

CME Needs Assessment: National Model

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Introduction

This CME Needs Assessment paper was written to provide analysis on a particular regional country's <<the country>> proposed CME in Primary Care program. It has been provided as a National Model that other countries may wish to replicate

The vision of <<the country>> is "To Provide World Class Healthcare." One of the first steps to achieve this vision is to start comprehensive educational programs to improve the skills of the primary health care team as Primary Health Care is essentially the first level of contact of the patient with the health care system. The suggested programs include the following:

- **Interdisciplinary Primary Care Training Program.** To assist medical centers in organizing their delivery of care around the of primary care principals.
- **Primary Care Physician Education Initiative (PCPEI).** The goals of the educational intervention are to better prepare current physicians to deliver care under this new paradigm.

The aim of the above programs is to create Family Medicine Model of Care at the primary health care centers in <<the country>> through a focus on excellence in health, wellness and education; in a barrier free environment that inspires interdisciplinary team approach, accountability, trust, enthusiasm and pride. In addition pave the way to excellence by challenging the practitioner, maximizing professional fulfillment, promoting research and creating an environment of learning centering the focus of the program on the patient, our clients.

Need Assessment

Continuing Medical Education (CME) consists of educational activities which serve to maintain, develop or increase the knowledge, skills, and professional performance and relationships that a physician or dentist uses to provide services for patients, the public and the profession. CME ultimately manifests as better patient care and better patient outcomes.

A number of CME activities in primary health care are active within the regions through the country's CME department consisting of lectures, workshops, activities in the centers as well as regional and international conferences. A lot of effort has been done to encourage the health care providers to obtain CME through the official requirement of 50 CME credit per physician per year in order to keep his license valid. However there is a need for establishing structured CME programs.

Quality Health Care requires considerable knowledge and skills from the practitioners combined with best professional attitudes. Understanding the science of Medicine and its clinical effectiveness are moving forward rapidly along with the advancement of delivering the services. The knowledge and skills of the practitioners along with good professional attitudes requires updating through the process of Continuing Professional Development. It is now well accepted that a multi-disciplinary team approach is the best way forwards for providing quality health care

Need Assessment Survey

Need Assessment

In order to develop a comprehensive educational program for the health care team there is a need to carry extensive need assessment, the first step in planning an educational activity. In an attempt to assess the needs for professional development of the medical, dental practitioners and nursing staff a survey was conducted by means of a Questionnaire (APPENDIX 1) by the Department of Health for <<the country>>. The report takes into account a wide section of the various staff. The wide range of topics that were covered in the survey is also well elaborated in the report included the following

Part I-Demographic Data

465 questionnaires were included in the study out of 600 hundreds distributed. The exclusion criteria were that either the questionnaire was not returned or was incomplete.

The response rate was 77 percent.

The mean age of the study population was 42years (SD 9.70) with the minimum age being 23 years and maximum being 74years. 72% of the study populations were below 50 years. The mean of the number of years since graduation was 18 years (mean =8.46, SD=9.16). Whereas the mean of the number of years in practice was 17 years (Mean=17.18, SD=9.16). As for gender distribution 35% of the samples were males vs 65% who were females.

CME Topics for Physicians

The response to the various topics in medicine is presented in the Tables in the report.

The topics that received the highest rating were:

1. Doctor patient relationship
2. How to order diagnostic tests
3. Diabetes mellitus, thyroid disorders, Obesity, Hyperlipidemia, chest pain, hypertension, abdominal pains, asthma, dyspnoea, cerebrovascular accidents, epilepsy, arthritis, back pain, anxiety, UTI, fever of unknown origin, infection control, anaemias, vertigo & dizziness, red eye, medical problems & drugs in pregnancy, skin infections, ECG, evaluation of breasts lumps, sprains, Basic & advanced life support,
4. Pediatrics- growth & developmental disorders, nutrition, otitis media, immunization schedule

Format of CME

The response rate for the monthly activity was the highest with Hands – workshops.

Recommendations

In <<the country>> it is clear that there is a definite need for improvement. All current physicians within the primary health care setting will participate in the PCPEI and DCPEI project to upgrade their skills. In addition there is a need to improve and train people responsible for CME and CPD activities and faculty development is necessary to ensure effective team teaching approaches, interdisciplinary collaboration, integration of material across disciplines and courses, and focus on patient health outcomes. The integration of these concepts needs to be across the curriculum and in every course rather than adding additional curricular time. Faculty development for role modeling and mentoring techniques should be considered.

The response rate from the survey was relatively high, reflecting the interest of the primary health care team in CME and CPD. There are a number of Barriers to obtaining optimal CME including lack of time and type of activities which include: Lack of time, Motivation and fatigue, Distance, availability and cost.

It is clear that looking at tables in the report that the respondents rated the importance of topics according to their level of knowledge. It is an important concept that revealed that the less knowledge they have about a topic was reflected by less score on rate of importance. Therefore in planning CME programs this should be taken into account.

Assessment Strategies

In the implementation of any CME activities assessment strategies is critical to judge the success of such a program. For example communication skills learning must be both formative and summative. The knowledge, skills, and attitudes to be assessed must be made explicit to both learners and teachers alike. Potential evaluators include local experts, course faculty, simulated and real patients, peers, and the learners themselves. Formative assessment should occur throughout the communication skills curriculum and is intended to shape and improve future behaviors. Assessment of communication skills must include direct observation of performance. Evaluation of setting a therapeutic environment, gathering data and providing information and closure must be included. Evaluation of advanced skills, including use of interpreters, providing bad news and promoting behavior change should be done as well. Criteria should match the novice level of the end of second year student, who should be able to identify the critical issues for effective communication and perform the skills under straightforward circumstances.

It will be as well a good idea to create a department of Family Medicine under the umbrella of <<the country>> that helps coordinate the implementation of the different educational program, in addition to conducting a number of ongoing research and academic activities.

Conclusions

Quality CME can enhance the knowledge base and practice skills of the participating health care provider and is increasingly used as part of the credentialing and reappointment process. Continuing Medical Education is important not only as a requirement for practice, but as means for the profession to achieve one of its primary goals: QUALITY PATIENT CARE. To our patients CME requirements are a commitment made by the medical and dental practitioner to keep our knowledge and skills current.

CME really is about changing behavior through education—about doing something different, doing it better.” It is critical to look at CME and CPD in the mentality of 21st century. We attempted to clearly present: that the patient’s concerns, values and outcomes must be the center of care; that partnering with an activated patient is essential; that self-awareness is essential in being an effective physician; that improving the process of care and health outcomes is the physician’s responsibility and requires a systems approach.

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Introduction

In this new millennium most nations, both developed and developing are actively reviewing national health policies and strategies as well as health delivery systems. The over-riding imperative in all cases is to deliver quality health care in a cost efficient manner while addressing issues of access and equity.

The provision of health services in <<the country>> is divided into federal, local and private sectors. The Health Authority, and the local government agency is responsible for the provision of integrated, comprehensive, and quality of health services for its population.

Primary Health Care

Primary Health Care is essentially the first level of contact with the health care system. This could mean seeing the family doctor, health unit, pharmacy, or clinic. Or it could mean phoning an advice line staffed by health professionals, or even attending a self-care workshop to learn how to take a more active role in ones' own health. Primary health care involves treating short-term health problems, managing long-term health conditions such as diabetes, and even helping to learn how to prevent injury and illness. Prevention is the key objective of primary health care.

When properly organized and coordinated, primary health care has enormous potential to introduce improvements in the health system leading to better care, shorter waiting lists, improved access to health care services, and a more sustainable health care system.

The definition of Primary Care in terms of its functions:

- Integrated and accessible healthcare
- Services provided by primary care clinicians, generally considered to be physicians and nurse practitioners, but involving a broader array of individuals in a primary care team (nurses, social workers, clinical pharmacists, dieticians)
- Accountability of clinicians and systems for quality of care, patient satisfaction, efficient use of resources, and ethical behaviour
- The majority of personal healthcare needs, which include physical, mental, emotional, and social concerns
- A sustained partnership between patients and clinicians
- Primary care in the context of family and community

At the time a primary care program is first established and routinely thereafter, a system for measuring primary care needs has to be operational. Indicators of how well primary care is being delivered are critical to guide program development, implementation and refinement and must be regularly communicated to providers and managers.

Primary Health Care Program

The vision is "To Provide World Class Healthcare." One of the first steps to achieve this vision is to start comprehensive educational program to improve the skills of the primary health care team. The suggested programs include the following:

In order to achieve the above vision number of large-scale primary health care projects need to be conducted and planned under Primary Health Care Section. One important aspect of the program will be comprehensive educational program to improve the skills of the primary health care team. The suggested programs include the following:

- **Interdisciplinary Primary Care Training Program.** To assist medical centers in organizing their delivery of care around the of primary care principals.
- **Primary Care Physician Education Initiative (PCPEI).** The goals of the educational intervention are to better prepare current physicians to deliver care under this new paradigm.

By centering the focus of the program on the patient, rather than who provides the functions and services, we are best able to define our primary care program as the provision of integrated, accessible, cost-effective health care, wellness and preventative services through interdisciplinary teams. These teams are accountable for addressing the healthcare needs of their patients; developing a sustained partnership with their patients and practicing in the larger context of family and community.

Medical education is true learning where those who attend gain knowledge, apply it to their profession, and then continue to practice it. It is reinforced by various programs that they participate in, or reminder systems that are put in place, so that their behavior changes for the better, which ultimately manifests as better patient care and better patient outcomes. Continuing Medical Education consists of educational activities which serve to maintain, develop or increase the knowledge, skills, and professional performance and relationships that a physician or dentist uses to provide services for patients, the public and the profession.

A number of CME activities in primary health care are active within the regions through the CME department and include lectures, workshops, activities in the centers as well as regional and international conferences. A lot of effort has been done to encourage the health care providers to obtain CME through the official requirement of 50 CME credit per physician per year in order to keep his license valid. However there is a need for establishing structured CME programs.

Quality Health Care requires considerable knowledge and skills from the practitioners combined with best professional attitudes. Understanding the science of both Medicine & Dentistry and their clinical effectiveness are moving forward rapidly along with the advancement

of delivering the services. The knowledge and skills of the practitioners along with good professional attitudes requires updating through the process of Continuing Professional Development. It is now well accepted that a multi-disciplinary team approach is the best way forwards for providing quality health care

Physicians - Clinically Deficient

A physician is believed to be clinically deficient when the following factors are evidenced by the inability to exercise prudent medical judgment and the inability to practice with reasonable skills and safety without jeopardy to patient care:

- (a) unethical practices, and/or
- (b) incompetent (clinical ineptitude)

These factors may be substantially alleviated through education and/or behavioral modification.

Need Assessment

All health care disciplines share a common and primary commitment to serving the patient and working toward the ideal of health for all. While each discipline has its own focus, the scope of health care mandates that health professionals work collaboratively and with other related disciplines. Collaboration emanates from an understanding and appreciation of the roles and contributions that each discipline brings to the 'delivery of care experience'. Such professional socialization and ability to work together is the result of shared educational and practice experiences.

In order to develop a comprehensive educational program for physicians, dentists, nurses and the rest of the health care team there is a need to carry extensive need assessment. Needs assessment is the first step in planning an educational activity. Identification of needs provides the basis for writing activity objectives. Many sources may be used to establish needs. Physician needs may be determined through prior activity evaluations and/or surveys of individual needs. New advances in a clinical treatment may be identified as an area in which further education is needed. Needs assessment data may be drawn from surveys (on-site, email, Web site), focus groups, expert consensus, faculty perception, formal or informal requests from physicians, analyses of previous evaluations, epidemiological data, environmental scans including literature search/review, and quality assurance/improvement data (e.g., gaps between practice guidelines and practice performance, patient safety/institutional error data, and information from external entities such as licensing boards or certifying agencies, etc.).

It might seem self evident that the need to learn should underpin any educational system. Indeed, the literature suggests that, at least in relation to continuing professional development, learning is more likely to lead to change in practice when needs assessment has been conducted, the education is linked to practice, personal incentive drives the educational effort, and there is some reinforcement of the

learning. On the other hand, basing learning in a profession entirely on the assessment of needs is a dangerous and limiting tactic. So a balance must be struck.

The integration of needs assessment, education, and quality assurance of the service is stressed. Clinical audit, would identify practices in need of improvement and ensure that educational and organizational interventions were made to address these needs. Accordingly, audit was described as "essentially educational" and the educational process surrounding it described.

In adult learning principles we assume that learners needed to feel a necessity to learn and that identifying one's own learning needs was an essential part of self directed learning. In medicine a doctor's motivation to learn would therefore derive from needs identified during his or her experience of clinical practice.

The definition of Need

As in most areas of education, for many years there has been intense debate about the definition, purpose, validity, and methods of learning needs assessment. It might be to help curriculum planning, diagnose individual problems, assess student learning, demonstrate accountability, improve practice and safety, or offer individual feedback and educational intervention. Published classifications include felt needs (what people say they need), expressed needs (expressed in action) normative needs (defined by experts), and comparative needs (group comparison). Other distinctions include individual versus organizational or group needs, clinical versus administrative needs, and subjective versus objectively measured needs. The defined purpose of the needs assessment should determine the methods used and the use made of the findings.

Exclusive reliance on formal needs assessment in educational planning could render education an instrumental and narrow process rather than a creative, professional one.

Methods of needs assessment

Although the literature generally reports only on the more formal methods of needs assessment, doctors use a wide range of informal ways of identifying learning needs as part of their ordinary practice. These should not be undervalued simply because they do not resemble research. Questionnaires and structured interviews seem to be the most commonly reported methods of needs assessment, but such methods are also used for evaluation, assessment, management, education, and now appraisal and revalidation.

Learning for needs

The main purpose of needs assessment must be to help educational planning, but this must not lead to too narrow a vision of learning. Learning in a profession is unlike any other kind of learning. Doctors live in a rich learning environment, constantly involved in and surrounded by professional interaction and conversation, educational events, information, and feedback. The search for the one best or "right" way of learning is a hopeless task, especially

if this is combined with attempting to “measure” observable learning. Research papers show, at best, the complexity of the process.

Multiple interventions targeted at specific behavior result in positive change in that behavior. Exactly what those interventions are is less important than their multiplicity and targeted nature. On the other hand, different doctors use different learning methods to meet their individual needs. For example, in a study of 366 primary care doctors who identified recent clinical problems for which they needed more knowledge or skill to solve, 55 different learning methods were selected. The type of problem turned out to be the major determinant of the learning method chosen, so there may not be one educational solution to the identified needs.

Much of a doctors’ learning is integrated with their practice and arises from it. The style of integrated practice and learning (“situated learning”) develops during the successive stages of medical education. The components of apprenticeship learning in postgraduate training are made up of many activities that may be regarded as part of practice (13). Senior doctors might also recognize much of their learning in some of these elements and could certainly add more—such as conversations with colleagues.

Thus, educational planning on the basis of identified needs faces real challenges in making learning appropriate to and integrated with professional style and practice. The first step is to recognize the need of learning that are a part of daily professional life in medicine and to formalize, highlight, and use these as the basis of future recorded needs assessment and subsequent planning and action, as well as integrating them with more formal methods of needs assessment to form a routine part of training, learning, and improving practice.

Methodology

Quality health care for patients is supported by maintenance and enhancement of clinical, management and personal skills. The knowledge and skills of practitioners require refreshment, and good professional attitudes need to be fostered through the process of continuing professional development. In an attempt to assess the needs for professional development of the medical, dental practitioners and nursing staff a survey was conducted by means of a Questionnaire (APPENDIX 1) by the Department of Primary Health Care. This report takes into account a wide section of the various medical, dental and nursing staff. The purposes of the review, therefore were to:

- Determine the area of professional development
- Help the primary care physician, meet the challenge of changes in the structure and delivery of patient care.
- Encourage more reflection on practice & learning needs, including more forward planning; and
- Make the educational methods used in practice more effective

The topics that were covered in the survey included the following

CME TOPICS FOR PHYSICIANS

. Family Medicine Concepts
 . Patient Management Skills
 . Critical Appraisal
 . Internal Medicine
 - Endocrinology & Metabolic
 - Cardiovascular
 - Gastroenterology
 - Pulmonary
 - Nephrology
 - Neurology
 - Rheumatology
 - Psychiatry
 - Genito Urinary
 - Infections Diseases
 - Hematology
 . Pediatrics
 . Otorhinolaryngology
 . Ophthalmology
 . Maternal Health
 . Dermatology
 . Gerontology
 . Health Promotion and Disease Prevention
 . Diagnostic Procedures
 . Therapeutic Procedures
 . Special Topics
 . Surgery
 . Emergency Care

Format of CME

Timing of the CME
 Type of Activities
 Self Study

Results

The tables following represent a summary of the data collected.

Part I-Demographic data

465 questionnaires were included in the study out of 600 hundreds distributed. The exclusion criteria were that either the questionnaire was not returned or was incomplete. The response rate was 77 percent.

The mean age of the study population was 42 years (SD 9.70) with the minimum age being 23 years and maximum being 74 years. However 72% of the sample were below 50 years. The mean of the number of years since graduation was 18 years (mean =8.46, SD=9.16). Whereas the mean of the number of years in practice was 17 years (Mean=17.18, SD=9.16). As for gender distribution 35% of the sample were males vs 65% who were females. Looking at years since graduation 78 % of sample had graduated for more than ten years, 42% of sample more than twenty years ago while 12% of sample had graduated since more than 30 years. Looking specifically at different professions of the study population and specialty only 3.4 percent were family physicians

Table 1: Current Specialty among Physicians

Specialty	Frequency	Percent
Family	12	3.4
GP	48	13.6
PED	38	10.8
OBS	3	0.8
Total	101	

Part II: CME Topics for Physicians

The response to the various topics in medicine is presented in Tables 4 to Tables 29.

The rating for each topic were:

- (a) In order of importance for having CME on the topic (1 = least important to 5 = most important)
 (b) Current level of knowledge of the topic. (1 = basic to 5 = highly skilled)
 (c) Recommend CME activity on level of priority. (1=least to 5 = highest priority)

Table 2: Family Medicine Concepts

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Development of Family Medicine	3.31	1.35	2.82	1.05	3.16	1.42
2	Family structure and dynamics	3.17	1.32	2.80	1.08	3.13	1.29
3	Role of the Family in illness management	4.03	1.118	3.46	.95	3.86	1.16
4	Assessment of Family Function	3.47	1.18	2.99	1.09	3.35	1.24
5	The Family and the social environment	3.72	1.16	3.27	1.02	3.52	1.22

Table 3: Patient Management Skills

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Interviewing skills	4.18	1.05	3.88	.90	3.83	1.20
2	Doctor – patient relationship	4.42	.95	4.12	.78	3.85	1.25
3	Patient compliance	4.29	.94	3.71	.97	3.75	1.20
4	Genetic Counseling	4.12	1.0	3.12	1.0	3.95	1.13
5	Nutritional Counseling	4.27	.91	3.66	.85	4.04	1.10
6	Sexual Counseling	3.87	1.04	3.31	.97	3.69	1.20
7	Premarital – Marital Counseling	4.20	.95	3.31	.95	3.72	1.18
8	The critically ill and dying patient	3.94	1.23	3.08	1.03	3.58	1.39

Table 4: Critical Appraisal

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	How to read papers	3.87	1.27	3.63	.96	3.60	1.30
2	How to order diagnostics tests	4.27	1.091	3.98	.76	3.92	1.18
3	How to write papers	3.83	1.256	3.33	1.07	3.69	1.26
4	How to design research	3.75	1.25	2.83	1.13	3.64	1.35
5	Computer skills	4.16	1.06	3.05	1.07	3.91	1.20
6	Internet skills	4.22	1.05	3.11	1.17	3.91	1.26
7	Statistics	3.60	1.20	2.59	1.0	3.53	1.35
8	Quality Indicators	3.89	1.02	2.64	1.0	3.63	1.27

Internal Medicine

Table 5: Endocrinology & Metabolic

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Diabetes Mellitus	4.72	.63	4.14	.60	4.38	.96
2	Goiter	4.08	.95	3.77	.736	3.85	1.04
3	Thyroid disorders	4.45	4.64	3.69	.77	3.83	1.07
4	Obesity	4.53	.82	4.01	.62	4.44	.86
5	Osteoporosis	4.14	1.0	3.57	.82	4.08	1.04
6	Hyperlipidemia	4.46	.89	3.90	.89	4.12	1.15

Table 6: Cardiovascular

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Chest pain – CAD	4.64	.76	3.94	.79	4.28	1.07
2	Hypertension	4.68	.71	4.17	.64	4.32	1.02
3	Arrhythmias	4.38	.86	3.59	.80	4.19	1.00
4	Congestive heart failure	4.25	.89	3.75	.73	4.01	1.04
5	Heart murmurs	4.30	.91	3.78	.79	4.12	1.06
6	Rheumatic fever	4.17	.99	4.03	.76	3.86	1.10
7	Congenital heart disease	4.17	.93	3.59	.82	3.99	.97
8	Peripheral vascular disease	3.94	.96	3.29	.88	3.84	1.09
9	Cardiac Rehabilitation	3.82	1.09	2.90	.88	3.73	1.11

Table 7: Gastroenterology

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Abdominal pain	4.55	.75	4.08	.61	4.23	1.01
2	Jaundice	4.24	.87	3.90	.72	4.04	1.02
3	Diarrhea	4.19	.93	4.12	.61	3.91	1.09
4	Peptic ulcer and hyperacidity	4.18	.92	3.94	.70	4.00	1.0
5	Intestinal parasites	3.83	1.07	3.92	.72	3.53	1.20
6	Irritable bowel disease	3.99	.97	3.90	.76	3.77	1.13

Table 8: Pulmonary

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	C. O. P. D	4.29	.87	3.86	.66	4.00	1.07
2	Acute Bronchitis	4.22	.94	4.19	.59	3.75	1.17
3	Asthma	4.71	.65	4.33	.57	4.29	1.05
4	Pneumonia	4.39	.75	4.06	.62	4.05	1.07
5	Hemoptysis	3.94	1.05	3.60	.79	3.75	1.12
6	Dyspnea	4.38	.84	3.87	.76	4.08	1.04
7	Tuberculosis	4.03	.98	3.81	.80	3.79	1.16

Table 9- Nephrology

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Renal Failure	4.05	1.06	3.41	.77	4.06	.98
2	Hematuria and Proteinuria	4.45	.87	3.64	.78	4.35	.88

Table 10 - Neurology

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Cerebrovascular accidents.	4.20	1.05	3.34	.81	4.02	1.11
2	Rehabilitation following stroke	3.72	1.15	2.77	.93	3.54	1.20
3	Convulsions/Epilepsy	4.34	.90	3.56	.78	4.29	.87
4	CNS infections.	4.16	.97	3.50	.80	4.00	1.02
5	Movement disorders	3.78	1.03	3.03	.78	3.62	1.10
6	Headache	4.62	.78	3.86	.77	4.36	.92

Table 11: Rheumatology

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Arthritis – approach	4.33	.85	3.56	.81	4.12	.97
2	Rheumatoid arthritis	4.11	.91	3.56	.72	3.85	.97
3	Osteoarthritis	4.16	.95	3.61	.80	3.82	1.08
4	Back pain	4.34	.89	3.69	.67	4.02	1.07
5	Knee pain	4.13	.97	3.40	.73	3.89	1.04
6	Ankle pain	3.92	.95	3.35	.77	3.63	1.08
7	Shoulder pain	4.07	1.86	3.30	.76	3.66	1.14

Table 12 - Psychiatry

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Sleep disorders	3.99	1.02	2.95	.84	3.81	1.10
2	Anxiety	4.22	.93	3.32	.94	4.00	1.06
3	Affective disorders	3.80	1.06	2.89	1.0	3.70	1.17
4	Personality disorders	3.83	1.06	2.79	.95	3.67	1.09
5	Drug abuse	3.87	1.14	2.91	.89	3.83	1.15
6	Sexual dysfunction	3.76	1.12	2.90	1.0	3.64	1.20
7	Somatization disorders	3.81	1.13	2.82	1.15	3.67	1.21

Table 13 - Genitourinary

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Nephrolithiasis.	4.04	.94	3.47	.87	3.90	1.08
2	Infertility.	3.69	1.19	3.16	.86	3.61	1.18
3	Urinary tract infections	4.47	.84	4.03	.68	4.13	1.06
4	Enuresis.	4.26	1.0	3.72	.90	3.94	1.12
5	Incontinence.	3.81	1.16	3.15	.95	3.59	1.28
6	Prostate problems	3.53	1.24	2.82	1.0	3.35	1.31

Table 14: Infectious Diseases

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Fever without a focus	4.46	.84	3.72	.71	4.31	.91
2	Sexually transmitted diseases	4.18	.91	3.65	.75	3.99	1.04
3	Cellulitis	3.82	1.05	3.75	.80	3.65	1.12
4	Infection control	4.28	.92	3.60	.86	4.11	.98
5	Use and abuse of antibiotics	4.60	.79	3.93	.78	4.33	1.02

Table 15: Hematology

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Anemia	4.56	.83	4.12	.65	4.25	1.00
2	Lymphadenopathy	4.29	.89	3.76	.75	4.10	1.01
3	Bleeding disorders	4.15	.92	3.50	.77	4.02	1.0
4	Hemoglobinopathies	4.16	.95	3.67	.84	4.03	1.06

Table 16: Pediatrics

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Normal growth and development	4.42	.88	3.90	.81	4.10	1.13
2	Nutrition	4.42	.83	3.84	.87	4.04	1.09
3	Immunizations	4.39	1.04	4.16	.80	3.97	1.26
4	Development disorders	4.42	.85	3.57	.88	4.10	1.04
5	Learning disabilities	4.24	.87	3.20	.93	4.12	.93
6	Congenital orthopedic problems	4.02	1.11	3.10	.93	3.85	1.15
7	Diarrheas	4.40	.84	4.08	.70	3.99	1.19
8	Puberty and adolescence	4.20	.91	3.60	.88	3.93	1.09
9	Failure to thrive	4.27	.96	3.52	.97	3.96	1.13
10	Mental retardation – evaluation	4.13	.98	3.15	1.04	3.89	1.12

Table 17: Otorhinolaryngology

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Otitis Media	4.36	.94	4.0	.71	3.9	1.19
2	Otitis Externa	4.00	1.02	3.95	.76	3.51	1.27
3	Pharyngitis /tonsillitis	4.21	1.05	4.31	.67	3.50	1.36
4	Hearing loss	4.06	1.01	3.17	.87	3.79	1.11
5	Vertigo and dizziness	4.24	.91	3.43	.76	4.03	1.08
6	Rhinitis – Sinusitis	4.11	1.0	3.90	.75	3.71	1.21
7	Hoarseness	3.92	1.10	3.43	.92	3.72	1.22

Table 18: Ophthalmology

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Redeye	4.49	.84	3.51	.95	4.17	1.10
2	Glaucoma	3.91	1.17	2.84	.96	3.70	1.24

Table 19: Maternal Health

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Medical problems during pregnancy	4.30	1.02	3.55	.95	4.02	1.17
2	Antenatal care	4.15	1.15	3.63	1.12	3.66	1.31
3	Drugs in pregnancy	4.50	.85	3.56	.93	4.20	1.10
4	Abnormal vaginal bleeding	4.07	1.06	3.33	1.01	3.77	1.17
5	Family planning & contraception	3.87	1.07	3.43	1.10	3.48	1.24
6	Female genital tract infections	4.04	1.03	3.45	1.11	3.67	1.23
7	Contraception	3.78	1.19	3.38	1.08	3.42	1.27
8	Amenorrhea	3.85	1.16	3.23	1.02	3.60	1.29

Table 20: Dermatology

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Skin infections	4.47	.84	3.77	.77	4.23	1.04
2	Evaluation of a rash	4.61	.76	3.65	.82	4.41	.85
3	Dermatitis	4.37	.87	3.58	.89	4.10	1.0
4	Acne	4.16	1.00	3.69	.90	3.84	1.15
5	Psoriasis	3.92	1.05	3.34	1.03	3.72	1.15
6	Skin exam for cancer	4.14	.96	2.85	1.08	3.93	1.09
7	Drug eruptions	4.35	.93	3.50	.977	4.12	1.09
8	Hair problem	4.17	.94	3.07	1.02	4.02	1.11

Table 21: Gerontology

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Physiologic changes of aging	3.91	1.13	3.14	.93	3.70	1.19
2	Preventive care	4.12	1.06	3.16	.93	3.82	1.158
3	Drug therapy in the elderly	4.11	1.04	2.99	.92	3.95	1.14
4	Frailty	3.58	1.12	2.66	.97	3.46	1.21
5	Dementia and pseudodementia	3.64	1.15	2.77	.96	3.57	1.23
6	Special considerations in comprehensive care	3.76	1.20	2.72	.95	3.63	1.17

Table 22: Health Promotion and Disease Prevention

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Immunization schedule, adult	3.88	1.13	3.31	.93	3.60	1.20
2	Immunization schedule, child*	4.47	1.02	4.25	.80	3.89	1.30
3	Screening schedule, infant*	4.23	1.10	3.61	1.03	3.84	1.22
4	Screening schedule, child*	4.24	1.01	3.54	1.02	3.91	1.18
5	Screening schedule, adolescent	4.12	1.06	3.36	.99	3.77	1.147
6	Screening schedule, young adult	3.94	1.10	3.20	.93	3.56	1.19
7	Screening schedule, older adult	3.93	1.10	3.20	.98	3.63	1.17
8	History and physical, infant*	4.27	1.04	3.66	.95	3.69	1.26
9	History and physical, child*	4.24	1.03	3.76	.93	3.68	1.21
10	History and physical, adolescent	4.13	1.05	3.75	.88	3.57	1.19
11	History and physical, young adult	4.02	1.15	3.62	.96	3.46	1.24
12	History and physical, older adult	3.96	1.18	3.49	1.05	3.44	1.21

Table 23: Diagnostic Procedures

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Pap smear	3.97	1.25	3.05	1.24	3.62	1.28
2	Electrocardiogram	4.57	.80	3.51	.95	4.40	.94
3	Ambulatory blood pressure	4.19	1.06	3.89	.89	3.68	1.34
4	Ultrasound	4.22	.96	2.39	1.09	3.95	1.17

Table 24: Therapeutic Procedures

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Intramuscular injection	3.53	1.45	4.30	.92	2.58	1.38
2	Subcutaneous injection	3.56	1.45	4.14	1.02	2.60	1.41

Table 25: Special Topics

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Home care	3.58	1.22	2.88	1.08	3.28	1.28
2	Fatigue	3.88	1.13	3.13	.97	3.64	1.28
3	Andropause and men's health	3.36	1.24	2.48	.98	3.18	1.31

Table 26: Surgery

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Evaluation of Breast lumps	4.25	1.14	3.53	1.11	3.82	1.27
2	Sprains	4.052	1.02	3.55	.92	3.67	1.20
3	Animal bites	3.97	1.05	3.29	.90	3.62	1.21
4	Office surgical procedures	4.03	1.13	2.98	.98	3.77	1.27

Table 27: Emergency Care

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Basic Life Support	4.64	.79	3.64	1.00	4.48	.93
2	Advanced Life Support	4.57	.85	3.09	1.0	4.34	1.01

Format of CME

Attempt was made to establish the most suitable timings and frequency of the CME activities. The ratings adopted were :

1 being least appropriate, 5 most appropriate. The results are presented below and the need for a monthly activity was rated highest 3.95 with Hands- on Training

Table 28: Timing of CME

Timing of the CME		Rating	
		Mean	SD
1	Weekly at night	2.42	1.52
2	Half day in the weekend on weekly basis	2.48	1.49
3	Bi-weekly	2.61	1.55
4	Monthly	3.95	1.38
5	Once yearly (Conference)	2.75	1.72
6	Others	2.03	1.60

Table 29: Type of Activities

Type of activities		Rating	
		Mean	SD
1	Classic lectures	3.41	1.49
2	Workshops	3.91	1.38
3	Hand on Training	3.96	1.29
4	Conferences	3.55	1.32
5	Journal Club	2.82	1.48
6	Others	1.85	1.37

Table 30: Self Study Methods

Self Study		Rating	
		Mean	SD
1	Videotapes	3.39	1.45
2	Monographs	2.52	1.26
3	Journals	3.64	1.38
4	Internet	3.58	1.43
5	CD	3.55	1.48
6	Others	2.03	1.49

Recommendation

There is little disagreement that medical education is a continuum, which begins prior to the professional school, continues through the four or five years of medical school, into graduate education, and proceeds throughout the physician's/dentists' lifespan as life-long learning. There is increasing consensus that the Accreditation Council for Graduate Medical Education's (ACGME) Outcome Project, with its defined competency structure, is driving significant changes in graduate medical education. Given the continuum of medical education and the remarkable congruency of all the broad-based calls for medical education reform with the ACGME competency structure. In the area of Primary health care it is clear that there is a definite need for improvement. All current physicians within the primary health care setting will participate in the project to upgrade their skills.

Overall Evaluation and Need for Improvement

As curricula and methodologies for the training of physicians approach the 100-year anniversary of the Flexner report (2010), it is important to recognize that medical education

has been a constantly evolving process to address the training needs of physicians to serve society and its people. Understanding curricular reform is one of understanding its history

Many reports prior to 1990 (e.g. Rappleye, GPEP, Macy Foundation) comment on the process, as well as the content and structure of medical education. Several have noted the glacial progress of reform and the reasons behind this pace. More recently in the 1990s and the new century, the breadth of involved stakeholders in this process has widened, as many entities within and beyond medical schools have identified significant needs in the process of education of physicians for the 21st century. These defined challenges reflect not only the explosion of medical knowledge and technology and the changing demographics of the population, but also the broader societal and health care system changes that are significantly affecting the contextual environment in which medicine is practiced.

There is a need to improve and train people responsible for CME and CPD activities. Traditional educational practice in medical schools emphasize the organ systems and discipline-based approaches, but in Primary Health Care, faculty development is necessary to ensure effective

effective team teaching approaches, interdisciplinary collaboration, integration of material across disciplines and courses, and focus on patient health outcomes. The integration of these concepts needs to be across the curriculum and in every course rather than adding additional curricular time. Faculty development in adult education techniques may be necessary. Faculty development for role modeling and mentoring techniques should be considered.

The response rate from the survey was relatively high, reflecting the interest of the primary health care team in CME and CPD. There are a number of Barriers to

obtaining optimal CME including lack of time and type of activities.

Lack of time

Lack of time was seen as the biggest barrier to obtaining optimal CME. All CME was carried out in personal time. GPs were perceived as working hard and long hours. Personal time is precious. 'It means night-time or weekends. CME activity has to fit in with on call and family. 'I am a working mother, time is the essence.' In our survey most health care members preferred CME activity on a monthly basis which reflects that time is precious for the busy primary health care team. (Table 31)

Table 31: Timing of CME

Timing of the CME		Rating	
		Mean	SD
1	Weekly at night	2.42	1.52
2	Half day in the weekend on weekly basis	2.48	1.49
3	Bi-weekly	2.61	1.55
4	Monthly	3.95	1.38
5	Once yearly (Conference)	2.75	1.72
6	Others	2.03	1.60

Motivation and fatigue were other barriers to CME. Distance, availability and cost were seldom raised as issues for urban GPs. However, distance precluded attendance for many rural practitioners, as did difficulty obtaining locums, cover for single days, availability of CME and financial considerations. The perceived challenge was to increase the accessibility of personally-interactive CME.

Type of Activities

A number of studies have shown preference of GPs for personal interaction. Some studies have shown a preference amongst physicians for lectures but this may include interaction. Others have found journals the most popular source of information but interactive formats were still highly rated. Preference depends on the type and quality of personal experience of this type of format. Pendleton differentiated the academic and professional approach to CME. He postulated that the academic prefers the written medium and the clinician prefers face-to-face. In our survey the respondents preferred the most hand on training, workshop, and conferences.

Review of randomized controlled trials on CME interventions revealed that personal interaction to be central to effectiveness in change in practice. Several studies have reported that physicians seek confirmation and validation of current and new medical practices through their peers. Other studies have confirmed the importance of interaction in changing professional behavior. However, it has not been established which elements of the interactive process enable learning. Interaction allows for clarification, personalisation of information, exploration, feedback, and reflection. It can also address other needs of doctors that may not be recognized or quantified – the

need for support, recognition, motivation and fulfillment, and the 'need' to belong to a professional community.

As for self study methods the respondent preferred mostly journals followed by the internet followed by CD-Table 33

Table 32 : Type of Activities

Type of activities		Rating	
		Mean	SD
1	Classic lectures	3.41	1.49
2	Workshops	3.91	1.38
3	Hand on Training	3.96	1.29
4	Conferences	3.55	1.32
5	Journal Club	2.82	1.48
6	Others	1.85	1.37

Table 33: Self Study Methods

Self Study		Rating	
		Mean	SD
1	Videotapes	3.39	1.45
2	Monographs	2.52	1.26
3	Journals	3.64	1.38
4	Internet	3.58	1.43
5	CD	3.55	1.48
6	Others	2.03	1.49

Interactive formats are not inherently beneficial nor always produce change. Some formats may be more conducive to specific changes in behavior and some to support. Group dynamics, facilitation, personal agendas, and internal and external influences contribute to the complexity of the format. In general, the focus was on choice of CME as opposed to other elements of the learning cycle. This approach has been documented previously and reflects the traditional approach to learning. It is well established that CME should follow the principles of androgogy – adult, self-directed learning. The term ‘androgogy’ has been coined to describe the learning culture appropriate to adult education. Whereas the term ‘pedagogy’ describes the teacher-centred approach to the education of children, androgogy ‘recognises education to be a dynamic lifelong process’ that ‘is learner-orientated’. This is grounded in experiential learning – identifying and addressing needs and applying learning with continuing reflection. Although much has been written about the theory and benefits of this model, GPs do not appear to adopt it. This is not unique to GPs – a study of physicians’ CME found that ‘unstructured ad hoc reading and postgraduate activities predominate over methods based on specific, individual needs or on current patient problems’. Some GPs in our study did recognise that tailoring their CME to their identified, specific needs was better than the opportunistic approach, but few attempted this in any structured way. Discussions with colleagues one-to-one and in small groups may serve as an informal process of reflection, even though the benefits may not be easily quantifiable. The process of reflecting on issues, debating problem areas and formalising opinions may be helpful to the clinician, even where there has not been a specific updating of knowledge.

Lack of time may be one reason GPs have not embraced the adult learning model. Clinical experience is abundant in general practice, yet many may be too busy to learn from it. Lack of time has been well documented as a significant barrier to obtaining optimal CME, a finding borne out strongly in this study. Perceived high workload and stress lead not only to lack of time, but also de-motivation. Motivation is a complex issue, however one role of CME is to sustain motivation.

GPs may not be very good at identifying their needs unassisted. The current system of CME credits rewards application of the traditional model, one of updating knowledge and skills, with no focus on utilisation of the adult learning cycle. Without evaluation of CME undertaken, GPs are likely to be unaware of any failings of the current system. Few tools are available to facilitate this process of reflection and evaluation. Personal development plans and mentorship have been suggested but need to be evaluated. Practical, evidence-based, user-friendly ways of addressing this issue are awaited.

Most doctors want to improve the quality of their action as painlessly as possible. They wish to maximise the return on their investment of time and this becomes a matter of cost-benefit analysis based on the likely yield of the activity. Personally interactive formats are costly on time, especially when travelling is taken into consideration, yet

most GPs prefer these formats. Clearly GPs consider time spent in this way to be beneficial. They may find that the scheduled nature of these events ensures their participation, whereas spending the equivalent time on their own reading or accessing the Internet may require more personal discipline.

CME and CPD for Physicians

Traditionally, GPs have obtained their CME through didactic lectures and written material. Although these mechanisms may increase their knowledge, there is no evidence that they change performance. Recently, there has been a move, in the literature at least, towards application of the Kolb adult learning cycle: identifying learning needs, addressing those needs and evaluating the outcome, with reflection inherent in the process. CME is undergoing change in many countries, in part because of this move. Obtaining views regarding CME from GPs may facilitate this change. Proposed changes are most likely to succeed when compatible with existing beliefs.

Most GPs do not direct their CME according to the adult learning model. The challenge for CME providers is to provide avenues to facilitate needs identification and self-directed learning.

It is clear that looking at table 4 and 7 showed that the general practitioners rated the importance of topics according to their level of knowledge. It is an important concept that revealed that the less knowledge they have about a topic was reflected by less score on rate of importance. Therefore in planning CME program this should be taken into account

We divided the level of importance of CME into three categories between 4.4 to 4.5, between 4.5 to 4.6 and above 4.6

CME that was rated between 4.4 to 4.5

1. Doctor Patient relationship
2. Hematuria and Proteinuria
3. Urinary Tract Infection
4. Fever without a focus
5. Normal Growth and development
6. Nutrition
7. Development Disorders
8. Diarrheas
9. Red Eyes
10. Skin Infection
11. Immunization schedule

CME that was rated between 4.5 to 4.6

1. Obesity
2. Abdominal Pain
3. Headache
4. Use and Abuse of Antibiotics
5. Anemia
6. Drugs in Pregnancy
7. Electrocardiogram
8. Advanced Life Support

Table 34: Family Medicine Concepts

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Development of Family Medicine	3.31	1.35	2.82	1.05	3.16	1.42
2	Family structure and dynamics	3.17	1.32	2.80	1.08	3.13	1.29
3	Role of the Family in illness management	4.03	1.118	3.46	.95	3.86	1.16
4	Assessment of Family Function	3.47	1.18	2.99	1.09	3.35	1.24
5	The Family and the social environment	3.72	1.16	3.27	1.02	3.52	1.22

Table 35: Endocrinology & Metabolic

Topics		Rating of Importance		Knowledge Level		Recommended CME	
		Mean	SD	Mean	SD	Mean	SD
1	Diabetes Mellitus	4.72	.63	4.14	.60	4.38	.96
2	Goiter	4.08	.95	3.77	.736	3.85	1.04
3	Thyroid disorders	4.45	4.64	3.69	.77	3.83	1.07
4	Obesity	4.53	.82	4.01	.62	4.44	.86
5	Osteoporosis	4.14	1.0	3.57	.82	4.08	1.04
6	Hyperlipidemia	4.46	.89	3.90	.89	4.12	1.15

CME that was rated above 4.6

1. Diabetes Mellitus
2. Chest Pain
3. Hypertension
4. Asthma
5. Evaluation of Rash
6. Basic Life Support

competency structure. The CME Curriculum will focus on clinical competencies necessary. The competencies were identified through the consensus of experienced educators from the primary care disciplines and need assessment. The CCP has two components: an overall compendium of suggested competencies and a delineation of 6 priority areas

The PCPEI Matrix incorporates:

- Six ACGME competencies
- Five Family Medicine Principles - Values that define the profession, which should guide our educational activities.
 - o Context of Care
 - o Continuity of Care
 - o Comprehensive Care
 - o Coordination of Care
 - o Biopsychosocial Approach
- Three Family Medicine Clerkship Themes - Contexts in which FM delivers care.
 - o Prevention and Wellness
 - o Acute and Chronic Illness
 - o Community and Population Medicine
- Family Medicine Topic Areas- derived from the need assessment
- Clinical protocols developed for primary health care
- Special topics of interest
 - End-of-life and palliative care
 - Geriatrics
 - Genetics

Curriculum Guideline for Primary Care Physician Education Initiative

CME cannot be entirely focused on GP preference. However, it is clear from this study that interactive formats were generally preferred in accordance with evidence of what changes GP behaviour. More research is needed into which elements of interactive formats facilitate learning. Most GPs are not directing their CME according to the adult learning model. This situation needs to be addressed, bearing in mind the barriers of lack of time and motivation, in order to change the status quo.

This curriculum guideline drawn from existing family Medicine Curriculum, the need assessment, and clinical protocol being developed by the primary health care clinical guideline committee at the authority. This will help in preparing our current primary care physicians to understand and practice with family medicine spirit.

The CME program will include a matrix structure, including family medicine principles, family medicine themes, and the

- Informatics
- Substance abuse
- Mental health
- Bioterrorism
- Oral Health

ACGME Competencies

Patient Care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health

Medical Knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care

Practice-Based Learning and Improvement that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care

Interpersonal and Communication Skills that result in effective information exchange and teaming with patients, their families, and other health professionals

Professionalism, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population

Systems-Based Practice, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of health care and the ability to effectively call on system resources to provide care that is of optimal value

CME topics rated above 4.4 by respondents

Diabetes Mellitus
Chest Pain
Hypertension
Asthma
Evaluation of Rash
Basic Life Support
Doctor Patient relationship
Hematuria and Proteinuria
Urinary Tract Infection
Fever without a focus
Normal Growth and development
Nutrition
Development Disorders
Diarrheas
Red Eyes
Skin Infection
Immunization schedule
Obesity
Abdominal Pain
Headache
Use and Abuse of Antibiotics
Anemia

Drugs in Pregnancy
Electrocardiogram
Advanced Life Support

The Alphabetical list of clinical guidelines

Acne, Management of
Acute Coronary Syndrome and Chest Pain; Diagnosis and Treatment of
Ankle Sprain
Anticoagulation Therapy Supplement
Asthma, Diagnosis and Outpatient Management of
Asthma, ER and Inpatient Management of
Atrial Fibrillation
Attention Deficit Hyperactivity Disorder in Primary Care for School Age Children and Adolescents, Diagnosis and Management of
Breast Cancer Treatment
Breast Disease, Diagnosis of
Cardiac Stress Test Supplement
Cervical Cancer Screening
Chronic Obstructive Pulmonary Disease
Colorectal Cancer Screening
Coronary Artery Disease, Stable
Degenerative Joint Disease of the Knee, Adult; Diagnosis and Treatment of
Depression, Major, in Adults for Mental Health Care Providers
Depression, Major, in Adults in Primary Care
Diabetes Mellitus, Type 2; Management of
Domestic Violence
Dyspepsia & GERD
Headache, Diagnosis and Treatment of
Heart Failure in Adults
Hypertension Diagnosis and Treatment
Immunizations
Infertility, Diagnosis and Management of
Labor, Management of
Lipid Management in Adults
Lipid Screening in Adults
Lipid Screening in Children and Adolescents
Low Back Pain, Adult
Menopause and Hormone Therapy (HT): Collaborative Decision-Making and Management
Obesity; Prevention and Management of (Mature Adolescents and Adults)
Osteoporosis, Diagnosis and Treatment of
Otitis Media in Children, Diagnosis and Treatment of
Pain, Acute, Assessment and Management of
Pain, Chronic, Assessment and Management of
Pap Smear, Initial Abnormal; Management of
Pharyngitis, Acute
Pneumonia, Community-Acquired
Prenatal Care, Routine Stroke, Ischemic, Diagnosis and Initial Treatment of
Tobacco Use Prevention and Cessation for Adults and Mature Adolescents
Tobacco Use Prevention and Cessation for Infants, Children and Adolescents
Urinary Tract Infection in Women, Uncomplicated
Venous Thromboembolism (formerly DVT)
Venous Thromboembolism Prophylaxis

Stroke, Ischemic, Diagnosis and Initial Treatment of
 Tobacco Use Prevention and Cessation for Adults and Mature Adolescents
 Tobacco Use Prevention and Cessation for Infants, Children and Adolescents
 Urinary Tract Infection in Women, Uncomplicated
 Venous Thromboembolism (formerly DVT)
 Venous Thromboembolism Prophylaxis
 Viral Upper Respiratory Infection (VURI) in Adults and Children

Clinical Protocols for Primary Health Care

	Clinical Protocols
1	Asthma, Diagnosis and Outpatient Management of
2	Diabetes Mellitus, Type 2; Management of
3	Hypertension Diagnosis and Treatment
4	Lipid Screening & Management in Adults & Children
5	Low Back Pain, Adult
6	Otitis Media in Children, Diagnosis and Treatment of
7	Depression, Major, in Adults in Primary Care
8	Breast Disease, Diagnosis of
9	Acne, Management of
10	Headache, Diagnosis and Treatment of
11	Prenatal Care, Routine
12	Obesity; Prevention and Management of (Mature Adolescents and Adults)

Building on the above resources mainly the need assessment, the Clinical protocols developed for primary health care, the six ACGME competencies, the five Family Medicine Principles, special topics of interest, and the Three Family Medicine Clerkship Themes, We recommend a CME, CPD program that cover the Topics below over a period of two years.

Protocols to be developed

Asthma, Diagnosis and Outpatient Management of
 Diabetes Mellitus, Type 2; Management of
 Hypertension Diagnosis and Treatment
 Screening and Management of Dyslipidemia
 Low Back Pain, Adult
 Otitis Media in Children, Diagnosis and Treatment of
 Depression, Major, in Adults in Primary Care
 Breast Disease, Diagnosis of
 Acne, Management of
 Headache, Diagnosis and Treatment of
 Prenatal Care, Routine
 Obesity; Prevention and Management of (Mature Adolescents and Adults)
 Ankle Sprain
 Degenerative Joint Disease of the Knee,
 Adult; Diagnosis and Treatment of
 Sleep Apnea, Diagnosis and Treatment of Obstructive
 Attention Deficit Hyperactivity Disorder in Primary Care
 for School Age Children and Adolescents, Diagnosis and Management of
 Immunizations
 Stroke, Ischemic, Diagnosis and Initial Treatment of
 Chronic Obstructive Pulmonary Disease
 Coronary Artery Disease, Stable
 Heart Failure in Adults
 Atrial Fibrillation

Acute Coronary Syndrome and Chest Pain; Diagnosis and Treatment of
 Dyspepsia & GERD
 Domestic Violence
 Menopause and Hormone Therapy (HT):
 Collaborative Decision-Making and Management
 Pap Smear, Initial Abnormal; Management of
 Cervical Cancer Screening
 Infertility, Diagnosis and Management of
 Pain, Acute, Assessment and Management of
 Pain, Chronic, Assessment and Management of
 Preventive Counseling and Education
 Preventive Risk Assessment Forms
 Preventive Services for Adults
 Preventive Services for Children and Adolescents
 Colorectal Cancer Screening
 Osteoporosis, Diagnosis and Treatment of
 Rhinitis
 Sinusitis in Adults, Acute
 Urinary Tract Infection in Women, Uncomplicated
 Viral Upper Respiratory Infection (VURI) in Adults and Children
 Pharyngitis, Acute
 Pneumonia, Community-Acquired
 Preoperative Evaluation
 Anticoagulation Therapy Supplement
 Venous Thromboembolism (formerly DVT)
 Venous Thromboembolism Prophylaxis
 Sleep Apnea, Diagnosis and Treatment of Obstructive
 Tobacco Use Prevention and Cessation for Adults and Mature Adolescents
 Tobacco Use Prevention and Cessation for Infants, Children and Adolescents

Topics that of importance identified in the Need Assessment Survey and not matched to the clinical guidelines and protocols being developed

Evaluation of Rash
 Basic Life Support
 Doctor Patient relationship
 Hematuria and Proteinuria
 Fever without a focus
 Normal Growth and development
 Nutrition
 Development Disorders
 Diarrheas
 Red Eyes
 Skin Infection
 Abdominal Pain
 Use and Abuse of Antibiotics
 Anemia
 Drugs in Pregnancy
 Electrocardiogram
 Advanced Life Support

Other Topics from other sources

.Patient Care
 .Practice-Based Learning and Improvement
 .Interpersonal and Communication Skills
 .Professionalism,
 .Community and Population Medicine

.End-of-life and palliative care
 .Geriatrics
 .Genetics
 .Informatics
 .Substance abuse
 .Mental health
 .Bioterrorism
 .Arthritis / Arthralgia
 .Cancer Screening
 .Cultural Competence
 .Dementia
 .Anxiety
 .Fatigue
 .Frailty
 .Skin Problems
 .Strains / Sprains
 .Menstrual Disorders
 .Nutrition

	Special Interest Topics
1	Interpersonal and Communication Skills
2	Professionalism
3	Community and Population Medicine
4	End-of-life and palliative care
5	Geriatrics
6	Genetics
7	Informatics
8	Substance abuse
9	Mental health
10	Bioterrorism

Conclusions

Quality CME can enhance the knowledge base and practice skills of the participating health care provider and is increasingly used as part of the credentialing and reappointment process. Continuing Medical Education is important not only as a requirement for practice, but as means for the profession to achieve one of its primary goals: QUALITY PATIENT CARE. To our patients CME requirements are a commitment made by the medical practitioner to keep our knowledge and skills current.

Implementation steps

Learning in medicine occurs across a continuum, from the life experience gained prior to beginning medical school, through the traditional four years of medical student education, through professional residency /fellowship training and continually through one's professional career.

Practice based learning is important within the context of primary health care. Each member of the team should be prepared to manage their learning about their patients' problems with minimal direction from the attending physician, residents, or other physicians on the rotation.

This self-directed learning will require a commitment to assessing one's own needs for learning, an ability to identify the types of information pertinent to the care of their patients (e.g., physical examination findings, diagnostic testing, treatment options, medication side-effects, diagnostic and therapeutic procedures), a listing of perceived gaps in knowledge in those areas, and a strategy for finding and assessing the necessary information. To search for information, the student will need to be able to identify up-to-date information through on-line resources. Assessing information will depend on an ability to assess the validity of evidence in clinical guidelines, reviews, and studies about diagnosis or treatment of disease.

The primary health care team must be committed and able to appraise and assimilate scientific evidence for improvement of patient care practices.

- Demonstrate commitment to personal role in providing healthcare outcomes.
- Effectively employ recursive strategy for life-long learning.
- Learn to direct own learning about patient's problems.
- Learn to locate, appraise, and assimilate evidence from clinical guidelines, systematic reviews, and articles related to patients' problems.
- Learn to apply knowledge of study designs and statistical methods to appraise information about diagnostic tests and therapeutic interventions.

Assessment Strategies

In the implementation of any CME activities assessment strategies is critical to judge the success of such a program. For example communication skills learning must be both formative and summative. The knowledge, skills, and attitudes to be assessed must be made explicit to both learners and teachers alike. Potential evaluators include local experts, course faculty, simulated and real patients, peers, and the learners themselves. Formative assessment should occur throughout the communication skills curriculum and is intended to shape and improve future behaviors. This requires direct observation (in person or videotaped) of the skills during role-play activities, with standardized patients, and with real patients. The feedback provided should be balanced and nonjudgmental. Self-assessment during the learning process should be encouraged.

Assessment of communication skills must include direct observation of performance. Evaluation of setting a therapeutic environment, gathering data and providing information and closure must be included. Evaluation of advanced skills, including use of interpreters, providing bad news and promoting behavior change should be done as well. Criteria should match the novice level of the end of second year student, who should be able to identify the critical issues for effective communication and perform the skills under straightforward circumstances.

Specific tools can be chosen from among the following:

- Standardized patients
- OSCE's
- Observed performance with patients and others
- Written reflections describing how a learner would approach a certain situation
- MCQ's

It is critical that some of the CME and CPD occur at the clinical setting. The characteristics of the ideal clinical teaching setting were described as follows:

- The care of patients should be continuous and not limited by the duration, severity, or type of illness, or by the patient's age or gender.
- The patient population should reflect the ethnic and socioeconomic mix of the community at large as closely as possible and should be sufficient in volume to provide diversity in patient encounters.
- The care provided should be community-based (that is, where care follows the need and the setting most suited to the patient, not just the practice) and should occur wherever most appropriate for the patient, including the home, office, nursing home, hospital, or extended care facility.
- The care of patients should include consideration of family, occupation, social support, resources, and ethnicity, and be customized according to the patient's needs and values.
- The faculty should be trained for, educated for, and involved in the practice of family medicine.

We need as well to apply the New Model of Family Medicine Care where, family medicine care (and teaching) will occur in a dramatically changed environment. Characteristics of the New Model of family medicine include:

- A patient-centered team approach;
- Elimination of barriers to access;
- Advanced information systems, including an
- Electronic health record;
- Redesigned, more functional offices;
- A focus on quality and outcomes;
- And enhanced practice finance.

In order to be able to achieve the above we need certain Characteristics of faculty to train physicians in this new environment:

- The faculty should be trained and current in use of technology at the point of care with patients. The setting should provide access to web-based learning resources with access to the Internet for all students.
- The faculty should be self-aware individuals who can demonstrate and role model life-long learning principles in their routine every-day care of patients.
- Faculty diversity will reflect the diversity in the patient population served at the setting where student clinical training occurs.

Community clinical teaching sites in the family medicine clerkship provide a unique learning experience for all medical students. Preserving and nurturing these teaching settings is the key to teaching a new generation of student physicians the “New Model” for family medicine.

Evaluation of Patient Care requires utilization of multiple techniques to address knowledge, skills and attitudes of future physicians. Direct observation is the key to evaluation of many of the skills outlined above. This is an area where faculty have decreased their involvement as pressures in other aspects of their roles have increased. Faculty must return to this foundational method of monitoring the growth and development of patient care skills. Videotaping of patient encounters and standardized patient evaluation are methods that enable assessment of patient care skills.

Structures within the curriculum must be developed that encourage systematic feedback to physicians about patient care knowledge, skills, and attitudes. All sources of input are viable, but the key is formative and summative evaluations by clinical preceptors.

Medical knowledge is of ultimate importance and assessment should be highly visible and very high stakes based on explicit expectations of students. Evaluation will require utilization of multiple techniques to address knowledge, skills and attitudes. Videotaping of patient encounters and standardized patient evaluations, participation in small group discussions, oral and written examinations, tests for specific examination skills, observations during patient care, Socratic questioning of individual physicians, and structured opportunities for individual and group reflection are all methods that can be used.

The knowledge, skills, and attitudes of Practice-Based Learning and Improvement are best learned in an interactive environment where a variety of teaching strategies are used to facilitate physicians learning. Basic knowledge can be transmitted through lectures, computer-assisted instruction (such as web-based curricula), or readings, but understanding and applying the material to actual patient care problems is best accomplished through problem-based methods using small group experiences and active participation and problem solving. The full application of Practice-Based Learning and Improvement requires an on-going clinical practice with information systems that allow retrieval of practice information and data from patient records.

Faculty development

Faculty development should be focused on increasing knowledge about evidence-based medicine, clinical epidemiology, and print and electronic sources for reviews and guidelines. However, often there is faculty resistance to application of the concepts of evidence-based medicine, clinical epidemiology, and quantitative approaches to decision-making, because they are sometimes viewed as counter-intuitive, impractical, and undermining the “art of medicine” as well as physician discretion to individualize patient care. Faculty skill development is critical in this

area, especially skills in problem-based or case-based teaching strategies, small group instruction, and methods of quick access to information through the WWW or hand-held devices.

Faculty Faculty Members Teaching the Curriculum

Faculty members do not need to be expert in any of these special topic areas to be highly effective teachers. There may even be benefit in a teacher appearing to be a non-expert, yet a “champion” for the topic. Physicians need to understand that a basic level of mastery in such a topic is an essential component of every physician’s practice. A teacher who shows expertise only in one specific area may represent an unattainable or even undesirable role model. A champion who demonstrates a broad range of competence with a variety of patient problems, and conveys both enthusiasm and a solid understanding of a topic, can serve as an ideal role model. A champion conveys an essential enthusiasm to students. Clearly, all teachers cannot be champions for all topics; rather, programs may want to identify faculty members with enthusiasm for one or more of the various topics areas and then support those champions in the development and implementation of these curricular topics.

Adult Learning Principles

In addition to being “champions,” teachers need to employ principles of adult learning in their approach to teaching these topics. The knowledge base for any of these topics is changing every day with the information and technology explosion that has occurred in the last quarter-century. Genetics is a perfect example of a topic subject to rapid, ongoing revision based upon new research findings. Physicians must learn how to identify their own learning needs and address these needs effectively, in order to keep up with the ever-advancing knowledge base in most of these topic areas.

Self-Awareness

In addition to fostering an enthusiastic approach to lifelong learning, the instructional method must encourage physicians to reflect upon their own lives in relationship to the topic. The topic of geriatrics, for example, emphasizes many issues that every student will face, through the aging of parents and themselves. Substance abuse, end-of-life, and other topics often elicit strong emotions within students, as physicians remember past experiences or recognize ongoing struggles within their own lives. Teachers must create environments that are safe enough to foster trust and intimacy, and yet challenge physicians to reflect upon their own experience of life, as they develop a basic level of mastery in these special topic areas

Conclusion

CME really is about changing behavior through education—about doing something different, doing it better.” The bottom line of CME in the past has been the activities we produced—how many, how much they cost, how many

how much they cost, how many people came. In essence, CME was more activity-oriented than learner-oriented. "Not only do you have to focus on the learner," "you have to focus on the learner in the context in which they are learning, which is the healthcare environment where they practice medicine." The aim of the proposal is to 'to provide leadership in the delivery of high quality education, for the primary care team, in the context of a caring and vibrant academic environment'

It is critical to look at CME and CPD in the mentality of 21st century. We attempted to clearly present: that the patient's concerns, values and outcomes must be the center of care; that partnering with an activated patient is essential; that self-awareness is essential in being an effective physician; that improving the process of care and health outcomes is the physician's responsibility and requires a systems approach.

In conclusion, GPs in this study displayed a strong preference for personally interactive formats and non-interactive formats were viewed as adjunctive. What this demonstrates is the value GPs place on personal contact with their colleagues, despite the added demand this places on their time.

Quality CME can enhance the knowledge base and practice skills of the participating health care provider and is increasingly used as part of the credentialing and reappointment process. Continuing Medical Education is important not only as a requirement for practice, but as means for the profession to achieve one of its primary goals: QUALITY PATIENT CARE. To our patients CME requirements are a commitment made by the medical and dental practitioner to keep our knowledge and skills current.