Trends in Pharmacy Training - Way forward.
Presentation at the PSU Awareness Week
Sept. 2006

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PHARMACY

• That branch of medical science concerning the sources, nature, properties, preparation (formulation) and use of drugs
• Pharmacy and the practice of medicine were often combined,
• Close association of drugs, medicine, and religion or faith
• Specialization first occurred in the 8th century in the civilized world around Baghdād
Age of Galenicals

• Up to 1940s (empirical age)
• Pharmacognosy and Galenical Pharmacy typified pharmacy practice and education
• Natural products and crude extracts were compounded and dispensed by the pharmacist
History cont...

- The pharmacy was perceived as highly professional
- The pharmacist made crude extracts, tablets triturates, capsules, suppositories to dispense
- He had the legal right to sell any drugs in his possession without prescription
- Pharmacist was the principal health provider providing clinical pharmacy
History cont...

• **1940-1970: Scientific Era and Industrialization**
  – Formation of standardized and pre-packaged medications
  – Elimination of compounding by pharmacists
  – Little contact with pts
  – Not perceived as drug experts and advisers
History cont…

– Considered by health care community as businessmen than professionals
– Additionally laws passed in early 1950s prevented pharmacists from directly recommending treatment to pts
– This limited the scope of information and problem-solving activities
History cont…

• Pharmacy education responded by becoming scientific and less practice, less pt-oriented
• The education also seemed to lose sight of its focus
• Pharmacists were considered over educated and under-utilized
• Trainers were frustrated with limited roles played by graduates of Pharmacy
History cont..

- This lead to a mismatch between professional practice of pharmacy and education obtained
- Therefore a new thinking to focus on the patient
- Emphasized the concept of pharmaceutical care
- The pharmacist as therapeutic advisor
History cont…

• The modern pharmacist deals with complex pharmaceutical remedies far different from the elixirs, spirits, and powders described in the *Pharmacopeia of London* (1618) and the *Pharmacopeia of Paris* (1639)
PHILOSOPHY OF PHARMACY TRAINING

(1)

• A profession concerned with the development of human and animal drug treatments, preparation and dispensing of medicines and provision of drug and related information to patients and their caretakers.
PHILOSOPHY (2)

• Is both an art and science that span from drug production to monitoring for the safety and effectiveness of medicines

• The pharmacist therefore needs to employ lifelong learning skills to keep adept with new developments
THE ROLES AND FUNCTIONS OF THE B.PHARM PROGRAMME GRADUATE

- Provision of pharmacy services
- Management of Health Services
- Generation of Information (Research)
- Dissemination of Information (Teaching)
- Community Leadership
COMPETENCES

- Problem solving
- Life long learning
- Leadership
- Communication
- Clinical acumen
- Managerial/Administrative
- Teamwork
- Research
The curriculum is traditional in that it is

- Teacher-centred and mainly lecture based
- Almost wholly Faculty and Teaching Hospital based
- Abstract in delivery
- Not adaptable to the changing Health needs of the population
WHAT IS PROBLEM BASED LEARNING?

• PBL is a method of learning in which:
  – Learners first encounter a problem
  – Systematic, learner centred inquiry and reflection is the rule
  – Students are helped to learn sciences basic to pharmacy
  – The reasoning process used by pharmacists/physicians and other health professionals is developed
The learning Pyramid

The National Training Laboratories Institute (Bethel, Maine) has found the following average retention rates for different training and teaching methods:

- **Teaching others**: 90%
- **Practice by doing**: 75%
- **Discussion group**: 50%
- **Demonstration**: 30%
- **Audio visual**: 20%
- **Reading**: 10%
- **Lecture**: 5%

STATE OF THE ART HEALTH WORKER TRAINING BY SPICES MODEL

- S = Student Centered Learning
- P = Problem Based Learning
- I = Integrated Learning
- C = Community Based Education & Service (COBES)
- E = Elective courses
- S = Systematic planning
INCLUDES

- INTERGRATION
- EARLY CLINICAL/INDUSTRIAL EXPOSURE
- COMMUNITY ORIENTATION
- ACTIVE LEARNING
INTERGRATION

• FUSION OF RELATED DISCIPLINES INTO A LEARNING EXPERIENCE

• HORIZONTAL

• VERTICAL
HORIZONTAL INTERGRATION

• AT THE SAME LEVEL
• INTERDISCIPLINARY
• NO COMPARTMENTALISATION
• NO REPETITION
• INTERGRATES LEARNING
• NO DEPT. COMPETITION
VERTICAL INTERGRATION

• ACROSS EDUCATIONAL LEVELS

FUUSES:
• BASIC SCIENCE
• CLINICAL EXPERIENCE AND
• COMMUNITY EXPERIENCE
• INDUSTRIAL EXPERIENCE
ACHIEVING INTERGRATION

- INTERDISCIPLINARY COURSE UNITS
- BLOCKS WITH RELATED COURSES
- SEQUENCING
- SPIRALLING
- EARLY CLINICAL EXPOSURE
- EARLY COMMUNITY EXPOSURE
- EARLY INDUSTRIAL EXPAUSURE
LEARNING AND TEACHING STRATEGIES

• Knowledge outcomes: includes a clinical reasoning process that leads to competencies in problem solving and how to make a comprehensive and shared patient management plan.

• Skills outcomes: a host of pharmacy skills, self – directed learning skills and communication skills that will enable the graduate to be a life-long learner.
Teaching and learning strategies

• Attitudinal outcomes:
  – ability to listen to others actively and with empathy,
  – ability to build trust through being worthy of trust,
  – respect for cultural diversity,
  – understanding the pharmacist’s responsibilities towards her/his colleagues and other members of the health care team.
ACTIVE LEARNING

• USING PROBLEMS
• TUTORIALS
• SELF STUDY
• SKILLS LABS
CLINICAL/INDUSTRIAL EXPOSURE

• STARTS IN YEAR ONE.
• WARD / INDUSTRIAL PLACEMENTS
• PAPER CASES
• REAL CASES
• RELATED TO COURSES COVERED
IN PBL

• The problem is introduced without advance reading, lectures or preparation
• The problem serves as a stimulus for the need to know
• The student identifies what he/she needs to learn in order to solve the problem
• A student is thus motivated to go out and look for the information necessary to meet the need.
PBL Develops:

- Integrated, context specific knowledge base
- Decision-making/critical thinking process and skills
- Self-directed, life-long learning skills
- Interpersonal, collaboration, and communication skills
- Constructive self and peer assessment skills
- Professional ethics and behaviour
**COBES**

- Become conversant with the needs of the community.
- Be familiar with how health services are managed.
- Acquire the skills of information gathering and dissemination (research skills).
A PROBLEM CAN BE:

- A patient care problem
- A community health problem (e.g. disease outbreak)
- A management and administration problem
- A real patient with symptoms and signs
- An idea or fact
- Research observation
PBL VS TRADITIONAL

• Academic achievement - short term no difference, long term recall better in PBL
• Clinical: Better clinical skills, better humanistic KAS in PBL
• Student approach to learning - students:
  – Study for understanding and meaning not just to pass
  – Make more use of a greater variety of learning resources
  – Feel more satisfied, less stressed, more challenged and engaged
Evidence


Challenge of PBL

• Heavy commitment
• Requires more man power
• Requires wider scholastic resources
  – Library
  – Rooms
  – Books
  – Computer services
  – Time
Way forward

• PBL is generally touted as providing a very favorable frame-work for active student learning
• It is also context-specific
• Therefore
  – Struggle to promote the system
• THANK YOU