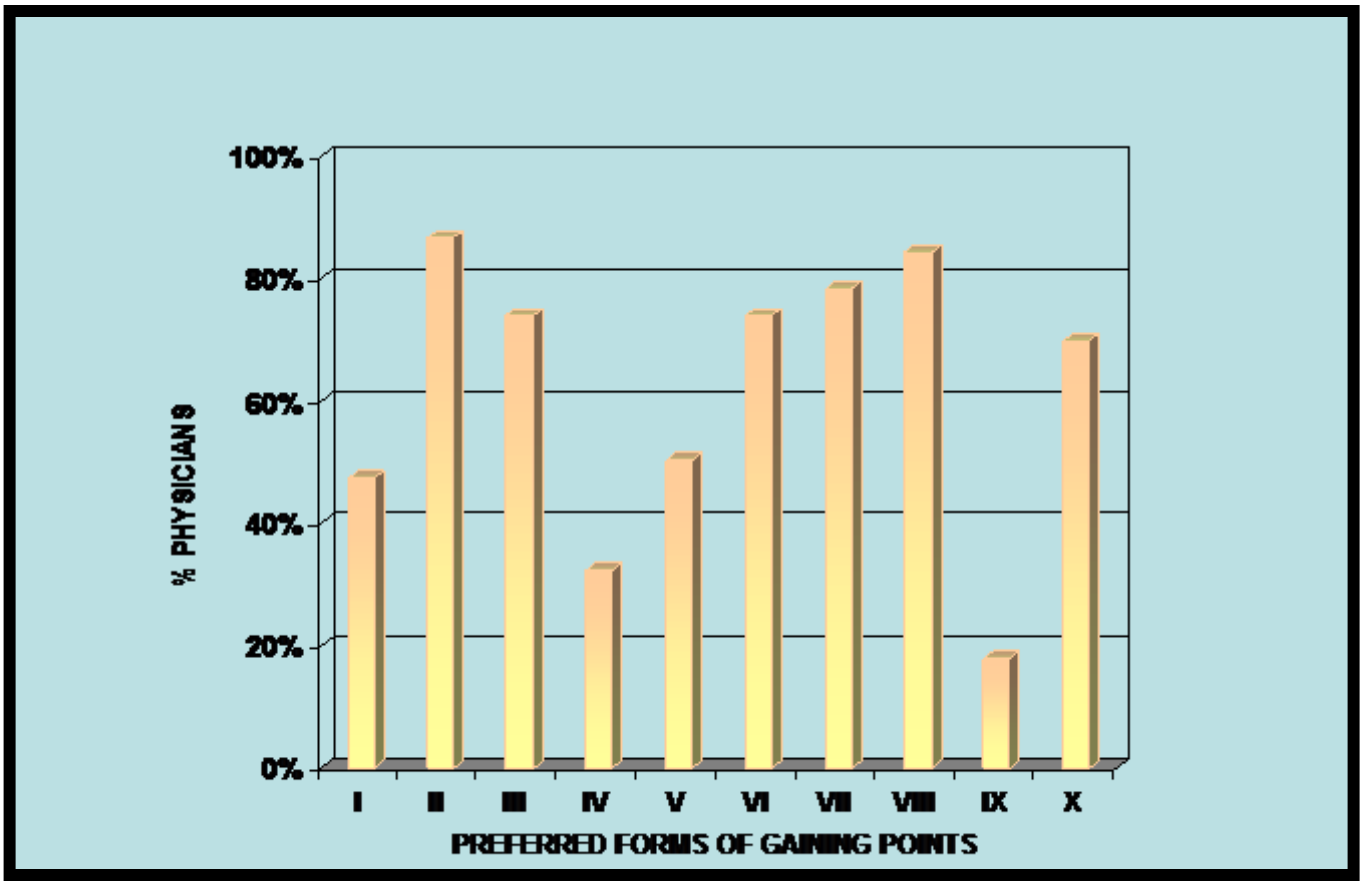
QUESTION 22		YES	NO	PERCENTAGE	95% CI of percentage
i	Are the credits awarded to CPD activities acceptable? (n=198)	137	61	61	62.4% ; 75.2%
ii	Should overseas programmes count more points? (n=201)	84	70	41.8	35.2% ; 48.7%
iii	Should academics receive credits for presenting lectures? (n=198)	154	22	77.78	71.5% ; 83.0%

Table 5.5 confirms that physicians are satisfied with the allocation of points of CPD activities in the mandatory CPD system in South Africa.

As far as the preferred form of obtaining these points are concerned, it seems that writing of articles is the preferred method, followed by acting as promoter of

master's or doctoral theses. Thirdly, physicians indicated that they would prefer visits to their practices by HPCSA representatives to audit their daily patient care management as a way of gaining points for reregistration. This method of reregistration, however, would involve establishing a committee of specialists to do these audits. This method will be costly and involve additional administrative personnel. Apparently, most physicians prefer to use a variety of methods to gain credits, such as journal discussion groups, and attending workshops, congresses as well as lectures sponsored by drug companies to launch the latest drugs available. The histogram gives a picture of the ways of gaining points and the distribution of physicians that make use of them. Figure 5.7 illustrates the preferred method that physicians use for obtaining points for re-registration.

Figure 5.7: Preferred activities for obtaining CPD points (n=204)



i Involvement in medical faculties [40.8 ; 54.4]
ii Writing articles for publication in medical journals [80.9 ; 90.3]
iii Training students [67.6 ; 79.6]
iv Group discussions [26.35 ; 39.0]
v Computer-assisted training by completing questionnaires on a particular group of articles [43.7 ; 57.3]
vi "Shadowing" by specialist [67.6 ; 79.6]
vii Visits to practices [72.3 ; 83.5]
viii Promoter for Master's or Doctor's degree [78.7 ; 88.7]
ix Conference attendance [3.5 ; 24.0]
x Conference poster or oral presentation [63.5 ; 76.0]

From the open-ended question 24 it is evident that gaining credits by means of completing questionnaires in journals regarding those articles are doubted. Physicians form a "mafia" and copy the answers from each other for credits. This is an unfortunate phenomenon, but similar to what was found in Italy (see paragraph 2.2.1) where a gentleman's word was not good enough any more. Another concern among the physicians was that oftentimes the well-intended journal questionnaires were irrelevant to their needs and thus only completed or even copied to gain credits for reregistration.

Other recommendations and comments made with regard to obtaining and awarding of points in question 24 were that CPD should make room for physicians not involved in clinical practice by offering courses on medical management. Make it simple and affordable, and perhaps even exclude doctors performing their community service from gaining credits for registration. Another recommendation made was that the HPCSA should become more involved in CPD by providing the accredited programmes on a website (see paragraph 4.16.). A wealth of computerised educational programmes already exists. Internet learning holds great promise especially for physicians in remote areas,

as it is accessible and affordable. The major drawback of computer education, however, is that it is still orientated towards information and not towards the cultivation of skills, such as problem solving and clinical reasoning. It also makes learning a solitary activity. The application of these programmes for CPD in South Africa is still limited and the cost involved in the development of such programmes is very high. Instructional Internet development with interactive capabilities might overcome these problems.

Apart from the recommendations there was also a concern that CPD does not upgrade clinical quality, because there is a lot of overlap of course material, and the material is not applicable to clinical practice. The long duration of courses makes physicians unavailable for practice during that time, thus causing a decrease in income. Weekend or even evening courses were recommended, because in this way patient care would be taken into account.

Physicians suggested that a quarterly self-generated report system, based on professional activities during that time, should be considered as another way of gaining credits for re registration.

5.4.3.9 Ways of keeping abreast before legislation for compulsory CPD

The different ways physicians kept abreast of new trends and knowledge before legislation for compulsory CPD is tabulated in table 5.5.

Table 5.5: Ways that physicians kept abreast before compulsory CPD

Question 25		Yes	No	95% CI of percentage
i	Reading scientific journals (n=191)	97.38	2.62	[94.0 ; 98.9]
ii	Liaison with faculties (n=145)	60.69	39.31	[52.6 ; 68.3]
iii	Further specialisasion (n=131)	40.49	59.54	[32.4 ; 49.0]
iv	Function for introduction of new pharmaceutical products (n=167)	83.23	16.77	[76.8 ; 88.1]
v	Member of medical group that met on regular basis (n=145)	57.93	42.07	[49.8 ; 65.7]

Physicians (97.3%), 95% CI of percentage [94.0 ; 98.9], kept their medical knowledge up to date by reading scientific journals and by attending functions where the latest pharmaceutical drugs were introduced to them (83%), 95% CI of percentage [76.6 ; 88.1]. Further spesialisation were only implemented by 40.49%, 95% CI of percentage [32.4 ; 40.0], of physicians as a way of keeping abreast of new trends in the medical profession.

5.4.3.10 Attendance of CPD opportunities

All the physicians (100%) who completed the questionnaire for the investigation attend CPD opportunities of several medical schools and societies. 59.6% of physicians attend 1-5 programmes annually, 6-10 events are attended by 15.3%, and 8.6% attend 11-20 CPD activities annually. 16.3% attended more than 20 CPD opportunities annually.

The high incidence (40,2%) of physicians that attend more than six CPD events annually, is an indication of the dedication of physicians to keep up with medical trends, but it does not secure better patient care (see paragraph 4.12.4).

5.4.3.11 Motivation for attending CPD programmes

The motivation for attending CPD courses as indicated by the respondents are tabulated in table 5.6.

Table 5.6: Motivational factors for attending CPD opportunities

QUESTION 28		YES	NO	95% CI of percentage
i	Only for reregistration (n=174)	25.8	74.2	19.9 ; 32.8
ii	Accumulating points (n=178)	31.4	68.6	25.1 ; 38.6
iii	Better patient care (n=185)	58.3	41.7	51.2 ; 65.2
iv	Upgrading of knowledge (n=190)	80.5	19.5	74.3 ; 85.5
v	Acquiring new techniques (n=187)	54	46	46.9 ; 61.0

It can be deduced from Table 5.6 that no single main factor motivated physicians to attend CPD programmes. A notable percentage of respondents felt that upgrading knowledge, improving patient care and acquiring new techniques are all equally important motivational factors for attending CPD opportunities.

5.4.3.12 Recommendations regarding the presentations of CPD courses

The following recommendations regarding the presentations were made in open-ended question 29: They would like user-friendly access to presentation on websites; handouts on presentations would help, as long times of concentration in monologue lectures are very tiring.

The general feelings of physicians attending CPD programmes are that presentations should focus on new developments in the medical field, and to omit research and statistical analysis. They recommended that indications should be given for best practice for community conditions. In this regard, the cost of diagnostic measures, drugs and other aspects of treatment would be helpful.

Presentations should be more practical and less academic, hands-on handling would be even better. Smaller groups are recommended and according to question 15, 97.1% of the participants indicated that smaller groups were preferred. Speakers that can speak English properly would be appreciated. Too

much repetition of programme content at different CPD programmes makes CPD presentations boring.

The above-mentioned recommendations show that there is still a serious impediment in presentations of CPD programmes; none, however, that cannot be rectified by skills development of educators.

5.4.3.13 Positive and negative perspectives about programmes

The results in table 5.2 depict that monologue methods of instruction without practical implication cause long periods of wasted concentration, as little meaningful learning takes place (see paragraphs 4.12.2 and 4.15). The current administrative system of the HPCSA (see paragraph 3.3), lost credits of the past three year period, a loss of income as well as time away from practice during programme attendance, reflect a negative perspective on the mandatory CPD system in South Africa.

There are positive perspectives as well, and physicians feel that gaining new knowledge does benefit patient care. At this stage, however, the negative perspectives unfortunately overshadow those that are positive. The negative perspectives regarding the insufficient administration of credits by the HPCSA, the loss of credits of the past three years as well as the unavailability of HPCSA staff for assistance in obtaining the current status of credits earned are not problems that cannot be overcome. By teaching the teacher effective adult

learning techniques (see paragraphs 4.14 and 4.15), and by implementing an effective system at the HPCSA (see paragraph 3.3), many of the current complaints will disperse.

Cost and time, however, will always be a problem, but awareness of this complaint and keeping it in mind when planning a programme may change attitudes towards CPD from negative to positive.

Question 30 asked the participants to indicate whether they were generally positive or negative about CPD and to motivate their answer. 93.8% of participants were positive about CPD. The motivation for their answers was that:

- "it ensures continued education, but does not warrant better patient care and outcomes,"
- it focus one to stay abreast of new development and provides opportunity for continuing learning,
- keep abreast with medicine,
- clinicians understand it is one of the criteria for reregistration,
- generally improves knowledge and therefore quality of care,
- better service delivery,
- CPD is good for patient care and for practitioner,
- very relevant,
- interaction with colleagues,
- more specific categories for hospital managers were requested,

- "mismanagement of HPCSA administration system, therefore it becomes a hussle [*sic]* more than it was intended for,"
- CPD will prevent old doctors from getting caught in their ways.

The participants (6.2 %) who felt negative about CPD motivated their answer with the following reasons:

- not encouraging clinicians,
- too much time and expenses,
- "benefit not in tune with time and money spent,"
- do not think it really makes a difference to the hospital manager,
- doctors in South Africa already struggle to survive financially,
- CPD has to be paid for by yourself/costly
- too academic not practice orientated,
- too many points required,
- money-making racket,
- "it's judgemental and discriminating law orientated as a threat,"
- not user friendly,
- "medical aids do not co-operate to create the service that we envisage for our patients therefore CPD is a waste of time,"
- hospital staff get little opportunity and money and has to share time and resources with other staff.

5.4.3.14 Suggestions by participants for CPD satisfaction

Participants suggested, in reaction to question 32, greater flexibility and clarity in categories, as well as job related activities for points. Others asked that the HPCSA: “Set rules and standards and stick to it.” Suggestions were made to lesson points needed for reregistration, add additional points according to distance travelled and that administration problems at the HPCSA should be fixed. The physicians recommended an electronic control system, for the points that they gained, when they attend CPD programmes.

According to the respondents, medical management discussions and reports on health management matters should also be accredited for points. The respondents asked for less financial exploitation by companies that organises CPD courses. Costs for course attendance could also be made more reasonable by means of sponsorships for courses and control of expenses by HPCSA was suggested. “Money-making racket,” summarised the cost aspect of CPD programmes. Relevant, less military style, less costly courses and that community doctors should not pay for courses were recommended by respondents, as well as smaller groups and user-friendly CPD courses. “Keep it worthwhile,” in short summarised the previous suggestions.

Others suggested that tele-medicine should be made available free of charge to rural doctors, as well as a wide communication to practitioners about courses coming up and that Medical Faculties should do outreach to towns and villages

far away from faculties. “Road shows, smaller venues close to home.” It was suggested that CPD courses that will better patient care and that were applicable in practice would keep it worthwhile.

5.4.3.15 Factors that cause frustration

When the participating physicians were asked to provide factors that cause frustration, the participants mentioned the current HPCSA system again. Thus, this seems to be the most important factor causing negativity. This problem, however, is to be something of the past soon, as the new system will be implemented in July 2004 (see paragraph 3.3).

5.4.4 Concluding remarks on physicians attending CPD programmes

The data gathered from the questionnaire survey revealed that physicians in South Africa accepted CPD, and were positive to keep up to date with the latest trend in Health Sciences. The participants indicated that the courses they attended were scheduled at a convenient time and the duration of the course suited them. Well-known experts in the field also presented the course they attended. The current HPCSA administration was one of the major factors for negativity. The fact that credits obtained during the previous three years from 1999 were not taken into account for reregistration also compounds this

negativity. The results of the presenters' questionnaire are presented in the following section.

5.5 RESULTS OF THE PRESENTERS' QUESTIONNAIRE

The presenters' questionnaire was compiled to investigate the methods of presentation, evaluation methods, needs assessment and the training in education levels of presenters.

5.5.1 Cognitive development

All the presenters took the cognitive development of the participants into account, as the presenters knew that the participants were adult learners and postgraduate physicians.

5.5.2 Needs' establishment

The evidence gathered from the presenters revealed that 100% of them do a needs' assessment before planning a CPD programme. This is contradictory to findings from the participants' questionnaire indicating that only 21% of needs' assessments were done before programmes were planned. The vast majority of presenters (83,4%) indicated that they make use of e-mail (16,6%) or perform needs' assessment at previous programmes. According to the presenters' questionnaire none of the presenters do a needs' assessment by means of telephone, questionnaires or at the request of colleagues.

5.5.3 Planning of learning activities

Deficiencies regarding teaching methods became evident. None of the presenters made use of demonstrations, videos, group work or role-play activities. No opportunities were offered to physicians to engage in professional hands-on activities during the courses included in this investigation. It appears as if presenters are either not knowledgeable on the use and effect of these means on meaningful learning, or they rely on their specialist knowledge to inform participants on new developments in health science and not necessarily to bring about behavioural change.

All the presenters of programmes used the monologue method, and in four of the programmes, it was combined with case studies. The lack of dialogue as an instructional method used during the programmes investigated was demonstrated in paragraph 5.4.3.6. This is a major cause for concern, as transformative and meaningful learning does not take place by monologue lectures. Monologue lectures are also out of line with the facilitation of outcomes-based education (OBE) practices.

5.5.4 Evaluation after CPD course attendance

No evaluation of new knowledge gained during CPD programmes was done by any of the responding presenters. Evaluation of newly acquired knowledge after CPD programmes is an essential part of any quality programme. It is essential to establish whether actual learning took place. Many different evaluation methods

such as tests, audits, self-assessment and practical assessment methods could be utilised for this purpose. Evaluation should be part of accredited programmes, as CPD is meaningless if actual learning is not establish after programmes were attended (see paragraph 4.16). Gaining of credits does not ensure that actual learning took place.

5.5.5 Support with regard to problem solving on diagnosis and treatment of patients

All the presenters conceded that they offer support after courses with regard to problem solving in treatment and diagnosis of patients in practice by means of e-mail. 22% of presenters offered support and advice by telephone. There is some awareness that support is necessary to doctors, as this is a means to improve patient care and even to lower stress levels in health practices (see paragraph 4.8).

5.5.6 Learning material

As mentioned in Section 4.8, getting the content of the CPD programme that is attended into written form helps to establish a sense of security. It also assists participants with a lack of background knowledge to obtain literature on programme subjects. The written learning material also serves as a source for future reference. Only 33% of the presenters give handouts to participants in the programmes.

5.5.7 Discussions

As mentioned in Section 5.5.4, there was no time for discussions before, during or after the monologue lectures of programmes. The lack of time for discussions made the connecting of new knowledge to existing knowledge or past experience very difficult and even impossible. Discussions or dialogue is an important part of meaningful learning (see paragraph 4.12.4). Dialogue is conducive to adult learning, as participating physicians have a wealth of experience and knowledge to contribute.

5.5.8 Relation of new knowledge to practice

Question 13 of the presenters' questionnaire asked whether presenters related the lectured new knowledge to practice. This was not done by any of the participating presenters. Attempting to relate knowledge to practice is important for meaningful learning to occur and will thus benefit adult learners attending CPD courses (see paragraphs 4.10.3 and 4.11). The educator should be aware of the fact that adult learners wish to apply their updated knowledge.

5.5.9 Points for workplace implementation of new knowledge

All the presenters (100%) agreed on question 14 of the presenters' questionnaire that points should be awarded for change of practice after new knowledge was gained. In the open-ended question 15, where they had to motivate their answer, their comments were that it would be very difficult to establish whether change did take place. Presenters asked who would be responsible to assess whether

change took place in practice. It is practically impossible to do this, but would have been the ideal situation. Audits of patient files would reveal treatment and diagnosis made by physicians before and after programmes were attended, and thus whether change in patient care did occur. The manpower to perform these audits would have to be acquired before this system of accreditation can be implemented. Therefore, at present (2004) this is not a viable option for gaining points.

5.5.10 Training of presenters in facilitation skills

Only 33% of presenters had training in facilitation skills. The facilitation training of all of these educators was day courses. None of the presenters had professional educational qualifications. This data clearly indicates that presenters of CPD lack training in facilitation skills. This also explains the findings of Section 5.5.3 where the monologue method was the only one applied in the investigated programmes. The presenters were, however, experts in their field of practice and highly experienced in presenting lectures. Programmes investigated in Bloemfontein, Cape Town as well as Pretoria were all presented according to the monologue method. The conclusion drawn is that it is a national phenomenon to present CPD courses in a monologue way.

5.6 CONCLUSION

This chapter focused on the presentation of the empirical results obtained from the questionnaire survey that was done with the participants in CPD programmes

in Bloemfontein, Cape Town and Pretoria, as well as the presenters of these programmes. Its main purpose was firstly, to identify the strengths and weaknesses of current CPD programmes offered in South Africa, and secondly, to identify the presenters' knowledge of essential learning elements and adult learning methods. Interesting perspectives, insights and ideas were gleaned from the results of the questionnaires.

The questionnaire for participants of CPD programmes was limited to key issues on the strengths and weaknesses of the current CPD system. The presenters' questionnaire was to determine the strengths and weaknesses of programme planning and presentation. Apparently, the HPCSA is aware of the weakness in the ill administrative system, as the implementation of an upgraded system in the near future has been announced by the organisation. However, it was a revelation to the researcher that poor presentation skills and a lack of training in presentation skills act as major drawbacks in achieving the main aim of CPD, namely to change physicians behaviour in practice. It seems that accreditation of programmes should include presenters with experience in adult learning methods and not just presenters with expert knowledge of the health profession.

It also became apparent that physicians are in favour of upgrading knowledge and that new knowledge means better patient care. However, the costs involved in attending programmes, as well as the length of courses apparently do cause distress. In addition, the repetition of the same topics at different CPD courses,

makes it more costly. The participating physicians should be more involved in decisions on credits allocated to certain activities as well as the amount of points required for reregistration. They feel that as professional people they should not be treated like children by a mandatory CPD system.

Based on the findings and analysis of the results of the empirical investigation with the participants and presenters of CPD programmes regarding the strengths and weaknesses of the programmes, conclusions will be drawn and recommendations made in the next chapter.

CHAPTER

6

CONCLUSIONS, RECOMMENDATIONS AND GUIDELINES FOR AN IMPROVEMENT-ORIENTATED EVALUATION OF CONTINUING PROFESSIONAL DEVELOPMENT IN SOUTH AFRICA

6.1 INTRODUCTION

The principal reason for this research inquiry was to investigate the strengths and weaknesses of the current mandatory CPD system in South Africa. This was done with the ultimate goal of making recommendations to the HPCSA for improvement of the current CPD system and programmes in South Africa. This was achieved by firstly engaging in an in-depth literature review on the status of CPD internationally (see Chapter 2) as well as the current mandatory system in South Africa (see Chapter 3). Secondly, it was done by identifying important factors of adult learning for CPD programme planning to enhance learning and practical implementation of new knowledge (see Chapter 4). The researcher also engaged in an empirical improvement-orientated investigation, which was aimed

at identifying the strengths and weaknesses of the CPD system in South Africa (see Chapter 5).

In view of the findings presented in the foregoing chapters of this study, a summary of the main literature and findings, as well as conclusions, recommendations and guidelines are advanced.

6.2 SUMMARY OF THE MAIN FINDINGS OF THE LITERATURE REVIEW

In this section, the researcher engaged in a literature review to identify the specific factors influencing the satisfaction of physicians in the compulsive CPD system in South Africa. As the researcher progressed through the literature, she took a conscious decision as to whether the inferences made in the previous chapters remained valid for CPD in South Africa.

In order to determine physicians' satisfaction with CPD, particularly compulsory CPD, a careful examination and critical analysis of the factors making CPD effective in adult learning were made. The course presenters' knowledge of learning was also examined. A critical analysis was made on the factors influencing CPD to bring about change in behaviour.

In Chapter 4 (see section 4.12), knowledge of the learning process was described as an important factor for teaching CPD. The practical implementation

of teaching methods to enhance learning was also discussed. The implementation of these methods by presenters of programmes will prevent one of the factors capable of inducing dissatisfaction among physicians, namely sitting passively through lengthy lectures.

According to Merriam and Caffarella (1999), one can distinguish between two types of learning, namely rote learning (memorisation), and meaningful learning (learning with understanding). When one learns, one makes meaning of something, and develops and builds ideas around it. The true value of CPD lies in the ability to change behaviour; therefore, it involves knowledge of adult learning and knowledge of the methods to bring about change. Valuing good and newly developed teaching practice means having the courage to change the behaviour of physicians and thus bettering patient care. Presenters, who are ready to quit their traditional teaching, where only the monologue method is applied, and open up so that participants may gain entry and share in their own individual knowledge and experience, are certain to achieve the goal of mandatory CPD. Acknowledging that participants in CPD programmes bring experiences to the course, and incorporating new information into their experiences by skilled presenters, can increase competence in physicians' practices. Chapter 4 (see section 4.12.2) casts light on effective presentation methods.

There is an obvious concern about the planning and content of courses as well

as presenters' capabilities in presenting courses, even though it has no effect on the physicians practice. These quality programmes may be seen by presenters as an opportunity to make easy money.

As stated in chapter 3 (see section 3.9), all courses need to be presented to the HPCSA for accreditation. Accreditation, however, evaluates neither the teaching method nor the evaluation after the course. Thus, the change or implementation of new knowledge is also not part of the accreditation criteria. Physicians are in dire need of presenters who would take pleasure in effective courses and its challenges, without striving for status. The question is: who is willing to do research on effective learning and presenting methods? They are also in need of courses that will benefit their patient and health practice and not merely gain them credits for reregistration.

In reality, however, what is implied above is never an easy task. It is unfortunate though that regardless of accreditation, physicians still encounter difficulties in finding courses that fulfil their needs or are applicable in their practices.

The test for any course is the knowledge implemented in practice. In this way, the presenter could make a boundless contribution towards the longevity of both CPD and patient care.

It is critical that the Accreditation Council carefully consider the role that

presenters as well as presenting methods and evaluation play in the ability of a course to attract, nurture, develop and retain top quality patient care that is up to date, as proven by research. Proof of a needs' assessment by presenters before application for course accreditation should be part of the criteria for accreditation.

However, knowledgeable presenters, and course material required and tested to be practical are not the main and sole reason why CPD should be compulsory, but giving patients the best care possible. The researcher argues that knowledge of adult learning and effective presentation methods are currently highly neglected aspects. These are areas she feels are prerequisites for teaching excellence. Most of the participating physicians are also not aware of the fact that the main reason for compulsory CPD is to better patient care, and this can only be possible if new knowledge is implemented.

All course development efforts should be appropriately directed. It should be directed to the physicians' practice needs and competencies. Furthermore, it should be directed to academics that need to change their attitudes, refresh ideas to extend their knowledge, and even deviate from present routines.

Today (2004), course development efforts have come to depend on multiple teaching methods. It is almost impossible to drive any form of change in the physicians' world without the support of course leaders and other specialists. It therefore seems that course presenters are important in maintaining the

momentum of physicians' change towards patients. The physicians will need support to propel change in the desired direction.

Academics should enthusiastically engage in adult learning research as a way of establishing the initial support for change. Furthermore, to solicit as many avenues of support as is deemed possible for the reforms prior to their execution. This is an important way of ensuring that physicians do not loose their important task of care when confronted with the expansive and overwhelming needs and pressures already discussed.

6.3 SUMMARY OF THE MAIN FINDINGS OF THE INVESTIGATION

Mandatory CPD is a relatively new concept in South Africa. When the investigation on the strengths and weaknesses was done, certain factors came to the fore.

The respondents of the questionnaire for participants mainly accentuated the cost of attending CPD programmes, as travel and loss of income as well and lack of time owing to busy health practices have to be taken into account. The poor administration of points at the HPCSA led to great dissatisfaction and frustration.

The questionnaire for presenters accentuated the fact that presenters are not knowledgeable in different methods of presentation and therefore only lectures

were presented. A lack of knowledge as far as adult learning is concerned also surfaced.

To summarise, it can be concluded that mandatory CPD is the way to go for better patient care but it can only achieve better patient care if programmes are presented according to adult learning techniques and if factors affecting adult learning is taken into account during its planning. The system can only become trustworthy if the HPCSA implement an administrative system that satisfies the needs of the physicians and takes the cost of programmes into consideration to prevent it from becoming a money-making racket.

6.4 CONCLUSIONS FROM THE LITERATURE

The literature has served as a cornerstone for this research project. It provided not only an important, but also an interesting perspective on the concept of adult learning and teaching and it is therefore on the basis of these findings that certain inferences could be made.

6.4.1 Conclusions from Chapter 2

Chapter 2 enlightened the reader on a global perspective of CME. The complexity of the issue of CME became clear. From this chapter, it also became clear that CME does not merely involve the provision of knowledge, but reinforces the elimination of barriers to change. It became clear that a variety of factors, such as educational, personal, patient-based and economic factors could

contribute to change in behaviour. In the USA, for example, experience showed that CME must be based on vocational activities. Mandatory CME should be a way to motivate physicians to attend CME programmes. Unfortunately, only America, Germany, Croatia, Finland and Hungary, amongst the countries discussed in chapter 2, have legislation as far as CME is concerned. This chapter also highlighted the lack of funding from governments for CME programmes and sponsorships for physicians to attend. This implies that stakeholders in CME should make attempts enabling attendance of programmes, or obtain legislation, not only as far as mandatory CME is concerned but also for funding. All stakeholders will benefit because patient care will be in line with the latest health trends, and healthy people contribute to a healthy economy and work force.

6.4.2 Conclusions from Chapter 3

Mandatory CPD in South Africa is still a new concept. Legislation was passed in 1999 and the HPCSA was not ready for the administrative load. However, the system is well defined and should be successful in keeping physicians up to date with new medical knowledge. A limitation of the mandatory CPD system could be that it becomes points driven to ensure reregistration, instead of change in physicians' behaviour driven for better patient care. Better patient care because of change in behaviour must remain the main aim of the CPD system.

6.4.3 Conclusions from Chapter 4

Chapter 4 provided an exposition of an abundance of factors that effect adult learning. Among others, these factors included stress, current knowledge, field of interest, and needs in health practice. The chapter further revealed that these factors had to be taken into account when CPD programmes are planned and that presenters should learn from global experience on programme planning. Furthermore, it emphasised learning and development theories, adult development concepts and its relevance to practical implications for teaching practice. In addition, this chapter exposed the complexity of assessing if meaningful learning and not just rote learning took place, and that this will transform health practice.

6.4.4 Conclusions from Chapter 5

This part of the study, which involved the actual investigation of the cause and effect of the strengths and weaknesses of the current CPD system and programmes, was regarded as the hallmark of the study. Deductions were made based on the results of the empirical research that had been performed in the Faculties of Health Sciences in Bloemfontein, Cape Town and Pretoria. The investigation was presented in the form of two questionnaires, one for participants of CPD programmes and another for presenters of CPD programmes. It revealed that several issues affected the respondents either positively or negatively, and the questionnaire provided a way of expressing these issues. The questionnaire survey also provided an opportunity for the

respondents to make recommendations on how the CPD system may prepare the environment to be conducive to physicians' satisfaction during periods of collecting credits for reregistration with the HPCSA.

6.4.4.1 Conclusions regarding application of knowledge in practice

Meaningful learning promotes application of new knowledge in practice. Meaningful learning occurs when new knowledge is connected to current knowledge. Various methods of presentation enhance meaningful learning. Among others, these methods include dialogue teaching, workshops and group discussions. None of these methods were used in any of the programmes investigated in this study. Lack of knowledge on behavioural change enhancing methods by presenters of programmes was established. Evidence was found that presenters are not knowledgeable in effective teaching methods, as none of the presenters had more than day course training in facilitation skills (see paragraph 5.4.3.7). It is thus no surprise that physicians apply little new knowledge in practice, as was established in this investigation (see paragraph 5.4.3.1).

Even though structures are in place to accredit programmes and solve the administration problems at the HPCSA, there is no evidence as to the existence of structures that can assist to prepare presenters for planning of programmes, as well as teach them facilitation skills to bring about change in health practices.

6.4.4.2 Conclusion regarding needs' fulfilment

Evidence shows that all the presenters did needs' assessment prior to the programmes (see paragraph 5.4.3.2). The needs' assessments were done by e-mail or at previous programmes (see paragraph 5.5.2). Needs' assessment is an essential part of programme planning (see paragraph 4.15.3 and 4.15.4).

Fortunately, evidence reveals that presenters carried out needs' assessments. Needs' assessment is an important part of effective programme presentation, as meaningful and transformative learning does not take place if the physicians' needs are not met (see paragraph 4.13.3).

6.4.4.3 Conclusion regarding evaluation of new knowledge

The responses showed that no evaluation was done after CPD programmes (see paragraph 5.5.4). Several evaluation methods do exist (see paragraph 4.13.4), but none of these were used during or after courses. Presenters have no way of establishing that actual learning took place if no evaluation was included in programmes.

6.4.4.4 Conclusion regarding reasons for attending CPD programmes

Evidence suggests that there is not one single, major reason for attending a specific CPD course. Various reasons for attendance were named by respondents (see paragraph 5.4.3.5). Apparently, physicians sometimes realise

that they need credits for reregistration and then attend any course available regardless of whether their needs are met or whether it would make a difference to their patient care. This is unfortunate as the main purpose of CPD is defeated by this fear of not being able to reregister with the HPCSA.

6.4.4.5 Conclusions regarding expectations with regard to CPD courses

Most of the respondents (79.8%) expected CPD courses to upgrade their knowledge, thereby improving their patient treatment, while 76.3% of physicians expected CPD programmes to keep them abreast of the latest scientific information as well providing a supportive environment for medical professionals in practice. It seems that physicians' expectations are diverse, as all of them pointed out that they had at least three major expectations of CPD programmes, namely to update them with current health knowledge, to provide support from experts and to fulfil their health practice needs.

6.4.4.6 Conclusions regarding instructional methods

Presenters of CPD programmes used only monologue lecturing. Physicians who attended the programmes confirmed this observation (see paragraph 5.4.3.6). Monologue lecturing is not an effective way of teaching adults, as no transformative or meaningful learning takes place (see paragraph 4.13.4, 4.15 and 4.15.2).

Opportunities should be available for facilitators of CPD programmes to attend courses on adult learning facilitation skills. Educators need to be knowledgeable as far as effective instructional methods are concerned. The aim of CPD is in jeopardy if the proper authority fails to address this issue.

6.4.4.7 Conclusions regarding obtaining points/credits

Evidence points to the fact that there is not a single preferred way of gaining points (see paragraph 5.4.3.7). Respondents of the investigation all gained points in various ways, among others journal questionnaires, conference attendance and ethics lectures.

One of the remarks made by respondents were that programmes on ethics are very costly as it is not easy to come by. Physicians travel vast distances when a ethics programme is available. Therefore, it was suggested that the number of credits on ethics required for reregistration be revised. The respondents felt that they were not included in any decision-making regarding the number of credits required in each category.

6.4.4.8 Conclusions regarding attendance of CPD opportunities

Opportunities for attending CPD programmes were motivated by several factors (see 5.4.3.9). Physicians' reasons for attendance were to obtain credits (31.4%), update knowledge (80.5%), better patient care (58.3%), only for reregistration (25.8%) or to acquire new techniques (54%).

Respondents of the investigation felt that mandatory CPD is not necessary, as physicians always attend opportunities to keep up to date with medical science. Mandatory CPD, however, is a more regulated way of ensuring that all physicians and not just some of them do this, as this is an important way of making sure that patients get the best care available.

6.5 RECOMMENDATIONS AND GUIDELINES FOR IMPROVING CPD IN SOUTH AFRICA

The recommendations that will be presented in this section will be twofold, namely recommendations made by respondents of questionnaires as well as those advanced by the researcher. The researcher strongly feels that physicians need to have ownership of matters that concern them in their reregistration with the HPCSA. Hence, the research investigation deliberately solicited the recommendations of the respondents (physicians attending CPD programmes) by means of open-ended questions in the questionnaire survey. The researcher also believes that physicians' recommendations on how the system and programmes can improve and enhance their satisfaction and motivation should have a place in this thesis. Furthermore, that their recommendations should not be regarded merely as perceived untested solutions.

6.5.1 Recommendations by physicians

Physicians who attended the investigated CPD programmes are of the opinion that the HPCSA and accreditors of programmes should take heed of the following

recommendations regarding the CPD system and CPD programme planning in South Africa.

6.5.1.1 Recommendations regarding expectations of CPD courses

Physicians in general felt that programmes should focus on new developments in health sciences. Topics of programmes should not include statistics or only research findings, as it is of little importance to implementation of knowledge in medical practice. They are of the opinion that the content of programmes should be more practice-orientated and less academically orientated. Duplication of topics at different programmes should be avoided.

6.5.1.2 Recommendations with regard to facilitation methods

Respondents suggested firstly that smaller groups would be more effective in changing behaviour, as dialogue would be possible and hands-on courses would be appreciated for skills development. Secondly, the HPCSA should have a website where all accredited programmes are listed. This would be of great help in the choice of attendance. The third recommendation was that presenters should be fluent in English or that facilities for translation of programmes should be made available to participants in CPD programmes. Fourthly, road shows where experts travel to small venues and present medical knowledge applicable to community doctors' patient care would be appreciated, as well as allowing community doctors to attend programmes free of charge. A fifth recommendation

that was made is that medical management activities should be accredited as well.

6.5.1.3. Recommendations with regard to the costs of CPD courses

CPD programmes are mainly offered at venues in big cities and often at luxury holiday resorts. This phenomenon makes programmes very expensive when registration fees, accommodation and travelling costs are calculated, not to mention the loss of income during the period of programme attendance. Doctors in private practice even have to pay locums (part-time doctors) a daily fee that sometimes exceeds their actual income for that day. Costs of the credits required for reregistration should be taken into account when the number required for registration is decided upon by the HPCSA. Tele-CPD by universities is very expensive, and the HPCSA should control costs of all CPD programmes as it could become a money-making racket.

6.5.1.4 Recommendations with regard to the length of courses

Only Saturday and even evening courses were recommended by respondents. On the other hand, respondents from other ethnic groups preferred not to attend any courses on Saturdays as it interferes with religious convictions. Day courses presented in the form of monologue lectures have only 10% retention of knowledge (Matthews, Zeidner & Roberts 2002), and should therefore not be allowed.

6.5.1.5 Recommendations with regard to administrative problems

Rules and regulations for CPD should be set and the HPCSA should then adhere to it. Continuous changes cause chaos to busy physicians. According to the respondents, the HPCSA is impossible to contact, as they are unavailable on the telephone and an answering machine prompts you to leave a message, but they do not return your calls. The status of points/credits as well as any other inquiries can thus not be made. Fax inquiries are never reacted on as no answers are faxed in reply to enquiries made. An effective CPD system should be implemented, where people are specifically appointed to answer all fax or e-mail enquiries within forty-eight hours.

6.5.2 General recommendations

It is important and imperative for accreditors of programmes to realise that presenters' facilitation skills are of the utmost importance to bring about behavioural change in physicians with regard to the treatment of patients, and therefore this should be a criterion for accreditation of CPD programmes. A plan to accredit programmes should be accompanied by a plan to train presenters in facilitation skills. The projection for implementing effective mandatory CPD programmes should be accompanied by projections for staff needed to support them; otherwise, dissatisfaction of the system will not disappear amongst physicians.

Meeting the demands of the HPCSA for credits for reregistration presupposes the

existence of concrete infrastructure to administer the CPD system as well as a clearly mapped out modus operandi for implementing the system effectively. This is because attending CPD programmes is no longer an option, but a pressing necessity for all physicians in health practice, particularly as a certain number of credits is a prerequisite for reregistration with the HPCSA.

Table 6.1: Recommended model of criteria for accreditation of CPD programmes

Mission statement	What the programme aims to achieve
Needs' assessment	Involve possible participants by doing an electronic or consulting needs' assessment. Proof of needs assessment must be attached to applications for accreditation of programmes.
Evaluation of learning retention	Post-tests after programmes are essential to confirm that any actual learning took place. Attendance alone is not enough to measure the success of CPD programmes.

Skills development	Programmes should include instruction on self-assessment, problem solving (critical thinking), decision-making, the exercise of clinical judgment and clinical reasoning.
Choice of learning methods	Learning rather than teaching should become the focus of CPD programmes. Programmes should not consist of more than 40% monologue lectures, and monologue lectures must be followed by discussion time.
New adult learning methods	Theory and application: Content expertise must be translated into physicians' practice needs. New knowledge must be sufficiently practice-based.
Training of providers of CPD	CPD lecturers should be trained to present their material in ways that maximise learning. Presenters must be familiar with the content of the educational process. Proof of training should be attached.

Evidence-based medicine	CPD programmes should be undertaken in concert with the development and implementation of evidence-based medicine.
Professional interaction	Programme content is discussed, and thus reinforced in a group setting. Interaction and collaboration need to be introduced into the learning environment.
Incorporation of instructional technologies	The process of adult learning and not only the content of programmes must be taken into account when planning a computerised programme.
Costs	Registration fees as well as venues should be chosen with cost in mind. Sponsorships and advertising may be used to lower costs of programmes.

For mandatory CPD to be successful in fulfilling its purpose, there must be a diversity of programmes, each geared towards addressing a specific issue of health transformation. This must be aligned with the commonly known principle for the construction of programmes that is developed on sound adult learning principles and physicians' practice needs.

Duplication of programme content of different providers can be prevented by electronically compiling all programmes of different Medical Schools at the HPCSA.

6.6 DRAWBACKS OF THE RESEARCH

In this section, I would like to share some of the problems that I experienced in this research project. I would like to alert other researchers that even in the most carefully planned research project, things are bound to emerge that may offset the entire plan for completing the project. The initial plan was to investigate the strengths and weaknesses of four universities in different parts of the country. However, I was forced to change this because of the following:

- Failure to gain access to programmes in Health Schools in Natal, as certain programmes had to be cancelled owing to the lack of interest on the part of physicians.
- A lack of support from the physicians who attended the programmes. The response rates were so low that I had to go back to second programmes to be able to obtain results that were more reliable.
- I must mention that it took me months and many written explanations before permission was given for me to distribute the questionnaires amongst participants. I had to travel twice to Cape Town, and in Bloemfontein, two programmes had to be used as research material.

A recommendation to future researchers is that, to avoid disappointment, they

should seek support from their target population and plan ample time for empirical work, more than double than is necessary to fulfil their study aims.

6.7 LIMITATIONS OF THE STUDY

As mentioned in Chapters 1 and 5, all research methods have flaws. Even the best-planned research does not proceed as planned. The researcher is bound to encounter problems and limitations. In this research, limitations have been identified.

6.7.1 Sampling size and generalisability of the research results

No CPD programmes of historically black universities that have different historical backgrounds were used in this study. The programmes that were supposed to be included in the investigation were cancelled or attended by too few physicians to justify travelling there and gathering material for the study. A possible explanation for a lack of interest may be that the presenters did not perform a needs assessment prior to the course, the course was held concurrently with other more topical courses, or even mistrust of programme standard because of the historical background of medical schools. However, the researcher is of the opinion that the findings of the investigation may still be generalised to their context, because many physicians from Black and Asian ethnic groups responded to the questionnaire when they attended CPD programmes at other universities.

6.7.2 Response rate

Although the researcher aimed at reaching at least 70% of physicians attending the programmes and handed out questionnaires to all participants, the response rate was not satisfactory. According to Jameson (2004), it is a trend amongst South African citizens to be bad respondents. For the survey, 600 questionnaires were distributed and 247 were received back, ensuring a response rate of 34%. Questionnaires for presenters were handed out to 36 presenters and only 14 were received back, again ensuring a response rate of only 38%. However, this has not affected the research results because of the similarity in responses of the participants. Moreover, a secondary objective of this study was to analyse the impact of CPD on medical practices. The main objective was to gather data in the form of opinion presentation, comments and recommendations to improve the current system and to point out the current strengths and weaknesses of this still new mandatory system in South Africa. Furthermore, this investigation aimed at making recommendations on how the HPCSA could make the CPD system more effective in reaching the objective of CPD implementation.

6.7.3 Cost

Research is expensive to do. Any investigation demands good planning and an in-depth literature review, which are costly. To do a national study, travelling is inevitable, as the researcher will find that by not physically doing it oneself,

response rates are very low. Literature material often has to be obtained globally and the rand/dollar exchange rate makes this expensive as well.

6.8 RECOMMENDATIONS FOR FUTURE RESEARCH

Mandatory CPD is supposed to be for the benefit of patients as well as health practice; however, it has the potential to impact negatively on all stakeholders if accreditation of programmes do not adhere to certain specifications as recommended in paragraph 6.5.2. In view of this, future studies for the improvement of CPD should be done at least every three to four years, since it is still a new concept in South Africa and positive outcomes of the system has to be monitored. This study focused only on three universities and findings from other universities may contribute to broader understanding of factors that may play a role in improving future CPD programmes.

Since adult learning is a non-static issue affected by various factors, studies for improvement could prove invaluable to presenters, patients and physicians. This is particularly so if implementers of the CPD system regard studies for improvement as a way of evaluating quality. In this way research will not be done for the sake of compiling written documents, but will be practically applied to effect change.

Since this study was broad and many aspects were investigated, another avenue that could be explored further concerning CPD programmes would be to do

in-depth investigation of each of the facilitation techniques and evaluation techniques that affect actual learning. This would portray a more vivid picture of the effect of facilitation and evaluation on behavioural change, thus improving patient care and consequently enabling researchers to establish the means to present possible solutions to the problem of low satisfaction and even dissatisfaction with regard to the CPD system.

6.9 CONCLUSION

Continuing Professional Development is currently a giant that has awakened, but does not yet know who it is or where it is going. It was hastily implemented in South Africa, after the system was announced by the INMDC, without the proper systems in place to handle the credits and reregistration of physicians. This caused negativity towards the system. All the physicians know and acknowledge the importance of lifelong learning, but currently it is neither attended nor presented to the patients' benefit, as it is expensive and points driven. The main objective is so easily forgotten, namely to change behaviour, resulting in improved patient care.

The lack of evaluation of CPD provides an element of distrust in the effectiveness of programmes. The feature of evaluation is the basis for laying claim to an innovative programme that changes physicians' behaviour and improves patient care.

REFERENCES

Abrahamson, S., Baron, J., Elstein, A.S., Hammond, W.P., Holtzman, G.B., Marlow, B., Taggart, M.S., Schulkin, J. 1999. Continuing Medical Education for life: Eight Principles. *Academic Medicine.* 74(12): 1288-1294.

Agere, S., Jorm, N. 2000. *Designing performance appraisals: assessing needs and designing performance management systems in the public sector.* London: Commonwealth Secretariat, Management and Training Services Division.

Altman, D.G., Machin, D., Bryant, T.N., Gardner, M.J. 2001. Statistics with confidence. Second edition. London: BMJ Books.

Andrews, G., Halford, G.S. 2002. A cognitive complexity metric applied to cognitive development. *Cognitive psychology.* 45(2): 153-219.

Angelo, J., Smith, R.O. 1993. An analysis of computer-related articles in occupational therapy periodicals. *American Journal of Occupational Therapy.*47(1): 25-29.

Anonymous. 1997. Instructions for Fertility and Sterility® CME program exam. *Fertility and Sterility* 67(6): 189-194.

Anonymous. 1993. History of accreditation of continuing medical education programs. *JAMA.* 250(12): 1502-1508.

Araya, T., Akrami, N., Ekehammar, B. 2003. Forgetting congruent and incongruent information stereotypical information. *Journal of Social Psychology.* 143(4): 433-449.

Armstrong, E.G., Doyle, J., Bennett, N.L. 2003. Transformative professional development of physicians as educators: assessment of a model. *Academic Medicine Journal of the Association of American Medical Colleges.* 78(7): 702-708.

Arnold, L. 2002. Assessing Professional Behaviour: Yesterday, Today, and Tomorrow. *Academic Medicine*, 77(6): 502-515.

Babbie, E. 1992. Guidelines for asking questions. *The Practice of Social Science*. Sixth edition. California: Wadsworth Publishing Company.

Babbie, E.R. 2004. *The Practice of Social Research.* 10th edition. Belmont, California: Thomson/Wadsworth Publishing Company.

Bacon, N.C. 1999. Modernizing medical education. *Hospital Medicine London.* 60(1): 54-56.

Bauriedel, K. 1980. Continuing medical education in 1910. *Urology,* 15 (2): 213-215.

Beatty, R.M. 2001. Continuing Professional Development, organizational support, and professional competence: dilemmas of rural nurses. *Journal of continuing education in nursing.* 32(5): 203 –209.

Beeld. 1998. Dokters moet van 1999 VPO doen. 5 November: 6.

Bell, D.S., Fonarow, G.C., Hays, R.D, Mangione, C.M. 2000. Self-study from Web-Based and Printed Guideline Material. A Randomized, quality controlled Trial among Redident Physicians. *Annals of Internal Medicine.* 132(12): 938-946.

Belsheim, D.J. 1986. Models for Continuing Professional Education. *Journal of Medical Education.* 61: 971-978.

Bertram, D.A. & Brooks-Bertram, P.A. 1977. The evaluation of Continuing Medical Education: A literature review. *Health Education Monographs* 5(4): 330-349.

Bignall, J. 1998. Continuing medical education: shibboleth or necessity? *The Lancet.* 351: 1004.

Boland, M. 1997. Wants and needs in continuing medical education. *Australian Family Physician.* 26: 53-55.

Bolton, J.E. 2002. Chiropractors' attitudes to, and perceptions of, the impact of continuous professional education on clinical practice. *Medical Education*. 36(4): 317-324.

Booklet 4. 2002.Guidelines for good practice in medicine, dentistry and the medical sciences. Professional Self-Development. 4 November 2002: 1-8.

Borgiel, E.M., Williams, J.L., Anderson, G.M., Bass, M.J., Dunn, E.V., Campbell, T.L., Spasoff, R.A. & Rice, D.I. 1985. Assessing the quality of care in family physicians' Practices. *Canadian Family Physician.* 31: 853-862.

Bouis, P.J., Fore, R.C. 1984. CME: National and State Overview, J Florida MA 71: 942.

Bransford, J.D., Brown, A.L., Cocking, R.R. (Eds). 1999. *How people learn: mind, brain experience, school.* Washington, DC: National Academic Press.

Bransford, J.D., Brown, A.L., Cocking, R.R. 2000. *How people learn: brain, mind, experience and school.* Washington, D.C.: National Academy Press.

Brewin, C.R., Beaton, A. 2002. Thought suppression, intelligence, and working memory capacity. *Behaviour Research and Therapy.* 40(8): 923-930.

Brookfield, S.D. 1992. Why can't I get this right? Myths and realities in facilitation adult learning. *Adult Learning, 3(6): 12-15.*

Brookfield, S.D. 1995. *Becoming a critical reflective teacher.* San Francisco: Jossey-Bass.

Brown, C.R., Uhl, H.S.M. 1970. Mandatory Continuing Education. *JAMA* 213: 1660-1668.

Buckley, G., LaDuca, A., Margetson, G., Martenson, D. 2001. A dialogue on teaching the teachers: resolving a dilemma. *Medical Education.* 35(2): 178-81.

Caine, R.N., Caine, G. 1994. *Make corrections: teaching and the human brain*. Menlo Park, CA: Addison-Wesley.

Candy, P.C. 1991. *Self-direction for lifelong learning: a comprehensive guide to theory and practice.* San Francisco: Jossey-Bass.

Cantillon, P. & Jones, R. 1999. Does continuing medical education in general practice make a difference? *British Medical Journal* 318:1267-1279.

Cates, J.E. 1979. Postgraduate Medical Education in the South West. *Bristol Medico-Surgical Journal*. 94(351-352). 3-11.

Citizen, The. 1998. Tough new rules for SA doctors. 5 November. 1.

Citizen, The. 1998. Not what the doctor ordered. 6 November: 6.

Citizen, The. 1998. Dentists included in development system. 6 November: 3.

Citizen, The. 1998. Points system is council's idea. 12 November: 23.

Citizen, The. 1999. Doctors warned on approval of courses. 10 March: 11.

Colquit, J.A., LePine, J.A., Noe, R.A. 2000. Towards an integrated theory of training motivation: A meta-analytic path analysis of 20 years research. *Journal of Applied Psychology.* 85: 678-707.

Daily News, The. 1998. New registration rules for doctors. 5 November: 6.

Daniel, M.F. 2001. Philosophical dialogue among peers: a study of manifestations of critical thinking in preservice teachers. *Advances in Health Science Education Theory and Practice.* 6(1): 49-67.

Davis, A., Thomson, M.A., Oxman, A.D. & Haynes, R.B. 1992. Evidence for the effectiveness of CME. A Review of 50 Randomized Controlled Trials. *JAMA* 268(9): 1111-1117.

Davis, D. 1998. Does CME work? An analysis of the effect of educational activities on physician performances or health care outcomes. *International Journal of Psychiatric Medicine*. 28: 21-39.

Deary, I.J. 2000. Simple information processing and intelligence. In R.J. Sternberg (ed.), *Handbook of Intelligence*. New York: Cambridge University Press.

De Villiers, J.T. De Villiers, M.R. 1999. The current status and future needs of education and training in Family Medicine and Primary Care in South Africa. *Medical Education,* 33:716-721.

Dismuke, S.E., McClary, A.M. 1990. Evaluation of an educational programme in preventive cardiology. *American Journal of Preventive Medicine.* 6(2): 99-105.

Domisse, J. 1997. Continuing Medical Education – a perspective. *Transactions of the College of Medicine of South Africa.* 41(1): 40-44.

Donovan, T., Hutchinson, T., Kelly, A. 2003. Using simulated patients in a multiprofessional communications skills programme: reflections from the programme facilitators. *European Journal of Cancer care.* 12(2): 123-128.

Downe, R.S., Macnaughten, J., Randall, R. 2000. *Clinical Judgment: Evidence in Practice. Oxford*. England: Oxford University Press.

Dowell, A.C., Westcott, T., McLeod, D.K., Hamilton, S. 2001. A survey of job satisfaction, sources of stress and psychological symptoms among New Zealand health professionals. *New Zealand Medical Journal.* 2001. 114(1145): 540-543.

Draper, G. 1999. Our teaching and your learning: are they Y2K compatible? *Specialist Medicine. 21(9):* 602-610.

Dunn, E.V., Martin, J., Bass, J., Williams, J.I., Borgiel, A.E.W., MacDonald, P., Spasoff, R.A. 1988. Study of relation of Continuing Medical Education to quality of Family Physicians' care. *Journal of Medical Education.* 63: 775-784.

Editorial. 1978. Postgraduate Education at the university of Cape Town. *Suid Afrikaanse Mediese Tydskrif*. 54(25): 1039-1040.

Edwards, N., Bunn, H., Morales-Mann, E., Papai, P., Davies, B. 2000. International collaboration workshops. A 6-year partnership between Canada and China. *Nurse Educator.* 25(2): 88-94.

Ell, S.R. 1984. Five hundred years of certification and compulsory continuing medical education. Venice 1300 –1801. *JAMA*. 251(6): 752-753.

Elstein, A.S., Christensen, C.,Cottrell, J.J., Polson, A. & Ng, M. 1999. Effects of prognosis, perceived benefit and decision style upon decision making in critical care. *Critical Care Medicine.* 27: 58-65.

Emerton, L. 1998. Points system is council's idea. *The Citizen.* 12 Nov: 23.

Epstein, R.M., Hundert, E.M. 2002. Defining and Assessing Professional Competence. *JAMA*. 287(2): 226-235.

Eraut, M. 2001. Do continuing professional development models promote one-dimensional learning? *Medical Education.* 35(1): 8-11.

Exelby, N. 1999. Mixed feelings over license points. *The Natal Witness.* 8 Feb.: 9.

Fore, R.C. Bouis, P.J. 1987. CME in Florida: An historical overview. *The Journal of the Florida Medical Association*: 74:7: 522-524.

Fourie, M. 1999 Preface. In M. Fourie, A.H. Strydom & J. Stetar. (Eds). *Reconsidering quality assurance in higher education: Perspectives on programme assessment and accreditation*. Bloemfontein: University of the Orange Free State.

Fourie, M., Strydom, A.H. & Stetar, J. (Eds). 1999. *Reconsidering quality assurance in higher education: Perspectives on programme assessment and accreditation*. Bloemfontein: University of the Orange Free State.

Fox, R.D. & Bennett, N.L. 1998. Learning and change: implications for continuing medical education. *British Medical Journal* 316: 466-468.

Frankford, D.M., Patterson, M.A., Konrad, T.R. 2000. Transforming Practice Organizations to Forster Lifelong Learning and Commitment to Medical Professions. *Academic Medicine* 75(7): 708-715.

Garbers, G.J. 1996. Aspects of the national and international science and technology systems and policy. In *Effective research in the human sciences: Research managers for researchers, supervisors and master's and doctoral candidates.* Edited by J.G. Garbers. Pretoria: J.L. van Schaik Academic.

Gardner, H. 2000. An education for the future: the foundation of science and values. http://pzweb.Harvard.edu/WhatsNew/Tsuzuki.htm. Retrieved 21 May 2000.

Gardner, H. 1993. *Frames of mind: the theory of multiple intelligences.* 2nd Edition London: Fontana.

Gardner, H. 1998. A multiplicity of intelligences. *Scientific American*. 9(4): 19-23.

Genesee, F. 2000. Brain research: implications for second language learning. ERIC Digest. http://www.cal.org/ericcll/digest/0012 brain. htm/ Retrieved 23 March 2002.

Gravett, S. 2001. *Adult Learning. Designing and implementing learning events. A dialogic approach.* Pretoria: Van Schaik Publishers.

Green, J.S., Grosswald, S.J., Suter, E., Walthall, D.B. 1984. *Continuing Education for the Health Professions*. San Francisco, CA: Jossey-Bass.

Greeno, J.G., Collins, A.M., Resnick, L. 1996. Cognition and learning. In DC Berliner & R.C Calfee (Eds), *Handbook of Educational Psychology*. 15-46. New York: Simon & Schuster Macmillan.

Grobler, S. 2001. *The effect of a Continuing Medical Education course at the Department of Family Medicine at the University of the Free State* (unpublished Master's degree dissertation). University of the Free State, Bloemfontein.

Guidelines for providers of CPD activities 2003. June 2003: 1-6.

Gullion, D.S., Adamson, T.E. & Watts, M.S.M. 1983. The effect of an individual practice-based CME program on Physicians' performance and patient outcomes. *The Western Journal of Medicine.* 138(4): 583-588.

Hansen, E.J. 1998. Creating teachable moments…and making them last. *Innovative Higher Education,* 23(1): 7-25.

Hawkins, V.C., Sherwood, R.N., Gwen, R.N., Gwen, P.M.H. 1999. The Pyramid Model: An Integrated Approach for Evaluating Continuing Education Programs and Outcomes. *The Journal of Continuing Education in Nursing.* 30(5): 203-212.

Haynes, R.B., Davis, D.A., McKibbon, A. & Tugwell, P. 1984. A critical appraisal of the efficiency of Continuing Medical education. *JAMA.* 251(1): 61-64.

Heard, J.K., Alten R.M., Clardy, J. 2002. Assessing the needs of Residency Program Directors to meet the ACGME General Competencies. *Academic Medicine.* 77(7): 750-756.

Heimlich, J.E., Norland, E. 1994. *Developing teaching style in adult education*. San Francisco: Jossey-Bass.

Hewson, M.G., Copeland, H.L., Fishleder, A.J. 2001. What's the use of faculty development? Program evaluation using retrospective self-assessments and independent performance ratings. *Teaching and Learning in Medicine.* 13(3): 153-160.

Holl, R.A. 2002. Continuing medical education in Europe. *Pediatrics in Review: American Academy of Pediatrics.* 23(10): 335-336.

HPCSA (Health Professions Council of South Africa). 2001. *Continuing Professional Development. Guidelines for medical practitioners and dentists* http://www.uovs.ac.za/faculties/med/cpd/RIGLYN.htm). Retrieved 20 July 2001.

Hulsman, R.L., Ros, W.J.G., Winnubst, J.A.M., Bensing, J.M. 1999. Teaching clinically experienced physicians communication skills. A review of evaluation studies. 33: 655-668.

Ibbotson, T., Grimshaw, J., Grant, A. 1998. Evaluation of a programme of workshops for promoting the teaching of critical appraisal skills. *Medical Education.* 32: 486-491.

Imber, M. 1997. Educational Reforms can produce societal inequalities: A case study. In J.J. Scheurich (Ed.). *Research method in the Postmodern.* London/Washington, DC: Palmer Press.

Income Tax Act RSA (Republic of South Africa) of 2000 Pretoria: Government Printer.

Jackson, N., Grenvill, M. 2001. *The changing role of the GP tutor*. Abingdon: Radcliffe Medical Press.

Jennett, P.A., Laxdal, O.E., Hayton, R.C., Klaassen, D.J., Swanson, R.W., Wilson, T.W., Spooner, H.J., Mainprize, G.W. & Wickett, R.E.Y. 1988. The effects of continuing medical education on family doctor performance in office practice: a randomized control study. *Medical Education.* 22: 139-145.

Johnson, S. 2002. Development of educator competencies and the professional review process. *Journal of Nurses in Staff Development.* 18(2): 92-102.

Jordan, S. 2000. Educational input and patient outcomes: exploring the gap. *Journal of advanced nursing.* 31(2): 461-471.

Kaartinen, L., Diwan, V. 2002. Mother and child health care in Kabul, Afghanistan with focus on the mother: women's own perspective. *Acta Obstetrics and Gynaecology Scandinavia.* 81(6): 491-501.

Katz, M. 1996. Professional growth is a journey, not a destination. *People Dynamics.* May: 26-29.

Keim, K.S., Johnson, C.A., Gates, G.E. 2001. Learning needs and continuing professional education activities of Professional Development Portfolio participants. *Journal of the American Dietetic Association.* 101(6): 697-702.

Knowles, M.S., Holton, I.I.I., Swanson, R.A. 1998. *The adult learner: the definite classic in adult education and human resource development.* Houston. TX: Gulf Publishers.

Knuth, P., Opderbecke, H.W. 1999. The history of the development of intensive care medicine in Germany. Contemporary reflections. *Anesthetist.* 48(6): 403-406.

Kratwohl, D.R. 1998. *Educational and Social Science Research: An integrated approach.* USA: Addison-Wesley Education Publishers, Inc.

Kusnic, E., Finley, M.L. 1993. Student self-evaluation: An introduction and rationale. In J. McGregor (Ed). *Student self-evaluation: Fostering reflective learning. New Directions for Teaching and Learning.* 56: 5-14. San Francisco: Jossey-Bass.

Leader, The. 1999. Medical Council warns doctors. 12 March: 5.

Leamnson, R. 1999. *Thinking about teaching and learning: developing habits of learning with first-year college and university students*. Sterking VA: Stylus.

Lecoq, D.A., Balblanc, J.C. 1999. Continuing Medical Education for Rheumatologists in France. Results of a national survey. *Review Rheumatology English Editorial.* 66(12): 717-723.

Leedy, P.D., Ormrod, J.E. 2001. *Practical Research: Planning and design.* Upper Saddle River, N.J.: Merrill Prentice Hall.

Levinson, B. 2004. *Morning Live*. 2 March 2004 at 7:38. Sexual survey.

Lewis, C.E., Hassanein, R.S. 1970. *The New England Journal of Medicine.* 282(5): 254-259.

Lewis, C.E. 1998. Continuing Medical Education: Past, Present, Future. *The Western Journal of Medicine.* 168(5): 334-340.

Liberman, A., Rotarius, T., Fottler, M. 2001. Constructive engagement: an integrative method of involving students in the learning process. *Journal of Health Administration Education.* 19(2): 239-252.

Long, H.B. 1998. Understanding adult learners. In Galbraith, M.W. *Adult learning methods: a guide for effective instruction,* 2nd Ed. Malibar, F.Lkrieger, 21-35.

Lohse, B., Nitzke, S., Ney, D.M. 2003. Introducing a problem-based unit into a lifespan nutrition class using a randomised design produces equivocal outcomes. *Journal of the American Dieticietic Association.* 103(8): 1020-1025.

Mafisa, L.J. 1999. *The establishment and development of a Further Education Sector in South Africa with specific reference to the Community Colleges concept in the Gauteng Province*. (Unpublished Ph.D. thesis.) University of the Orange Free State, Bloemfontein.

Mannapula-Masepela, L.E.M. 2002. *Staff Satisfaction in a South African University undergoing transformation.* (unpublished Doctor's degree script) University of the Orange Free State, Bloemfontein.

MacDonald, P. & Spasoff, R.A. 1988. Study of relation of continuing medical education to quality of family physicians care. *Journal of Medical Education.* 63: 775-784.

Manning, P.R. & Petit D.W. 1987. The Past, Present and Future of Continuing Medical Education. *JAMA.* 258(24): 3542 –3546.

Matthews, G., Zeidner, M., Roberts, R.M. 2002. *Emotional Intelligence: Science and Myth.* MIT Press. Cambridge, Massachusetts London, England.

Mayer, W.D., Bergland, R., Brown, C.R., Caplan, R.M., Clemente, C.D., Jones, J.E., Lewis, C.A., Meyer, T.C., Rabkin, M.T., Suker, J.R., Tarnoff, S. & Walthall, D.B. 1980. Continuing Education of Physicians: Conclusions and Recommendations*. Journal of Medical Education.* 55: 151-157.

McClary, C., Pyeritz, E., Bruce, W., Henshaw, E. 1992. A liberal arts health promotion course. *Journal of American college health.* 41(2): 71-72.

Merriam, S.B., Caffarella, R.S. 1999. *Learning in adulthood: A comprehensive guide.* San Francisco: Jossey-Bass.

Mezirow, J. 1991. Transformative dimensions of adult learning. San Francisco: Jossey-Bass.

Mezirow, J. 1997. Cognitive processes: contemporary paradigms of learning. In Sutherland, P.(Eds). Adult learning: a reader. London Kogan Page 3-13.

Mezirow, J. 1998. On critical reflection. *Adult Education Quarterly*, 48(3): 185-198.

Miller, G.E. 1967. Continuing Education for what? *Journal of Medical Education.* 42: 321-426.

Miller, G. E. 1990. The assessment of Clinical Skills/Competence/Performance. *Academic Medicine.* 65(9): 563-567.

Mills, G.E. 2000. *Action Research: a Guide for the teacher researcher.* New Jersey: Prentice-Hall.

Milne, R., Oliver, S. 1996. Evidence based consumer health information: developing teaching in critical appraisal skills. *International Journal of Quality in Health Care*. 8: 439-445.

Mkhize, B. 2004. Continuing Professional Development: The way Forward. www.hpcsa.co.za. 26 January 2004.

Momberg, E. 1998. Dentists included in development system. *The Citizen*. 6 November: 3.

Momberg, E. 1998. Tough new rules for SA doctors. *The Citizen*. 5 November : 1.

Montrieux, C., Collette, G., van Lochem, J.J., Baldewyns, L., Orban, M. 2000. Postgraduate training for medical doctors in Europe. *Revue Medicale de Liege.* 55(9): 850-851.

Moran, J.A., Kirk, P. & Kopelow, M. 1996. Measuring the effectiveness of a pilot continuing medical education program. *Canadian Family Physician* 42: 272-276.

Morrell, D. 1999. Continuing Professional Development - CPD. *Specialist Medicine* 21(5)*:* 264.

Mouton, J. 2001. How to succeed in your Master's and Doctoral Studies: *A South African Guide and Resource Book.* Pretoria: Van Schaik Publishers.

Murray, E., Gruppen, L., Catton, P., Hays, R., Wooliscroft, J.O. 2000. The accountability of clinical education: its definition and assessment. *Medical Education.* 34: 871-879.

Natal Witness, The. 1999. Mixed feelings over license points. 8 February: 9.

Ncayiyana, D.J. & Sanders, F.N. 1998. CPD the easy way. *SAMJ*. 16(9): 847-849.

Nel, C.J.C. 1994. Maintenance of professional competence, Continuing Medical Education and recertification (MPC, CME and RC) *SAMJ. 84(8) 462-465.*

O'Reilly, P., Tifft, M.D. & DeLena, C. 1982. Continuing Medical Education: 1960 to the Present. *Journal of Medical Education.* 57: 819-826.

Otteson, J.M., Patterson, I. 2000. Contextual influences on learning application in practice. An extended role for process evaluation. *Evaluation and the health professions.* 23(2): 194-211.

Parker, K., Pevrikh, S.V. 2001. Applying Prochaska's model of change to needs assessment, programme planning and outcomes measurement. *Journal of evaluation in clinical practice.* 7(4): 365-371.

Parker, J.D.A., Taylor, G.J., Bagby, R.M. 2001. The relationship between emotional intelligence and alexithymia. *Personality and Individual differences.* 30: 107-115.

Pereles, L., Lockeyer, J., Fidler, H. 2002. Permanent small groups: group dynamics, learning, and change. *Journal of continuing education in the health profession.* 22(4): 205-213.

Perkins, D.N. 1991. *Education for insight. Educational Leadership*, 49(2): 4-8

Power, M. 1999. Doctors warned: Keep up or you're out of business. Sunday *Tribune.* 14 March: 1.

Prawat, R.S. 1992. Teachers' belief about teaching and learning: a constructivist perspective. *American Journal of Education*, May, 354-395.

Queeny, D.S. 1995. *Assessing needs in continuing education: an essential tool for quality improvement.* San Francisco: Jossey Bass.

Rabbit, P. 1999. When age is in, the wit is out*?* In Sala, S.D. (Eds). *Mind myths: exploring popular assumption about the mind and brain.* Chichester: John Willey, 165-185.

Reardon, M. 1999. The brain - navigating the new reality: an exploration of brain compatible learning. *Adult learning,* 10(2): 10-13.

Resnick, L.B. (Ed). 1989. *Knowing, learning and instruction: essays in honor of Robert Glaser*. Hillsdale: Lawrence Erlbaum.

Richardson, M.L. & Norris, T.E. 1997. On-line delivery of Continuing Medical Education over the worldwide web: An on-line needs assessment. *American Journal of Roentgenology.* 168: 1161-1164.

Rogers, A. 1993. *Teaching adults*. Milton Kearns: Open University Press.

Rubenstein, L.V., Parker, L.E., Meredith, L.S., Altschuler, A., dePillis, E., Hernandez, J., Gordon, N.P. 2002. Understanding team-based quality improvement for depression in primary care. *Health services research.* 37(4): 1009-1029.

Rybash, J.M., Hoyer, W.J., Roodin, P.A. 1986. *Adult cognition and aging: developmental changes in processing knowing and thinking.* New York: Pergamon.

SAS Institute Inc. 1989. *SAS/STAT User's Guide.* Version 6, Fourth Edition, Volume 2, Cary, NC: SAS Institute Inc.

Schlemmer, L. 1996. The Communication Plan: From the grass-roots to policy-making level. In Garbers, J.G. (Ed*). Effective Research in the Human Sciences: Research Management for Researchers, Supervisors and Master's and Doctoral candidates.* Pretoria: J.L. van Schaik Publishers.

Schlomer, R.S., Anderson, M.A., Shaw, R. 1997. Teaching strategies and knowledge retention. *Family Medicine.* 13(5): 249-53.

Shepherd, G.R. 1960. History of Continuing Medical Education in the United States since 1930. *Journal of Medical Education.* 35(8): 740-758.

Sibley, J.S., Sacket, D.L., Neufeld, V., Gerrard, B., Rudnick, K.V. & Fraser, W. 1982. A randomized trial of continuing medical education. *The New England Journal of Medicine.* 306(9): 511-515.

Simpson, D. 2000. English roots of medical education in Australasia: Kenneth F. Russell memorial lecture. *Australian and New Zealand journal of surgery.* 70(12): 843-850.

Simpson, D. 2003. Pierre Dionis and the Franco-British dialogue in surgery. *ANZ Journal of Surgery.* 73(5): 336-40.

Smith, J. 2001. Unpacking the “value added” impact of continuing professional education: a multi-method case study approach. *Nurse-education-today.* 21(5): 341-349.

Sprenger, M. 1999. *Learning and memory: the brain in action*. Alexandria. VA: Association for supervision and curriculum development.

Stage, F.K., Muller, P.A., Kinzle, J. &Simmons, A. 1998. Creating learning-centred classrooms: What does learning theory have to say: Higher education report, 26(4) Graduate School of Education and Human Development. Washington , DC: George Washington University.

Stein, L.S. 1981. The effectiveness of continuing medical education: Eight research reports. *Journal of Medical Education.* 56: 103-110.

Strydom, A H. 1998. *Starting research: An introduction to academic research and dissertation writing.* (Unpublished document.) Unit for Research into Higher Education, University of the Orange Free State, Bloemfontein.

Sunday Tribune, *The*. 1999. Doctors warned: Keep up or you're out of business. 14 March: 1.

Suskie, A.L. 1992. *Questionnaire survey research that works* (Number six). Tallahassee, Florida: Florida State University, Association for Institutional Research Resources for Institutional Research.

Sutherland, P. 1997. *Adult learning : a reader.* London: Kogan Page.

Swanepoel, T. 1998. Dokters moet van 1999 VPO doen. *Beeld.* 5 November: 6.

Taylor, E.W. 1998. *The theory and practice of transformative learning: a critical review.* Information series 374. Columbo, OH: ERIC clearinghouse on Adult, Career and Vocational Education.

Tennant, M., Podgson, P. 1995. *Learning and change in the adult years: a developmental perspective.* San Francisco: Jossey Bass.

Terman, L.M., Merrill, M.A. 1937. *Measuring intelligence: A guide to the administration of the new revised Stanford-Binet test of intelligence.* New York: Houghton Mifflin.

Tousignant, M., DesMarchais, J.E. 2002. Accuracy of student self-assessment ability compared to their own performance in a problem-based learning medical program: a correlation study. *Advances in Health Science Education Theory and Practice.* 7(1): 19-27

Towle, A. 1998. Changes in Health care and continuing medical education for the 21st century. *British Medical Journal. 316: 466-468.*

Vella, J. 2000. *Taking learning to task: creative strategies for teaching adults*. San Francisco: Jossey-Bass.

Visser, M.R., Smets, E.M., Oort, F.J., De Haes, H.C. 2003. Stress satisfaction and burnout among Dutch medical specialists. *Canadian Medical Association Journal.* 168(3): 271-275.

Vollan, D.D. 1954. Preview of Principal Findings of American Medical Association survey of postgraduate medical education. *JAMA*. 155(4): 389-392.

Von Glaserfeld, E. 1995. A constructivist approach to teaching. In Steffe, L.P. & Gale, J. (Eds), *Constructivism in Education*. Hillsday, N.J: Lawrence Erlbaum, 159-174.

Von Engelhardt, D. Teaching history of medicine in the perspective of "medical humanities". 1999. *Croatian Medical Journal*. 40(1): 1-7.

Vysohlid, J., Walton, H.J. 1990. Development of continuing medical education in Europe: a review. *Medical Education.* 24: 406-412.

Waghid, Y. 2000. Qualitative research in education and the critical use of rationality. *South African Journal of Education 20(1) 25-29.*

Wagner, R.K. 2000. *Handbook of human intelligence.* Second Edition. New York: Cambridge University Press.

Walton, H.J. 1993. Projects on Continuing Medical Education in Europe. *Postgraduate Medical Journal.* 69 (suppl 2): 68-69.

Walton H.J. 1994. Continuing Medical Education Europe. *Medical Education.* 28: 332-342.

Watts, M.S.M. 1980. CME or PME. *Journal of Continuing Education for the Health Profession.* 10: 129-136.

Welch, T.R., Bullen, M.J. 2000. The effect of a teaching award on the quality of Continuing Medical Education participants evaluation. *Archives of Pediatric Adolescence.* 154:81-82.

Welman, J.C., Kruger S.J. 2002. *Research Methodology.* Second Edition. Oxford University Press.

Wertsch, J.V. & Toma, C. 1995. Discourse and learning in the classroom: a socio-cultural approach. In Steffe, L.P. &Gale, J. (Eds). *Constructivism in education*. Hillsday, N.J.: Lawrence Erlbaum, 159-174.

Williams, E.S., Konrad, T.R., Scheckler, W.E., Pathman, D.E., Linzer, M., McMurray, J.E., Gerrity, M., Schwarts, M. 2001. Understanding physicians' intentions to withdraw from practice: the role of job satisfaction, job stress, mental and physical health. *Health care management review.* 26(1): 7-19.

Williams, E.S., Konrad, T.R., Linzer, M., McMurray, J., Pathman, D.E., Gerrity, M., Schwartz, M.D., Scheckler, W.E., Douglas, J. 2002. Physician practice, and patient characteristics related to primary care physician

physical and mental health. Results from the physicians worklife (*sic)* study. *Health Services Research.* 37(1): 121-143.

Williamson, J.W., Alexander, M. & Miller, G.E. 1967. Continuing Education and Patient Care Research. *JAMA.* 201(12): 118-122.

Wilkerson, L., Irby, D.M. 1998. Strategies for Improving Teaching Practices: A Comprehensive Approach to Faculty Development. *Academic Medicine*. 73(4): 387-394.

Zhang, L.F. 2002. Thinking styles and cognitive development. *Journal of Genetic psychology child behavior, animal behavior and comparative psychology.*163(20): 179-195.

Zohar, D. 1997. *Rewiring the corporate brain: using new science to rethink how we structure and lead organizations.* San Francisco: Berrett-Koehler.

APPENDIX I

OFFICE USE

This questionnaire is a national survey to determine the strengths and weaknesses of the current Continuous Professional Development (CPD) for South African doctors. Recommendations will be made to the HPCSA and other relevant stakeholders. The questionnaire may be completed anonymously. You may therefore choose whether or not you wish to fill in your name. ☐☐☐ 1-3

A: BIOGRAPHICAL DETAILS

Name: _____ Town/city where you practise _____ ☐☐ 4 – 5

Sex: _____ Age: _____ ☐ 6 ☐ 7-8

Type of practice _____ ☐ 9

Highest qualification obtained: _____ ☐☐ 10 – 11

Place where the qualification had been obtained: _____ ☐☐ 12 – 13

Year in which you obtained the qualification: _____ ☐☐ 14 – 15

Are you in possession of an international qualification? Yes ☐ No ☐ ☐ 16

If yes, specify the said qualifications: _____ ☐☐ 17 – 18

_____ ☐☐ 19 – 20

☐☐ 21 – 22

Answer all the following questions with an X in the appropriate block

B: GENERAL

1. How much of your upgraded knowledge do you apply in the practice after a CPD course? 10 – 25% ☐ 26 – 50% ☐ 51 – 75% ☐ 76 – 100 ☐ ☐ 23

2. Does the current CPD course fulfil your need for upgrading your medical knowledge? Yes ☐ No ☐ Unsure ☐ ☐ 24

3. If No, indicate the reason for your view: _____ ☐☐ 25– 26

_____ ☐☐ 27– 28

_____ ☐☐ 29– 30

_____

4. Do you consider the CPD course cost-effective with regard to new knowledge gained and the changes brought about in your practice? Yes ☐ No ☐ ☐ 31

5. Are you familiar with self-evaluation methods with regard to your practice and patient conduct? Yes ☐ No ☐ ☐ 32

6. Were you subjected to any form of evaluation after the course? If Yes, specify the nature and scope of the evaluation. _____ _____ _____	Yes ☐ No ☐	☐ 33
7. Why do attend the CPD course? _____ _____ _____ _____		☐☐ 34 – 35 ☐☐ 36– 37 ☐ 38
8. Had there been a needs assessment of possible themes prior to the course?	Yes ☐ No ☐ Unsure ☐	☐ 39
9. Do CPD courses build your self-confidence with regard to patient treatment?	Yes ☐ No ☐ Unsure ☐	☐ 40
10. Do CPD courses contribute to the improvement of your diagnoses?	Yes ☐ No ☐ Unsure ☐	☐ 41
11. Could CPD change your treatment of particular diseases?	Yes ☐ No ☐ Unsure ☐	☐ 42
12. Is this a platform for sharing you problems and experience in practice?	Yes ☐ No ☐	☐ 43
13. Do you think CPD would help doctors to keep abreast of the latest medication and treatment methods?	Yes ☐ No ☐ Unsure ☐	☐ 44
C: EXPECTATIONS WITH REGARD TO CPD COURSES	Specify order of importance(1-6)	
14. Prioritise the following (1-6) according to your expectations of a course (1=most important to 6 least important)	☐	☐ 45
i) Keeping abreast of the latest scientific information.	☐	☐ 46
ii) Providing a supportive environment for medical professionals in practice	☐	☐ 47
iii) Upgrading your knowledge and thereby improving patient treatment.	☐	☐ 48
iv) Providing motivation for lifelong learning	☐	☐ 49
v) Obtaining credits for re-registration.	☐	☐ 50
vi) Themes on the programme interest me and meet my practice requirements	☐	☐ 51
Other: _____		
REASONS FOR ATTENDANCE AND LEARNING PREFERENCES		
15. Would you prefer smaller group contact sessions?	Yes ☐ No ☐ Unsure ☐	☐ 52

16. Does the size of the course group have the desired effect with regard to:

i)	knowledge gained?	Yes ☐ No ☐	☐ 53
ii)	motivation for lifelong learning?	Yes ☐ No ☐	☐ 54
iii)	improving patient treatment?	Yes ☐ No ☐	☐ 55
iv)	creating a support system for practising doctors?	Yes ☐ No ☐	☐ 56
v)	merely retaining your registration?	Yes ☐ No ☐	☐ 57

E: COURSE INFORMATION:

17. Is the CPD course suitable in terms of scheduled time?	Yes ☐ No ☐ Unsure ☐	☐ 58
18. Is the course suitable with regard to duration (number of days)?	Yes ☐ No ☐ Unsure ☐	☐ 59
19. Are the presenters known as experts in the field?	Yes ☐ No ☐ Unsure ☐	☐ 60

F: INSTRUCTIONAL METHODS:

20. Indicate which of the following instructional methods are used during the continuous development opportunities

i)	Monologue	Yes ☐ No ☐	☐ 61
ii)	Group work	Yes ☐ No ☐	☐ 62
iii)	Seminar	Yes ☐ No ☐	☐ 63
iv)	Workshop	Yes ☐ No ☐	☐ 64
v)	Lecture	Yes ☐ No ☐	☐ 65
vi)	Practical work	Yes ☐ No ☐	☐ 66

21. Was the course offered in your region?	Yes ☐ No ☐	☐ 67

G: OBTAINING POINTS:

22. What is your view on the points awarded for specific activities?

i)	Is it acceptable?	Yes ☐ No ☐	☐ 68
ii)	Should overseas congresses count more points?	Yes ☐ No ☐ Unsure ☐	☐ 69
iii)	Should persons in academic appointments receive points for presentation of lectures?	Yes ☐ No ☐ Unsure ☐	☐ 70

23. What form of obtaining points do you prefer:

i)	Involvement in medical faculties	☐	☐ 71
ii)	Writing articles	☐	☐ 72
iii)	Training students	☐	☐ 73
iv)	Group discussions	☐	☐ 74
v)	Computer assisted training by completing questionnaires on a particular article	☐	☐ 75

vi)	"Shadowing" by specialists	☐	☐ 76
vii)	Visits to practices	☐	☐ 77
viii)	Promoter of dissertations (master's and doctor's degrees)	☐	☐ 78
ix)	Congress attendance	☐	☐ 79
x)	Congress presentations or poster presentations	☐	☐ 80

24. What recommendations would you wish to make with regard to obtaining and awarding of point for CPD purposes in South Africa?

_____ ☐☐ 1 – 2

_____ ☐☐ 3– 4

_____ ☐☐ 5– 6

_____

_____

_____

_____

II: BEFORE LEGISLATION FOR COMPULSORY CONTINUOUS PROFESSIONAL DEVELOPMENT:

25. Before CPD became compulsory, how did you keep abreast of new trends and knowledge?

i)	By reading scientific journals	Yes ☐ No ☐	☐ 7
ii)	Liaison with faculties	Yes ☐ No ☐	☐ 8
iii)	Further specialisation	Yes ☐ No ☐	☐ 9
iv)	Attending functions where new pharmaceutical agents are introduced	Yes ☐ No ☐	☐ 10
v)	Member of a medical group who met on a regular basis.	Yes ☐ No ☐	☐ 11

I: ATTENDANCE:

2. What number of CPD opportunities as offered by a particular medical faculty do you attend annually?

i)	1 – 5	☐	☐ 12
ii)	6 – 10	☐	☐ 13
iii)	11 – 20	☐	☐ 14
iv)	more than 20	☐	☐ 15

27. Do you attend CPD opportunities at several medical faculties? Yes ☐ No ☐ ☐ 16

28. In order of importance, specify what motivates you to attend CPD opportunities presented by medical faculties? (1=most important and 5 least important)

i)	Only for re-registration	☐	☐ 17

ii)	Accumulating points	☐	☐ 18
iii)	Better patient service	☐	☐ 19
iv)	Upgrading of knowledge	☐	☐ 20
v)	Acquiring new techniques	☐	☐ 21

29. What recommendations would you wish to make with regard to the presentations during CPD opportunities as currently offered by medical faculties in South Africa

_____ ☐ 22
_____ ☐ 23
_____ ☐ 24
_____ ☐ 25
_____
_____

J: GENERAL PERSPECTIVES:

30. Are you generally positive or negative about the implementation of CPD in South Africa? Pos ☐ 1; Neg ☐ 2 ☐ 26
Kindly motivate your answer:

_____
_____
_____
_____
_____
_____ ☐☐ 27 – 28
_____ ☐☐ 29 – 30

31. What are the greatest "frustrations"

_____ ☐☐ 31 – 32
_____ ☐☐ 33 – 34
_____ ☐☐ 35 – 36
_____ ☐☐ 37 – 38
_____ ☐☐ 39 – 40
_____

Are there any other suggestions you wish to offer with regard to CPD within the South African context?

_____ ☐☐ 41 – 42
_____ ☐☐ 43 – 44
_____
_____

Hierdie vraelys is 'n nasionale opname om die sterk en swak punte van die huidige Voortgesette Professionele Ontwikkeling (VPO) vir Suid-Afrikaanse dokters te bepaal. Aanbevelings sal vir die GBRSA en ander relevante belanghebbendes gemaak word. Die vraelys kan anoniem voltooi word. U kan dus die keuse uitoefen of u u naam wil invul of nie.

KANTOORGEBRUIK

☐ ☐ ☐ **1-3**

A: BIOGRAFIESE BESONDERHEDE

Naam: _____Dorp/stad waar u praktiseer _____ ☐ ☐ **4 – 5**

Geslag: _____Ouderdom: _____ ☐ **6** ☐☐ **7-8**

Tipe Praktyk _____ ☐ **9**

Hoogste kwalifikasies verwerf: _____ ☐ ☐ **10 – 11**

Plek waar u die kwalifiasies verwerf het: _____ ☐ ☐ **12 – 13**

Jaar waarin u die kwalifikasies verwerf het: _____ ☐ ☐ **14 – 15**

Beskik u oor internasionale kwalifikasies? **Ja** ☐ **Nee** ☐ ☐ **16**

Indien ja, spesifiseer sodanige kwalifikasies: _____ ☐ ☐ **17 – 18**

_____ ☐ ☐ **19 – 20**

☐ ☐ **21 – 22**

Beantwoord al die onderstaande vrae met 'n X in die toepaslike blokkie:

B: ALGEMEEN

1. Hoeveel van u opgegradeerde kennis pas u na 'n VPO kursus in die praktyk toe? 10 – 25% ☐ 26 – 50% ☐ 51 – 75% ☐ 76 – 100 ☐ ☐ **23**
2. Vervul die huidige VPO kursus u behoefte om u mediese kennis op te gradeer? **Ja** ☐ **Nee** ☐ **Onseker** ☐ ☐ **24**
3. Indien Nee, dui aan waarom u so sê/voel: _____ ☐ ☐ **25– 26**

_____ ☐ ☐ **27– 28**

_____ ☐ ☐ **29– 30**

_____

4. Is VPO-kursusse vir u koste-effektief ten opsigte van nuwe kennis bekom en die verandering wat dit by u praktyk teweeggebring het? **Ja** ☐ **Nee** ☐ ☐ **31**
5. Is u bekend met selfevalueringsmetodes tov u praktyk en pasiënt optrede? **Ja** ☐ **Nee** ☐ ☐ **32**
6. Is u na die kursus aan enige vorm van evalueering blootgestel? **Ja** ☐ **Nee** ☐ ☐ **33**

Indien ja, spesifiseer die aard en omvang van die evaluering:

_____ ☐ ☐ **34 – 35**

_____

7. Hoekom woon u die VPO kursus by? _____ _____ _____ _____		☐ ☐ **36– 37** ☐ **38**
8. Is daar voor die kursus 'n behoeftebepaling van moontlike temas gedoen?	**Ja** ☐ **Nee** ☐ **Onseker** ☐	☐ **39**
9. Bou VPO-kursusse u selfvertroue tov pasiëntbehandeling?	**Ja** ☐ **Nee** ☐ **Onseker** ☐	☐ **40**
10. Dra VPO kursusse daartoe by om u diagnoses te verbeter?	**Ja** ☐ **Nee** ☐ **Onseker** ☐	☐ **41**
11. Kan VPO u behandeling van sekere siektes verander?	**Ja** ☐ **Nee** ☐ **Onseker** ☐	☐ **42**
12. Is dit 'n platform om u probleme en ervaring in die praktyk te deel?	**Ja** ☐ **Nee** ☐	☐ **43**
13. Dink u VPO sal dokters help om op hoogte van die nuutste medikasie en behandelingsmetodes te bly?	**Ja** ☐ **Nee** ☐ **Onseker** ☐	☐ **44**
C: VERWAGTINGS MET BETREKKING TOT VPO-KURSUSSE		
14. Prioritiseer onderstaande (1-6) volgens wat u van 'n kursus verwag. (1=mees belangrik tot 6 die minste belangrik)		
i) Om op hoogte te bly van die nuutste wetenskaplike inligting.	☐	☐ **45**
ii) Om 'n ondersteunende omgewing vir medici in die praktyk te voorsien.	☐	☐ **46**
iii) Om u kennis op te gradeer en sodoende pasiëntbehandeling te verbeter.	☐ ☐	☐ **47** ☐ **48**
iv) Om u te motiveer vir lewenslange leer.	☐	☐ **49**
v) Om krediete vir herregistrasie te bekom.		
vi) Onderwerpe op die program vervul my praktykbehoeftes en intereseer my.	☐	☐ **50**
Ander: _____	☐	☐ **51**
D: REDES VIR BYWONING EN VOORKEURE VAN LEER	**Ja** ☐ **Nee** ☐ **Onseker** ☐	☐ **52**
15. Sou u kleiner groepkontaksessies verkies?		
16. Het die grootte van die kursusgroep die verlangde effek tov:	**Ja** ☐ **Nee** ☐	☐ **53**
i) kennis bekom?	**Ja** ☐ **Nee** ☐	☐ **54**
ii) motivering vir lewenslange leer?	**Ja** ☐ **Nee** ☐	☐ **55**
iii) om pasiëntbehandeling te verbeter?	**Ja** ☐ **Nee** ☐	☐ **56**
iv) om 'n ondersteuningstelsel vir praktiserende geneeshere te skep?	**Ja** ☐ **Nee** ☐	☐ **57**
v) bloot om u registrasie te behou?		

E: KURSUSINLIGTING:

17. Is die VPO kursus geskik in terme van tyd geskeduleer?	**Ja** ☐ **Nee** ☐ **Onseker** ☐	☐ **58**
18. Is die kursus geskik tov tydsduur (aantal dae)?	**Ja** ☐ **Nee** ☐ **Onseker** ☐	☐ **59**
19. Is aanbieders bekend as kundiges op die gebied?	**Ja** ☐ **Nee** ☐ **Onseker** ☐	☐ **60**

F: ONDERRIGMETODES:

20. Dui aan watter van die volgende onderrigmetodes gedurende die voorgesette ontwikkelingsgeleenthede gebruik word?		
i) Monoloog	**Ja** ☐ **Nee** ☐	☐ **61**
ii) Groepwerk	**Ja** ☐ **Nee** ☐	☐ **62**
iii) Seminaar	**Ja** ☐ **Nee** ☐	☐ **63**
iv) Werkwinkel	**Ja** ☐ **Nee** ☐	☐ **64**
v) Lesing	**Ja** ☐ **Nee** ☐	☐ **65**
vi) Prakties	**Ja** ☐ **Nee** ☐	☐ **66**
21. Is die kursus vir u in u streek aangebied?	**Ja** ☐ **Nee** ☐	☐ **67**

G: VERWERWING VAN PUNTE:

22. Hoe voel u oor die punte wat aan spesifieke aktiwiteite toegeken word?			
i)	Is dit aanvaarbaar?	**Ja** ☐ **Nee** ☐	☐ **68**
ii)	Behoort oorsese kongresse meer punte te tel?	**Ja** ☐ **Nee** ☐ **Onseker** ☐	☐ **69**
iii)	Behoort persone in akademiese aanstellings punte te ontvang vir lesings aangebied?	**Ja** ☐ **Nee** ☐ **Onseker** ☐	☐ **70**
23. Watter vorm van punteverwerwing verkies u:(u mag meer as een kies)			☐ **71**
i)	Betrokkenheid by mediese fakulteite	☐	☐ **72**
ii)	Skryf van artikels	☐	☐ **73**
iii)	Opleiding van studente	☐	☐ **74**
iv)	Groepbesprekings	☐	
v)	Rekenaarondersteunde onderrig deur vraelyste oor 'n bepaalde artikel te voltooi	☐	☐ **75**
vi)	Navolg van spesialiste	☐	☐ **76**
vii)	Besoeke aan praktyke	☐	☐ **77**
viii)	Promotor van verhandelings (meesters- of doktorsgrade)	☐	☐ **78**
ix)	Kongresbywoning	☐	☐ **79**
x)	Kongresvoordragte of plakkaatvoordragte	☐	☐ **80**

24. Watter aanbevelings sou u wou maak oor die verwerwing en toekenning van punte vir VPO doeleindes in Suid-Afrika?

_____ ☐ ☐ **1 – 2**

_____ ☐ ☐ **3– 4**

_____ ☐ ☐ **5– 6**

_____

H: VOOR WETGEWING VIR VERPLIGTE VOORTGESETTE ONTWIKKELING

25. Voordat VPO verpligtend geword het, hoe het u op hoogte gebly van nuwe tendense en kennis?

i)	Lees van vakkundige tydskrifte	**Ja** ☐ **Nee** ☐	☐ **7**
ii)	Skakeling met fakulteite	**Ja** ☐ **Nee** ☐	☐ **8**
iii)	Het verder gaan spesialiseer	**Ja** ☐ **Nee** ☐	☐ **9**
iv)	Bekendstellingsgeleenthede van nuwe farmaseutiese middels bygewoon	**Ja** ☐ **Nee** ☐	☐ **10**
v)	Was lid van ‘n mediese groep wat gereeld vergader het.	**Ja** ☐ **Nee** ☐	☐ **11**

I: BYWONING:

26. Hoeveel VPO-geleenthede soos aangebied deur ‘n sekere mediese fakulteit woon u per jaar by? ☐ **12**

i)	1 – 5	
ii)	6 – 10	☐
iii)	11 – 20	☐
iv)	meer as 20	☐
		☐ ☐ **13**

27. Woon u verskillende mediese fakulteite se VPO-geleenthede by?

28. Spesifiseer na gelang van belangrikheid wat u dryfveeer is om VPO-geleenthede wat deur mediese fakulteite aangebied word by te woon? (1=meer belangrik en 5 minste belangrik) **Ja** ☐ **Nee** ☐

i)	Slegs vir herregistrasie	☐	☐**14**
ii)	Opbou van punte	☐	☐**15**
iii)	Beter pasiëntediens	☐	☐**16**
iv)	Kennisopgradering	☐	☐**17**
v)	Aanleer van nuwe tegnieke	☐	☐**18**

29. Watter aanbevelings sal u wou maak oor die aanbiedingsgedurende VPO-geleenthede soos tans deur mediese fakulteite in Suid-Afrika aangebied?

_____
_____
_____
_____
_____
_____

☐ **19**
☐ **20**
☐ **21**
☐ **22**

J: ALGEMENE PERSPEKTIEWE:

☐ **23**

30. Is u oor die algemeen positief of negatief oor die implementering van VPO in Suid-Afrika?

Pos ☐ 1 ; Neg ☐ 2

Motiveer asseblief u keuse:

_____
_____
_____
_____
_____

☐☐ **24 – 25**
☐☐ **26 – 27**

☐☐ **28 – 29**

31. Wat is die grootste frustrasies

_____
_____
_____
_____
_____

☐☐ **30 – 31**
☐☐ **32 – 33**
☐☐ **34 – 34**
☐☐ **36 – 37**

Enige ander voorstelle wat u aan die hand sou wou doen oor VPO binne die Suid-Afrikaanse konteks?

_____
_____
_____
_____
_____
_____

☐☐ **38– 39**
☐☐ **40– 41**
☐☐ **42– 43**
☐☐ **44– 45**
☐☐ **46 – 47**

QUESTIONNAIRE FOR THE PRESENTERS OF CPD COURSES

This is a national study that estimates the strong- and weak points of the current CPD system in South Africa. The findings will be published and recommendations will be made to the Health Profession Committee and other stakeholders to better the provision of CPD courses to physicians.

OFFICE USE

☐ ☐ ☐ **1-3**

A. Biographic information

If preferred, the questionnaire can be filled out anonymously.

Name: _____University: _____ ☐ ☐ **4 – 5**

Sex: _____Age: _____ ☐ **6** ☐☐ **7-8**

Type of Practice: _____ Town/city of Pratice: _____ ☐ **9** ☐☐ **10-11**

Answer the questions by making a X in the appropriate block.

B. General information

1. Was the cognitive development level of participants taken into account in designing the course?	**Yes** ☐ **No** ☐	☐ **12**
2. Were the current needs of physicians established before the course was offered?	**Yes** ☐ **No** ☐	☐ **13**
3. If yes, how?		
i) Telephone	**Yes** ☐ **No** ☐	☐ **14**
ii) Questionnaire	**Yes** ☐ **No** ☐	☐ **15**
iii) E-mail	**Yes** ☐ **No** ☐	☐ **16**
iv) Request from physicians	**Yes** ☐ **No** ☐	☐ **17**
v) Others: _____		☐ **18**
4. Which types of learning activities were used during the course?		
i) Did you make use of any videos?	**Yes** ☐ **No** ☐	☐ **19**
ii) Demonstrations?	**Yes** ☐ **No** ☐	☐ **20**
iii) Case studies?	**Yes** ☐ **No** ☐	☐ **21**
iv) Monologue	**Yes** ☐ **No** ☐	☐ **22**
v) Group work activities	**Yes** ☐ **No** ☐	☐ **23**
vi) Role play activities	**Yes** ☐ **No** ☐	☐ **24**
vii) Others (name them _____		☐ **25**
5. Did you do any evaluation to establish whether actual learning took place?	**Yes** ☐ **No** ☐	☐ **26**

6. If yes, how was the evaluation done? Mark all applicable. Test: ☐ 1; Audit: ☐ 2; Self: ☐ 3; Practical: ☐ 4		☐☐☐☐ **27-30**
7. Were any opportunities offered for physicians to engage in professional hands on activities during the course?	**Yes** ☐ **No** ☐	☐ **31**
8. If yes, how? _____ _____ _____ _____ _____		☐☐ **32 – 33** ☐☐ **34 – 35**
9. Has any support for problem solving in treatment of patients in practice been offered after the course?	**Yes** ☐ **No** ☐	☐ **36**
10. If yes, in which way?		
i) Telephone	**Yes** ☐ **No** ☐	☐ **37**
ii) E-mail	**Yes** ☐ **No** ☐	☐ **38**
iii) Others _____	**Yes** ☐ **No** ☐	☐ **39**
11. Were notes (learning material) on the course topics provided to participants?	**Yes** ☐ **No** ☐	☐ **40**
12. Were lectures interrupted to discuss the new knowledge?	**Yes** ☐ **No** ☐	☐ **41**
13. How did the presenter connect new knowledge to current state in practice? _____ _____ _____ _____ _____ _____		☐☐ **42 – 43** ☐☐ **44 – 45** ☐☐ **46 – 47**
14. In your opinion, should points be awarded for work place education after a new knowledge were gained and imlemented in practice?	**Yes** ☐ **No** ☐	☐ **48**

15. Please motivate your answer:

_____

_____

_____

_____

_____ ☐☐ **49 – 50**

_____ ☐☐ **51- 52**

_____

16. Did you have any training in facilitation skills? **Yes** ☐ **No** ☐ ☐ **53**

17. If yes, what kind of facilitation training?

Day course: ☐ 1; Diploma: ☐ 2; Degree: ☐ 3 ☐☐☐ **54 - 56**