



certain norms and criteria and applicator means you apply it to your patient incorporating circumstances and his /her values. I agree with you that EBES will be innovative way of delivering and teaching medical information and knowledge. Once again congratulations' for taking first steps in India."

Dr Manoj Malviya, MBBS, DCH, MRCP (UK), Fellowship Neonatology: Hospital for Sick Children, Toronto Westmead Hospital, Sydney, Divisional Director, NICU, NICE hospital for Newborn and Children, Hyderabad.

* * * *

"I have gone through the document on EBES that you have implemented, it deals with the innovative idea termed "Evidence Based Education System". I have gone through it critically and I would like to congratulate you for developing such an innovative idea. This is something needed for our education system. This should certainly be applicable and everybody should appreciate it. Only those who are not competent would oppose the idea. We need to look forward and therefore I see a very bright future of the proposed system. Certainly much will depend on the quality of teachers. Therefore there should be quality control at the entry point- which I understand you are doing by means of faculty training lecture series and individual faculty development programmes"

Prof.L.S. Chamyal, Department of Geology, Faculty of Science, The M.S.University of Baroda.



10 January 2011
Our Ref SL/sit



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Dear Sandip

I was delighted to meet a number of academics from Sumandeep Vidyapeeth at the recent training course for Teachers of Evidence-Based Child Health and to hear from them about the innovative approach to medical education being taken at their Medical School.

If we want our students to become great doctors they have to be able to make the best use of research evidence in decision making. They will also have to be able to keep updating their knowledge throughout their careers, a huge challenge in the face of the explosion in medical science. Evidence-Based Practice can help students develop a set of techniques which help them to identify what they need to know to inform their decisions, to find information quickly and then to assess whether the research evidence is valid and whether it is meaningful for their particular patients. It absolutely needs to be at the heart of medical education.

Although this is now recognised in all leading medical schools there have been great difficulties in getting the approach deeply embedded in the curriculum. I am enormously impressed with the strategy adopted by the medical educationalists at Sumandeep Vidyapeeth to make this happen. I think they have a real chance of leading the way in how best to effectively implement this approach and I will watch their development with great interest in the hope of learning from them.

Yours sincerely

Stuart Logan
Cerebra Professor of Paediatric Epidemiology
Director, NIHR Peninsula CLAHRC
Director, Institute of Health Service Research



Faculty Training workshop at Sumandeep Vidyapeeth

VOI.1, Issue 1

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Evidence Based Education System (EBES) NEWS LETTER

A Publication of Sumandeep Vidyapeeth

AN INNOVATIVE EDUCATION SYSTEM

"FIRST IN THE COUNTRY- BY SUMANDEEP VIDYAPEETH"

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Table of Contents:

- From the Editors desk
- Evidence Based Education System
- Evidence based practice and barriers
- Sumandeep Vidyapeeth's role to bridge the barriers
- EBES – achievements of Sumandeep Vidyapeeth
- Specialty Corner
- Anecdote
- Messages from the experts

Future Proposals: (Phase II and Phase III)

- Coordinate with Universities Internationally which are already functioning on these lines and develop a collaborative program with their input (Phase II).
- Review and identify the acceptance of the EB integrated curriculum in the UG courses and take a feedback of the stake holders on acceptability/ ease/ advantage of the EBES integrated curriculum over the traditional curriculum.(Phase III)
- Define a curriculum committee for the PG courses and plan to redesign the curriculum's with EBES integrated in each PG course (Phase III)

Research, research and more research! World of knowledge has now been flooded with studies....1500 new articles and 55 new randomized control trials are indexed in medical journals everyday, but how to select a reliable one and how to apply has now become a big question and that is where EBM (Evidence Based Medicine) comes to our rescue. But the problem is not affecting just the medical field, it is universal....., dental, physiotherapy, nursing, pharmacy and even management streams are feeling the heat. Hence, the need for EBES (Evidence Based Education System) and not just EBM.

With this vision, Sumandeep Vidyapeeth has adapted this unique and innovative programme – **EBES**.The objective is to develop a way of thinking, a philosophy, a paradigm of the practice of medicine, dentistry, physiotherapy, nursing care, pharmacy and health care management for the New Millennium.

We have planned the implementation of this system in a 3 phase manner:

Phase I: Jan 2007 to Jan 2009

- Faculties from constituent colleges were encouraged to participate in the workshops and programs on EBES and total of 6 such programs were attended.
- Faculties were also encouraged to learn online from various resources available.
- Faculties and University officials also explored the probabilities of collaborations with National and International Universities with similar courses.

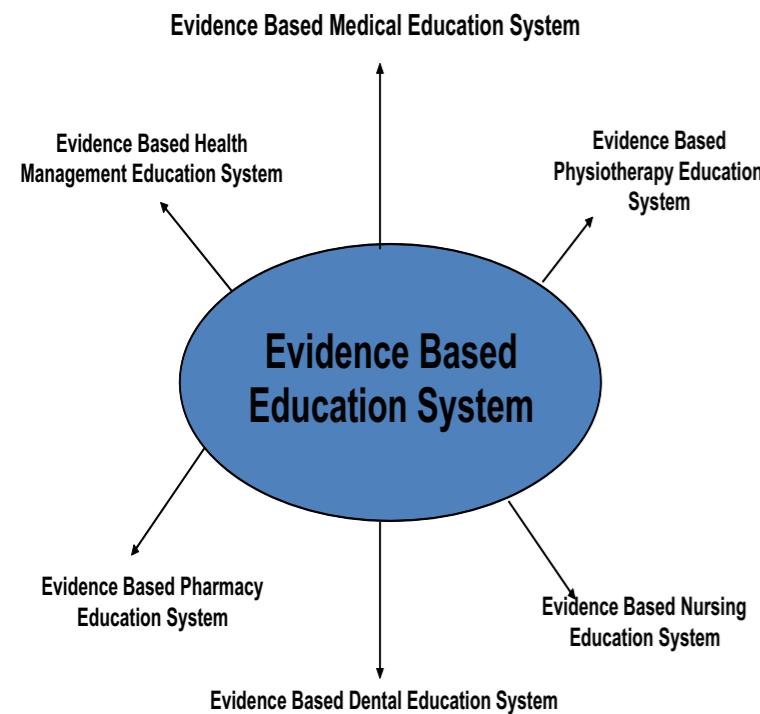
Hence this phase looked after the soft skills development of all the faculty members at the University and by the end of Phase I our University faculties were ready and well versed with basics of EBES.

Faculties were identified and under the Director of Research – a sensitizing program was organized in which an Internationally renowned scientist Dr C N Ramchand delivered a talk – Setting up a CRL with facility for Molecular Biology research and Stem Cell therapy facility.He also conducted a seminar on PCR – basics, techniques, applicability and how to set up PCR testing facility.

Need assessment was started for infrastructure requirement for setting up of an advanced and state of art CENTRAL RESEARCH FACILITY with new introduction of – Molecular Biology Lab, Genetic Research Lab and Stem Cell related lab At present our University has completed the Phase I implementation of the EBES and the Phase II has begun.

EBES: INTRODUCTION

Currently we have implemented phase III of EBES. We have reached a stage where we can claim to be the only University to have worked in this area for a long time. We have revamped curriculum and implemented this EBES integrated curriculum in all the constituent colleges. Our university is now enriched with six different EBE Systems.



EBES: INTRODUCTION

In today's world of information explosion, the knowledge and skills obtained during the training in a medical college (during undergraduate and post graduate courses) are insufficient to incorporate capability of decision making in clinical practice. To make clinical decisions, the practicing physicians even today are largely dependent on textbook knowledge and expertise derived from unsystematic observations made during training, which can be as old as the medical course itself.

EBES is an innovation in education system designed and planned to overcome these problems and includes :

- Training of Teachers
- Integration of evidence based learning in day to day tutorials and lectures.
- Practising Evidence Based Medicine
- Active involvement of students

Evidence Based Medicine (EBM) simply means judicious use of current, objective information in making decisions about the care of individual patients. **It is the optimal integration of best research evidence with clinical expertise and patient values.**

The term was coined to encourage proficiency in judgments by individual clinicians based not only on "experience" but also on experience informed by results acquired in systematic approach. The essential feature is that the practitioners (when faced with a problem/dilemma regarding decision making in any patient) should be able to perform a literature search, identify the evidence available pertaining to the clinical condition critically evaluate it and determine the "Best Evidence" to diagnose/treat/manage the patient. The concept is based on the motto "**Think Globally and Act Locally**".

The inability to carry out any of these functions may constitute a barrier to the application of evidence in practice. Health care practitioners today are increasingly urged to ensure that they are delivering care that is based on the best current research evidence, hence EBES becomes mandatory and **ours is the first university in India to be implementing it.**

What is EBES?

It is defined as the **integration of professional wisdom with the best available empirical evidence in making decisions**. Conceptually, it may not be new but it is certainly new in medical and paramedical education system.

Key points of EBES are:

- Transfer, translate, and integrate basic and clinical research findings into curriculum.
- Involve and integrate health research in teaching and learning.
- Provide students with focussed track for research and integration of same.
- Develop seminars/workshops for faculty and students to provide updates.
- Practice

Need for EBES

In India, the system of teaching in medical education has not yet adopted the new approach of EBES. The question arises - what is the need of EBES? Typical medical and paramedical education is based on

MESSAGES FROM THE EXPERTS

Messages from the experts

International

"Good luck with introducing EBM into the curriculum as we all know it is a tough task.....With best wishes"

Dr. Ruth Gilbert, Professor of Clinical Epidemiology, Director, Centre for Evidence-based Child Health Centre for Paediatric Epidemiology and Biostatistics and MRC Centre of Epidemiology for Child Health, University College London - Institute of Child Health.

"Evidenced Based Education System (EBES) is incorporated in several places in medical education and also in residency training. It is taught by active participation by our clinical faculty as well. Implementing EBES in your University definitely brings Sumandeep Vidyapeeth to International Standards.

Mulchand S. Patel, Ph.D., SUNY Distinguished Professor UB Distinguished Professor, Associate Dean for Res. & Biomed. Edu., Dept. of Biochem., Sch. Med. & Biomed. Sci., State University of New York at Buffalo.

"I read over the EBES system at Sumandeep Vidyapeeth today and I would like to say that I do not know any university that does this. Our university has a following of "research based teaching"

Mary Collins, Associate Professor, Faculty of Pharmacy, The University Of Sydney Rm 403, Badham A16, The University of Sydney.

"EBES at Sumandeep Vidhyapeeth, I am providing my opinion based on my experience as an academician. The education system, especially how to teach is going through rapid changes. At Swinburne we have been focusing on Project Based Learning, which teaches students through real world examples and projects. Our experience is that students relate better with these projects and are better employable as they have already worked on real life examples. Our accreditation body, Engineers Australia is now focusing on Outcome Based Education. What it does is to link all the four years of teaching to real outcomes. Each subject

should produce some known outcomes (skills) which the student can demonstrate. In a way it is similar to practice where knowledge of skills is necessary for becoming a good practitioner. On research side of education, we are very active on Education Research. After reviewing the Sumandeep's EBES, I think it is a innovative educational system developed to match today's requirement in education nationally and internationally.

Professor Ajay Kapoor, PhD (Cambridge), Associate Dean - Research Faculty of Engineering and Industrial Sciences Swinburne University of Technology Hawthorn, Australia.

National

I think your vision – EBES - and action will go a long way in furthering the ebm activities in your university and elsewhere afterwards.

Meenu Singh, MD, FCCP, FIAP., Additional Professor of Pediatrics. In Charge Pediatric Pulmonology. Site Director, South Asian Cochrane Network Coordinator, SAARC Telemedicine Network. PGIMER. Chandigarh.

"At the outset let me congratulate you for the innovative venture you have embarked in the field of medicine. In the era of globalization, where things are becoming so complex, such innovative approach to teaching will be of immense help to the teacher and student as well. I therefore strongly recommend to adopt such innovative practices"

Dr. S.C.Panigrahi, Professor and Head, Centre of Advanced Study in Education, Faculty of Education And Psychology, The M.S.University of Baroda.

"Congratulations ! for implementing EBES an innovative educational system. I must say your team and university is first in India and will create a benchmark or rather is a role model in India, you really deserve applaud for this. I think there is tremendous scope for application of EB in medical education system. It makes you wise consumer and applicator of information and knowledge. By consumer I mean you believe information sold to you by journals and text books only if it satisfies

EBES: INTRODUCTION

lectures and text books But they may not be containing the latest information .One example is the concept of intermittent therapy of tuberculosis (DOTS) which was tested and implemented in the country in 1997 but it took years to come in the text. Similarly, according to the BLS guidelines 2010, the 'ABC' of resuscitation has been changed to 'CAB' i.e; compression should even precede airway and breathing for better outcome or survival, but the information is still not available in any text book. Clearly, **there is a big gap in the literature available in text and the latest evidences and information. It is this gap which has created the need for EBES.**

Purpose:

You read ,you forget most.... You listen, you retain a little.....You see you remember more....You do it yourself, you know it always. The idea is to go from

To inculcate active in place of passive and to bridge the gap between text and latest, EBES includes the following elements:

- Promotion of learning culture.
- Regular evaluation of teaching by peers.
- Creating tangible reward system to recognize and encourage teaching excellence.
- Faculty development program on adult learning principles.
- Active learning.

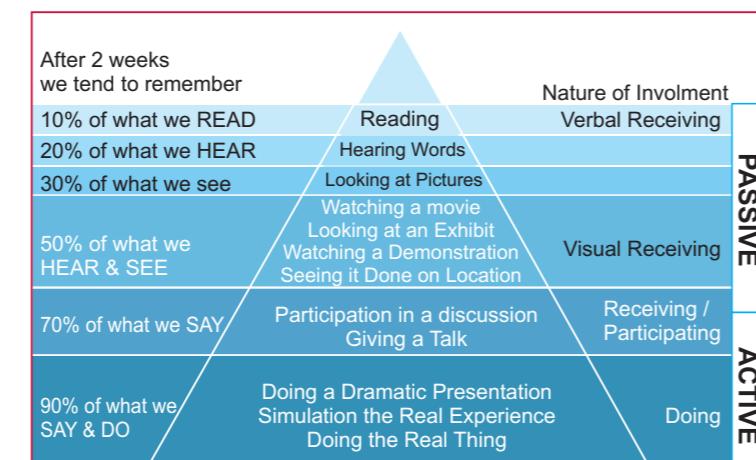
Evidence based education system in Sumandeep Vidyapeeth is implemented with the aim of **"Knowing is not enough; we must apply."**

Why now?

All of us have seen those days when finding a small reference for research used to be a tedious job, & needed hours and hours of searching. But now in the era of web, majority of information is on the tip of finger or in pockets!!.. The access to latest information is very fast and with entry of 3G, the speed will increase by more than four folds. Hence, time-honored undergraduate and postgraduate curricula need to be revamped to train the graduate as a self-directed learner by imparting the skills required for practice of EBM. **Sooner the better.**

Evidence based practice and barriers:

Major barrier to using current research evidence is the time, effort and skills needed to access the right information among the massive volumes of



passive to active learning, which is the basic purpose of EBES.

research. Hence we can approach this in 2 stages: getting the evidence straight and getting the straight evidence used.

Getting the evidence straight: By establishing and maintaining a comprehensive programme aimed at making scientific evidence more useful and accessible to all stakeholders including clinicians and patients – a part of our EBES.

Getting the evidence used: Clinicians frequently have questions about the care of their patients but most of them go unanswered or are answered by old textbooks.

This lack of bedside evidence leads to the 4 step model: ask an answerable question; track down the best evidence; critically appraise the evidence for validity, impact and applicability and integrate the results with the patients unique biology, circumstances and values.

Resistance from the faculty side

- 1) Resentment due to the implied assumption that faculty may be incompetent in their subject areas.
- 2) A suspicion that they will be evaluated by unqualified people [or those with an ideological difference].
- 3) Anxiety of being held accountable for performance in an area in which they have little or no training or interest.

ACHIEVEMENTS SO FAR:

Speciality Corner:

Gujarat State level Workshop – Conference at Sumandeep Vidyapeeth Sumandeep College of Nursing

The Sumandeep College of Nursing, Sumandeep Vidyapeeth, Piparia, Waghdia, Vadodara organized a state level Workshop – Conference SUVYSCON – 2010 on Evidence Based Nursing Education System Towards Future Challenges, on 4th & 5th October 2010. Many eminent Nursing personalities across the Gujarat state attended the workshop beside 500 participants. For the first time, the nursing professionals exhibited such a workshop with the theme 'Evidence based practice concept' in the nursing education.



SUVYSCON – 2010 souveiner was released by Shree N.N.Shah, the Registrar, Sumandeep Vidyapeeth. As a part of the event at Nagarwada, Vadodara, the participants conducted the Community health nursing research with pre test and post test on prevention of respiratory infection and applying nursing intervention with steam inhalation, besides creating an awareness on prevention of hypoglycemia and foot care for patients with diabetes mellitus at Dhiraj Hospital, Piparia a constituent of Sumandeep Vidyapeeth.

Evidence based Medicine: Anecdote

Nursing evidence base teacher from Hull University of UK talked on use of salt for personal hygiene and healing. During her graduation period, they used to put salt in the bath tub of the patients as a routine for providing personal hygiene, as they thought it gives relaxation and helps in healing. But evidence based searches suggested that for salt to be effective, the amount required would be in heaps rather than pinches. So after getting this evidence now they are not practicing it. Evidence changed the way of management.



Delegates from University of Hull, UK discussing EBES with Chancellor, Vice Chancellor, Director Research and Director DGH of Sumandeep Vidyapeeth

EBES: INTRODUCTION

For bridging the above barriers, University has suggested following steps:

1. Advocate, develop, and implement regular peer and expert teaching evaluation.

Research, publication, and grantsmanship are coins of the realm for faculty advancement. It is relatively easy to document one's activity in these areas: hard data exists for research projects, published articles, and grants received. Data on teaching excellence, however, are hard to come by. If generated by students, they may be suspected as merely popularity indicators. How can superb teaching be valued at par with research if no data exists to document teaching quality?

2. Advocate, develop, and implement a significant, continuing reward system for outstanding teaching.

Without the prospect of substantial monetary reward and recognition, faculty can easily view time spent on nonscientific research and teaching enhancement courses as a nonproductive activity that jeopardizes academic careers. Evidence is clear that many schools have done a far better job by honoring, rewarding, and encouraging teaching excellence.

Achievements of Sumandep Vidyapeeth

1. 2007 - Identified the need and therefore started EBES.
2. Formulated EBES core committee (including Heads of all institutes, University representatives and Chairman) with EBES course director and Research Director – directly under the Vice Chancellor.
3. Formed EBES committee (EBESC) at constituent college level and trained them to become empowered to translate skills.
4. Guided different college committees to design and develop a curriculum at the UG level (sample attached) in Medical, Dental, Physiotherapy, Nursing, Pharmacy, and Health Management Colleges of the university.
5. Trained faculty core group started a **series of lectures for sensitizing the faculty on EBES**. 2 such lecture series saw 27 training lectures by 3 international experts 15 national external experts and 10 SV trained EBES nodal co-ordinators. The lectures series trained 182 faculty members of our university.

Feedback of the participants of the EBES lecture series:

(On a scale graded from 1-4, sessions were rated for content, presentation and overall).

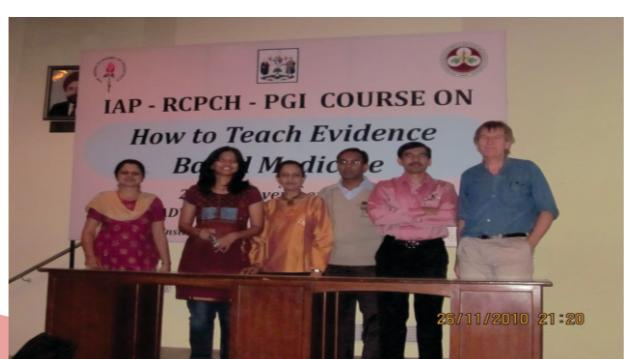
Feedback	Very good	Excellent.
overall	40%	51%
Introduction to research	49%	23%
Systematic review and meta-analysis	41%	31%

6. EBESC recommended the following infrastructural requirements (now fulfilled by the University) – virtual lecture halls, Advanced Learning Resource Centre, subscription to good evidence based journals e.g; EBSCO.



ACHIEVEMENTS SO FAR:

7. **Implementing credit system** for lectures attended and converting questions answered during the same lectures into direct credits to encourage the students.
8. EBESC in coordination with the SV has now recommended that each faculty should have at least 2 research publications in past 2 years before he/she can be eligible for further promotion. Each post graduate student should submit 2 research proposals over and above their dissertations. The UG student has to do at least one research project (eg STS) before final degree is awarded.
9. Designed a **post graduate intake program** that has 16 hours of teaching which teaches basics of scientific research including research designs, biostatistics, scientific writing, EBES and other related topics.
10. **Encouraged its faculty to participate** in various international & national workshops – most recent was organized at PGIMER Chandigarh in collaboration with RCPCH (UK)-ICMR on 'How to teach evidence based medicine' – and a group of 6 faculties from SV got trained during this workshop.
11. Formulation of **Three Curriculum Committees for integration of EBES in the Curriculum**.
 - a. **Medical Committee** headed by Professor Sagun Desai
For example in MBBS curricula, 16 hours of EBES in first year, 16 hours in second year and 25 hours in third year with exam of EBES is incorporated.
 - b. **Dental Curriculum Committee** headed by Professor Bharat Mody.
 - c. **Committee for Management College, Physiotherapy College, Sumandep Pharmacy College and Sumandep College of Nursing** headed by Professor A. K Seth.



Faculty of SV Getting trained by International experts from RCPCH (UK) at PGIMER Chandigarh in workshop on "How to teach EBM"